FINAL REPORT

Water Capacity Fee Analysis

City of Morgan Hill

January 2023

CITY OF MORGAN HILL

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Section 1. Executive Summary

A. Background and Purpose

The City of Morgan Hill retained NBS to conduct a water capacity fee study in conjunction with the recent water rate study update for two primary reasons: (1) to ensure that the fees are updated to comply with legal requirements and industry standards, and (2) to ensure that these fees reflect the cost of capital infrastructure needed to serve new connections or any person requesting additional capacity in the City's water utility (referred to throughout as "future customers").

The fees updated in this study are commonly referred to as "connection fees," "development impact fees," "capital facility fees," or, in this case, "capacity fees." The terms are often used interchangeably, and California Government Code Section 66013 defines these types of fees (referred to as a "capacity charge") as a one-time "charge for public facilities in existence at the time a charge is imposed or charges for new public facilities to be acquired or constructed in the future that are of proportional benefit to the person or property being charged, including supply or capacity contracts for rights or entitlements, real property interests, and entitlements and other rights of the local agency involving capital expense relating to its use of existing or new public facilities."

This authorizes public agencies to impose capacity fees on customers connecting to, or upsizing their connection to the water system, to ensure that they pay their fair share of existing utility asset costs plus the costs of new facilities needed to serve them. In its simplest form, capacity fees are the result of dividing the cost (or value) of the Utility's current system assets, plus planned capital improvements, by the expected number of future customers. As a result, future customers connecting to the City's water utility would enter as equal participants with current customers regarding their financial commitment and obligations to the Utility.

Whereas water rate increases imposed on existing customers require a protest ballot under Proposition 218, capacity fees do not because they are considered an appropriate funding mechanism for facilities that benefit new development citywide. Therefore, these fees may be imposed by a majority vote of the governing legislative body which, in this case, is the Morgan Hill City Council. This report provides the documentation and findings necessary for the adoption of the proposed capacity fees.

B. Overview of Capacity Fee Program Methodology

Various methodologies have been and are currently used to calculate water capacity fees. The following lists the most common methodologies from the American Water Works Association's *Principles of Water Rates, Fees, and Charges*,[1] also referred to as Manual M1:

- The value of existing (historical) system assets, often called a "system buy-in" methodology.
- The value of planned future improvements, also called the "incremental" or "system development" methodology.

[1] *Principles of Water Rates, Fees, and Charges, Manual of Water Supply Practices*, Manual M1, American Water Works Association (AWWA), Seventh Edition, 2017.

- A combination of these two approaches.

This analysis uses the "Combination Approach,"[2] which requires new customers to pay both their fair share of existing system assets as well as their share of the planned future capital improvements needed to provide them with capacity in the City's water system.

- Costs of planned future facilities and improvements required to serve new development are those that can reasonably be allocated to future development.
- The number of new units (i.e., growth) are those units projected to occur within the timeframe covered by the capacity fee analysis.

Capacity fees are one-time fees intended to reflect the cost of existing infrastructure and planned improvements available to new services which place new utility customers, or existing customers requesting an increase in service capacity, on equal basis with existing rate customers. Once new customers are added to the system, they then incur the obligation to pay the same service charges or water rates that existing customers pay.

This capacity fee study and the recommended fees assume a given level of development activity over the course of the study period based on data available from the City's 2021 Water Supply Master Plan. The development that occurs may result in both different impacts and fee revenues than those that are calculated in this study. For that reason, regular updates are recommended to adjust the fees to match the needs created by the rate of actual development.

In developing the proposed fees, NBS worked cooperatively with City staff. The fees presented in this study reflect input provided by City staff regarding financial matters, available capacity in the water system, existing asset values, and planned capital improvements.

Section 2 discusses in more detail the development of the water capacity fees and presents the updated fees recommended for new and upsized connections.

[2] Method of calculating capital facility fees (also known as System Development Fees, Connection Fees, Capacity Fees) are set forth in the American Water Works Association's *Principles of Water Rates, Fees and Charges*, Seventh Edition (2017), pages 311 to 347.

Section 2. Water Capacity Fee Study

A. Existing Connections and Projected Future Growth

The City currently has approximately 17,086 equivalent 1-inch water meters connected to the water system. The City has now implemented 1-inch meters as the standard (or base) meter size installed, but there are over 13,000 5/8- and 3/4-inch meters connected to the system. For the purpose of this study, 5/8- and 3/4-inch meters are treated the same as 1-inch meters, which is a common industry practice when setting rates and fees for smaller meter sizes. **Figure 1** shows the current number of meters connected to the system by size, meter equivalency factors, and meter equivalent units.

Figure 1. Current Water Customers

Meter Size	Existing Water Meters[1]	Meter Equivalence		1-inch Meter Equivalent Units
		Maximum Flow (gpm)[2]	Equivalency to 1-inch meter	
5/8-1 inch meter	13,684	50	1.00	13,684
1.5-inch meter	401	100	2.00	802
2-inch meter	609	160	3.20	1,949
3-inch meter	14	320	6.40	90
4-inch meter	43	500	10.00	430
6-inch meter	5	1,000	20.00	100
8-inch meter	1	1,600	32.00	32
Total	**14,757**			**17,086**

1. Number of meters by size and customer class for May 2021.
2. Meter flow rates are from AWWA M-1 Table B-1.

Larger meters have the potential to use more of the system's capacity compared to smaller meters. The potential capacity demanded by each meter is proportional to the maximum hydraulic flow through each meter size as established by AWWA's hydraulic capacity ratios. The hydraulic capacity ratios (also known as flow factors or meter equivalencies) used in this study are shown in the fourth column of Figure 1. The maximum flow rate, in gallons per minute (gpm) for each size meter, is used to determine the number of equivalent 1-inch meter units currently connected to the water system.

For example, a 2-inch meter has a greater capacity, or potential peak demand, than a 1-inch meter. The "equivalency to a 1-inch meter" is calculated by dividing the maximum capacity or flow of larger meters by the capacity of the base (1-inch) meter size. The meter capacity factors shown in Figure 1 are the ratio of potential flow through each meter size compared to the flow through a 1-inch meter. The 1-inch meter is the base meter size for the Utility and is used to compare the capacities of the larger meters. For instance, column 4 in Figure 1 shows that the equivalency of a 2-inch meter is 3.20 times greater compared to a 1-inch meter.

The actual number of meters by size is multiplied by the corresponding meter equivalency to calculate the total number of equivalent meters. The number of equivalent meters is used as a proxy for the potential demand that each customer can place on the water system. A significant portion of a water system's peak capacity and, in turn, the Utility's fixed capital costs, is related to meeting system capacity

requirements. Therefore, the capacity fee for a new connection will be proportional to the service's meter equivalence.

The equivalent meter calculation is summarized for standard use meters in Figure 1. Given that the State now requires fire suppression systems in all new single-family home construction, the minimum meter size going forward is a 1-inch meter. This difference has not changed the expected use within the home. Consequently, the City has chosen to treat 5/8-inch and 3/4-inch meters equivalent to 1-inch meters for the following reasons:

- The desire for a single, fixed meter charge across all customer classes.
- The overwhelming number of meters between 3/4-inch and 1- inch are for single-family or small multi-family residential properties.

The result of this analysis, summarized in Figure 1, is that while there are currently 14,757 connections to the potable water system, there are 17,086 equivalent (i.e., 1-inch) potable water meter units.

Figure 2 shows the existing and projected service numbers for the water utility. The anticipated future connections are based on the City's planned customer growth rate of 2.1% annually for the next 16 years (per historical population growth). Existing capacity in the City's water utility is allocated to current and future customers and the percentage assigned to current and future customers is based upon their assigned share of 1-inch meter equivalent units. As shown in Figure 2, new customers will be allocated about 29.8% of existing assets, planned assets, cash, and debt in the capacity fee calculation. This is calculated by taking the expected number of units (7,421) divided by the projected number of equivalent meters (24,327).

Figure 2. Existing and Projected Service Numbers

Demographic Statistics	Existing	Estimated Growth thru 2038[1]	% Allocation Factors		Cumulative Change	
			Existing Customers	New Customers	Number of Units	% Increase
Equivalent Meters	17,086	24,327	70.2%	29.8%	7,241	42.4%

1. Customer growth is based on the historical population growth.

B. Existing and Planned Assets

The capital assets addressed in this study include existing assets and planned capital improvements (i.e., the system buy-in and incremental assets). An important aspect of this study is how the value of existing utility assets is determined. For example, the purchase price does not account for wear and tear, and current book value (i.e., purchase price less accumulated depreciation) typically underestimates the "true value" of facilities as it does not account for cost increases over time. Therefore, this study uses the replacement-cost-new-less-depreciation (RCNLD) approach summarized in **Figure 3** to estimate existing asset values that reflect estimated cost inflation and depreciation.

Figure 3. Summary of Existing Asset Values

Asset Category[1]	System Buy-In Cost Basis	Allocation Basis (%)[2]		Distribution of Cost Basis ($)	
		Existing Customers	Future Customers	Existing Customers	Future Customers
WATER BUILDING AND IMPROVEMENTS	$ 34,732,548	70.2%	29.8%	$ 24,394,899	$ 10,337,649
WATER INFRASTRUCTURE	44,798,230	70.2%	29.8%	31,464,674	13,333,556
WATER EQUIPMENT/METERS	3,037,257	100.0%	0.0%	3,037,257	-
WATER LAND	-	0.0%	0.0%	-	-
VEHICLES	1,368,762	70.2%	29.8%	961,369	407,392
Total Capital Facilities & Equipment	**$ 83,936,797**	**71.3%**	**28.7%**	**$ 59,858,200**	**$ 24,078,597**

1. Source file for Morgan Hill current water assets as of July 2022: *FA1. Water.xls*
2. Based on proportionate allocation between existing and future users. See Table 2 in Exhibit 1 for demographic expectations. Some assets are excluded or allocated to existing customer only because rate payers will incur these expenses once connected to system. Land is excluded from the analysis as it is not a depreciable asset.

The RCNLD is calculated by escalating the book value of existing assets to current-day values using inflation factors from the Handy-Whitman Index of Public Utility Construction Costs for Water Utility Construction. Figure 3 summarizes the System Buy-In Cost Basis by Asset Category for the water utility. For this analysis, assets that have exceeded their useful life (as defined in the City's asset records) were considered to have no remaining value. This approach was used for all assets, except land, which does not depreciate and is excluded from the analysis.

Most of the RCNLD costs were allocated to current customers based on the 70.2% allocation factor previously shown in Figure 2. When certain assets are considered to only serve current customers, they are allocated 100% to current customers. For example, existing meters are allocated 100% to current customers since they do not benefit future customers. Figure 3 shows the allocation of the $83.9 million system buy-in costs to current and future customers. Future customers are allocated approximately $24 million of the existing water utility assets, or about 28.7%, due to some assets being excluded from the calculation.

The City's capital improvement plans for the water utility extend to FY 2037/38 in the 2021 Water System Master Plan. Some of the cost estimates for planned future improvements used to calculate the system development component of the capacity fees are allocated using the allocation factors developed in the Master Plan, as these projects benefit both current and future customers. **Figure 4** includes a list of future capital improvement projects, where future customers are allocated about $59.4 million of the planned asset costs.

Figure 4. Planned Assets Allocated to Current & Future Customers

Capital Project Description[1]	Future Cost Estimate (2020-2038)[1]	% Allocation		Distribution of Cost Basis ($)	
		Existing Customers	Future Customers	Existing Customers	Future Customers
Pipeline Capacity Improvements	$ 16,603,707	6.8%	93.2%	$ 1,135,717	$ 15,467,990
Storage Reservoir Capacity Improvements	$ 16,712,442	50.6%	49.4%	$ 8,453,440	$ 8,259,002
Groundwater Well Capacity Improvements	$ 30,240,228	18.5%	81.5%	$ 5,605,821	$ 24,634,407
Pump Station Capacity Improvements	$ 5,846,185	50.3%	49.7%	$ 2,938,790	$ 2,907,395
Pressure Reducing Valve Capacity Improvements	$ 101,878	55.0%	45.0%	$ 56,033	$ 45,845
Known Pipeline Renewal and Replacement	$ 3,267,410	100.0%	0.0%	$ 3,267,410	$ -
Recommended Annual Pipeline Condition Renewal and Replacement (10-year)	$ 18,297,698	100.0%	0.0%	$ 18,297,698	$ -
Reservoir Condition Improvements	$ 3,863,750	100.0%	0.0%	$ 3,863,750	$ -
5-Year Improvement Projects	$ 3,900,000	100.0%	0.0%	$ 3,900,000	$ -
Comprehensive Plan Updates	$ 1,782,000	65.0%	35.0%	$ 1,158,300	$ 623,700
Calendar Year Budget Expansion	$ 7,500,000	0.0%	100.0%	$ -	$ 7,500,000
Total	**$ 108,115,298**	**45.0%**	**55.0%**	**$ 48,676,959**	**$ 59,438,339**

1. Capital Improvement Program projects and allocation to future customers from Water Supply Management Plan projects. Source file: 2021_WSMPUpdate_Report_FinalDraft_120321.pdf

* Some projects postponed 2 years from Water Supply Management Plan. Source file: *Water CIP from MP revised.pdf*

The City may have additional capital projects that are needed to serve future developments, and the costs of such projects may be recovered through a development agreement. This will be evaluated on a case-by-case basis as part of the development review process.

C. Adjustments to the Cost Basis

Before the capacity fees are developed, an adjustment is applied to the cost basis to account for existing un-restricted cash reserves and outstanding debt principal. Existing cash reserves are treated as an asset because they were funded by current customers and are available to pay for capital and/or operating costs of the water utility that future customers will benefit from, once connected. The cash reserves are, in a sense, no different than any other water utility asset. The existing cash reserves allocated to current and future customers are summarized in **Figure 5** using the same allocation factors from Figure 2. Future customers are allocated about $6 million in cash reserves.

Figure 5. Cash Reserves Allocated to Future Customers

Cash Reserves	Beginning Cash[2]	% Allocation		$ - Allocation	
		Existing Customers	Future Customers	Existing Customers	Future Customers
Un-restricted Reserves					
Water Operations Fund (650)	$ 2,842,432	70.2%	29.8%	$ 1,996,423	$ 846,009
Water System Replacement Fund (653)	$ 11,271,126	70.2%	29.8%	$ 7,916,436	$ 3,354,690
Rate Stabilization Fund (652)	$ 3,151,127	70.2%	29.8%	$ 2,213,239	$ 937,888
Restricted Reserves					
Impact Fund (651)	$ 2,941,398	70.2%	29.8%	$ 2,065,933	$ 875,465
Total Beginning Cash	**$ 20,206,083**	**70.2%**	**29.8%**	**$14,192,030**	**$ 6,014,053**

2. Total beginning cash is the sum of the projected cash balances in Funds 650, 651, 652, and 653 as of 07.01.21. Source file: *Cash balance as of 6-30-22.xlsx*

Since the water utility is including current debt service towards the capacity fees, the capacity fee calculation must include an adjustment to the cost basis to account for this. Since new connections pay

their share of existing asset values, including the debt payment principals on those same assets would double count the asset values included in the capacity fees. Therefore, future customers are credited approximately $4.8 million as shown in **Figure 6.**

Figure 6: Debt Service Allocated to Future Customers

Bond Issue	Outstanding Principal[1] (Fund 651/653)	% Allocation		$ - Allocation	
		Existing Customers	Future Customers	Existing Customers	Future Customers
2014 Water Refunding & CIP Revenue Bonds	$ 6,711,700	70.2%	29.8%	$ 4,714,058	$ 1,997,642
2014 Water Refunding & CIP Revenue Bonds	$ 9,658,300	70.2%	29.8%	$ 6,783,644	$ 2,874,656
Grand Total	**$ 16,370,000**	**70.2%**	**29.8%**	**$11,497,702**	**$ 4,872,298**

1. The 2014 Water Revenue Bonds were issued to: (1) finance 2014 Projects; (2) refinance 1999 Projects and refund the Series 1999 COPs; (3) refinance 2004 Projects and refund the Series 2004 Bonds; and, (4) to pay certain costs of issuance. Source file: *2014 water bonds debt service schedule.pdf.*

D. Calculated Capacity Fees

The sum of the existing and future planned asset values (i.e., the system buy-in and system development costs), along with the adjustment for cash reserves, defines the total cost basis allocated to future customers. **Figure 7** summarizes this calculation.

Figure 7. Summary of Cost Basis Allocated to Future Customers

System Asset Values Allocated to Future Development	
Costs Included in Existing System Buy-In:	
Existing Assets	$ 24,078,597
Planned, Future Capital Projects	59,438,339
Total: Existing & Future System Costs	$ 83,516,936
Adjustments to Cost Basis:	
Cash Reserves	$ 6,014,053
Outstanding Long-Term Debt (Principal)	(4,872,298)
Total: Adjustments to Cost Basis	$ 1,141,756
Total Cost Basis for New Development	**$ 84,658,692**

The total adjusted cost basis is then divided by the number of future customers, measured in 1-inch meter equivalents, expected to connect to the water utility (that is, the 7,241-meter equivalents) in order to determine the base capacity charge for a 1-inch water meter. This calculation is shown in **Figure 8**.

Figure 8. Summary of New Base Capacity Fees

Summary of Capacity Fee Calculation	Adjusted System Cost Basis	Build-Out Total *(Units)*	Base Capacity Fee
Proposed Capacity Fee	$ 84,658,692	7,241	**$11,692**

Based on the combined system buy-in and incremental capacity fee methodology, and the assumptions used in this analysis, NBS has calculated the new water capacity fees by meter size, as shown in **Figure 9.** The updated fees represent the maximum that the City can charge for new connections.

Figure 9. Updated Water Capacity Fees

Meter Size	Equivalency Factor		Capacity Fee Per Meter Size
	Maximum Continuous Flow (gpm)[1]	Equivalency to 1-inch meter	
5/8-1 inch meter	50	1.00	**$11,692**
1.5-inch meter	100	2.00	**$23,385**
2-inch meter	160	3.20	**$37,415**
3-inch meter	320	6.40	**$74,830**
4-inch meter	500	10.00	**$116,923**
6-inch meter	1,000	20.00	**$233,845**
8-inch meter	1,600	32.00	**$374,152**

1. Source: *AWWA M1, Table B-2. Assumes displacement meters for 3/4" through 2", Compound* Class I for 3" through 6", and Turbine Class II for 8" through 10".

E. Water Capacity Fee Findings Statements

The new water capacity fees calculated in this report are based on regulatory requirements and generally accepted industry standards, and further detailed in *Appendix A*. This study concludes the following findings:

- The purpose of the City's water capacity fees is to ensure that new and upsized connections reimburse and/or mitigate a reasonable portion of the City's planned capital investment projects. These investments benefit and/or are necessary to accommodate the increased demand for water services.
- The City uses capacity fee proceeds to fund capital investments in the water system, which include the future design and construction of planned facilities.
- Capacity fees for new water customers vary depending on the size of the water meter serving the connection. Meter size is generally proportionate to the demands that a parcel places on the water utility system, specifically the peaking requirements related to the meter size.
- The City has made investments in water infrastructure and plans to invest further in expanded and upgraded facilities. These investments make possible the availability and continued reliable service of high-quality water sufficient to meet the demands of growth within the City's service area.
- Without capital investment in existing facilities, the water system capacity available to serve the needs of future connections would be uncertain. Without planned investments in future facilities, water service would not be sustainable at the level of service received by current users. The total value of planned water system assets that are attributable to serving future connections is identified in *Appendix A*.
- Upon payment of a capacity fee, a new customer incurs the obligation to pay the same ongoing service rates as existing customers, regardless of the date of connection to the system or the actual start of service. These fees ensure that, over time, ongoing service rates are not disproportionately burdened by the accommodation of system growth.

Section 3. Recommendations and Next Steps

A. Consultant Recommendations and Next Steps

NBS recommends the City take the following actions:

- **Approve and Accept this Study Report**: NBS recommends the City Council formally approve and adopt this study and its recommendations and proceed with the steps outlined below to implement the new capacity fees. This will provide documentation of the study and the basis for adopting the new capacity fees.
- **Implement New Water Capacity Fees:** Based on the analysis presented in this report, the City Council should implement the new water capacity fee of $11,692 per 1-inch equivalent water meter unit, as described in this study.
- **Periodically Review Capacity Fees:** Any time an Agency adopts capacity fees, they should be periodically reviewed to incorporate new capital facility plans, significant repair and replacement projects, or new planning data (i.e., customer growth estimates). This will help ensure the fees generate sufficient revenue to cover the cost of capital projects, support the fiscal health of the City, and ensure that future customers bear their fair share of infrastructure costs. NBS also recommends applying an inflation factor to the capacity fees on an annual basis. Annually, the City should review the Engineering News Record's Construction Cost Indices and calculate the percentage change in construction costs and apply that change to the capacity fees to ensure they keep pace with cost inflation. Beginning January 1, 2022, the nexus study must be updated every eight years.
- The Mitigation Fee Act requires an agency to prepare a Development Impact Fee Report within 180 days of the last day of the fiscal year. This report should identify the beginning and ending balances in the fee report, the fees collected in the preceding year, the projects the fees were used for along with the percentage of the total project costs funded with fees, and the date expected projects are to start.

B. Principal Assumptions and Considerations

In preparing this study and the recommendations included herein, NBS has relied on a number of principal assumptions and considerations with regard to financial matters, number of customer accounts, asset records, planned capital improvements, and other conditions and events that may occur in the future. This information and assumptions were provided by sources we believe to be reliable, although NBS has not independently verified this data.

While we believe NBS' use of such information and assumptions is reasonable for the purpose of this Study and its recommendations, some assumptions will invariably not materialize as stated herein or may vary significantly due to unanticipated events and circumstances. Therefore, the actual results can be expected to vary from those projected to the extent that actual future conditions differ from those assumed by us or provided to us by others.

Appendix - Water Capacity Fee Study Summary Tables

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CITY OF MORGAN HILL **EXHIBIT 1**
Water Capacity Fee Analysis
Demographic Data and Projections

TABLE 1 - METER EQUIVALENT UNITS

Meter Size	Existing Water Meters[1]	Meter Equivalence		1-inch Meter Equivalent Units
		Maximum Flow (gpm)[2]	Equivalency to 1-inch meter	
5/8-1 inch meter	13,684	50	1.00	13,684
1.5-inch meter	401	100	2.00	802
2-inch meter	609	160	3.20	1,949
3-inch meter	14	320	6.40	90
4-inch meter	43	500	10.00	430
6-inch meter	5	1,000	20.00	100
8-inch meter	1	1,600	32.00	32
Total	**14,757**			**17,086**

1. Number of meters by size and customer class for May 2021.
2. Meter flow rates are from AWWA M-1 Table B-1.

TABLE 2 - EXISTING AND PROJECTED SERVICE NUMBERS

Demographic Statistics	Existing	Estimated Growth thru 2038[1]	% Allocation Factors		Cumulative Change	
			Existing Customers	New Customers	Number of Units	% Increase
Equivalent Meters	17,086	24,327	70.2%	29.8%	7,241	42.4%

1. Customer growth is based on the historical population growth.

TABLE 3 - EXISTING ASSETS, ALLOCATION TO EXISTING AND FUTURE CUSTOMERS

Asset Category[1]	System Buy-In Cost Basis	Allocation Basis (%)[2]		Distribution of Cost Basis ($)	
		Existing Customers	Future Customers	Existing Customers	Future Customers
WATER BUILDING AND IMPROVEMENTS	$ 34,732,548	70.2%	29.8%	$ 24,394,899	$ 10,337,649
WATER INFRASTRUCTURE	44,798,230	70.2%	29.8%	31,464,674	13,333,556
WATER EQUIPMENT/METERS	3,037,257	100.0%	0.0%	3,037,257	-
WATER LAND	-	0.0%	0.0%	-	-
VEHICLES	1,368,762	70.2%	29.8%	961,369	407,392
Total Capital Facilities & Equipment	**$ 83,936,797**	**71.3%**	**28.7%**	**$ 59,858,200**	**$ 24,078,597**

1. Source file for Morgan Hill current water assets as of July 2022: *FA1. Water.xls*
2. Based on proportionate allocation between existing and future users. See Table 2 in Exhibit 1 for demographic expectations. Some assets are excluded or allocated to existing customer only because rate payers will incur these expenses once connected to the system.Land is excluded from the analysis as it is not a depreciable asset.

TABLE 4 - ALLOCATION OF DEBT TO EXISTING AND FUTURE USERS

Bond Issue	Outstanding Principal[1] (Fund 651/653)	% Allocation		$ - Allocation	
		Existing Customers	Future Customers	Existing Customers	Future Customers
2014 Water Refunding & CIP Revenue Bonds	$ 6,711,700	70.2%	29.8%	$ 4,714,058	$ 1,997,642
2014 Water Refunding & CIP Revenue Bonds	$ 9,658,300	70.2%	29.8%	$ 6,783,644	$ 2,874,656
Grand Total	**$ 16,370,000**	**70.2%**	**29.8%**	**$ 11,497,702**	**$ 4,872,298**

1. The 2014 Water Revenue Bonds were issued to: (1) finance 2014 Projects; (2) refinance 1999 Projects and refund the Series 1999 COPs; (3) refinance 2004 Projects and refund the Series 2004 Bonds; and, (4) to pay certain costs of issuance. Source file: *2014 water bonds debt service schedule.pdf.*

TABLE 5 - ALLOCATION OF CASH RESERVES TO EXISTING AND FUTURE USERS

Cash Reserves	Beginning Cash[2]	% Allocation		$ - Allocation	
		Existing Customers	Future Customers	Existing Customers	Future Customers
Un-restricted Reserves					
Water Operations Fund (650)	$ 2,842,432	70.2%	29.8%	$ 1,996,423	$ 846,009
Water System Replacement Fund (653)	$ 11,271,126	70.2%	29.8%	$ 7,916,436	$ 3,354,690
Rate Stabilization Fund (652)	$ 3,151,127	70.2%	29.8%	$ 2,213,239	$ 937,888
Restricted Reserves					
Impact Fund (651)	$ 2,941,398	70.2%	29.8%	$ 2,065,933	$ 875,465
Total Beginning Cash	**$ 20,206,083**	**70.2%**	**29.8%**	**$ 14,192,030**	**$ 6,014,053**

2. Total beginning cash is the sum of the projected cash balances in Funds 650, 651, 652, and 653 as of 07.01.21. Source file: *Cash balance as of 6-30-22.xlsx*

TABLE 6 - PLANNED CAPITAL IMPROVEMENT COSTS, ALLOCATED TO EXISTING AND FUTURE CUSTOMERS

Capital Project Description[1]	Future Cost Estimate (2020-2038)[1]	% Allocation		Distribution of Cost Basis ($)	
		Existing Customers	Future Customers	Existing Customers	Future Customers
Pipeline Capacity Improvements	$ 16,603,707	6.8%	93.2%	$ 1,135,717	$ 15,467,990
Storage Reservoir Capacity Improvements	$ 16,712,442	50.6%	49.4%	$ 8,453,440	$ 8,259,002
Groundwater Well Capacity Improvements	$ 30,240,228	18.5%	81.5%	$ 5,605,821	$ 24,634,407
Pump Station Capacity Improvements	$ 5,846,185	50.3%	49.7%	$ 2,938,790	$ 2,907,395
Pressure Reducing Valve Capacity Improvements	$ 101,878	55.0%	45.0%	$ 56,033	$ 45,845
Known Pipeline Renewal and Replacement	$ 3,267,410	100.0%	0.0%	$ 3,267,410	$ -
Recommended Annual Pipeline Condition Renewal and Replacement (10-year)	$ 18,297,698	100.0%	0.0%	$ 18,297,698	$ -
Reservoir Condition Improvements	$ 3,863,750	100.0%	0.0%	$ 3,863,750	$ -
5-Year Improvement Projects	$ 3,900,000	100.0%	0.0%	$ 3,900,000	$ -
Comprehensive Plan Updates	$ 1,782,000	65.0%	35.0%	$ 1,158,300	$ 623,700
Calendar Year Budget Expansion	$ 7,500,000	0.0%	100.0%	$ -	$ 7,500,000
Total	**$ 108,115,298**	**45.0%**	**55.0%**	**$ 48,676,959**	**$ 59,438,339**

1. Capital Improvement Program projects and allocation to future customers from Water Supply Management Plan projects.
Source file: 2021_WSMPUpdate_Report_FinalDraft_120321.pdf
* Some projects postponed 2 years from Water Supply Management Plan. Source file: *Water CIP from MP revised.pdf*

TABLE 7 - DEVELOPMENT OF THE COST BASIS FOR NEW CUSTOMERS

System Asset Values Allocated to Future Development	
Costs Included in Existing System Buy-In:	
Existing Assets	$ 24,078,597
Planned, Future Capital Projects	59,438,339
Total: Existing & Future System Costs	$ 83,516,936
Adjustments to Cost Basis:	
Cash Reserves	$ 6,014,053
Outstanding Long-Term Debt (Principal)	(4,872,298)
Total: Adjustments to Cost Basis	$ 1,141,756
Total Cost Basis for New Development	**$ 84,658,692**

TABLE 8 - DEVELOPMENT OF THE MAXIMUM CAPACITY FEE PER METER EQUIVALENT

Summary of Capacity Fee Calculation	Adjusted System Cost Basis	Build-Out Total *(Units)*	Base Capacity Fee
Proposed Capacity Fee	$ 84,658,692	7,241	**$11,692**

1. Refer to Exhibits 2 and 7 for detail of existing assets.
2. Refer to Exhibit 4 for detail related to planned assets.
3. Refer to Exhibit 3 for detail related to cash reserves and outstanding debt.
4. Refer to Exhibit 1 (Demographics) for growth projections.

TABLE 9 - WATER CAPACITY FEE BASED ON METER SIZE

Meter Size	Equivalency Factor		Capacity Fee Per Meter Size
	Maximum Continuous Flow (gpm)[1]	Equivalency to 1-inch meter	
5/8-1 inch meter	50	1.00	**$11,692**
1.5-inch meter	100	2.00	**$23,385**
2-inch meter	160	3.20	**$37,415**
3-inch meter	320	6.40	**$74,830**
4-inch meter	500	10.00	**$116,923**
6-inch meter	1,000	20.00	**$233,845**
8-inch meter	1,600	32.00	**$374,152**

1. Source: *AWWA M1, Table B-2. Assumes displacement meters for 3/4" through 2", Compound* Class I for 3" through 6", and Turbine Class II for 8" through 10".