

Final Report



Los Angeles County Public Works District 29 System Capacity Charges Study *September 2026*





September 28, 2026

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Subject: Los Angeles County Public Works District 29 System Capacity Charge Study Report

Dear Mr. Naderi:

Please find enclosed the final report regarding the District 29 System Capacity Charge study (Study) for Los Angeles County Public Works (County). District 29 System Capacity Charges include a Meter Component and a Fire-Flow Component. These fees are different in their establishment and assessment but work in tandem to support District 29.

The focus of this report is the creation of cost-based and proportional fees to support the impact of growth on the District 29 water system. This report has been prepared using generally accepted financial and engineering principles. District 29 financial, planning, and engineering data were the primary sources for the information contained in this report.

HDR appreciates the opportunity to assist the County in this matter. We also would like to thank County staff for the assistance provided to us. We look forward to future opportunities to assist the County.

Sincerely yours,
HDR Engineering, Inc.

A handwritten signature in black ink, appearing to read 'Shawn Koorn'.

Shawn Koorn
Associate Vice President



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Abbreviations and Acronyms

County	Los Angeles County Public Works
AWWA	American Water Works Association
CIP	Capital Improvement Plan
EDU	Equivalent Dwelling Unit
RCN	Replacement Cost New
RCNLD	Replacement Cost New Less Depreciation

Definitions

Allowable Capacity Charge: Is the maximum cost-based charge which can be implemented. As a matter of policy, a capacity charge which is less than the allowable capacity charge may be implemented.

Buy-In Methodology: A generally accepted methodology used to calculate a capacity charge which considers only the value of the existing assets of the utility available to provide service (e.g., capacity).

Capacity Charge Eligible: The assets (i.e., infrastructure) and value of those assets which are included within the calculation of the capacity charge. For example, the value of contributed or donated assets are not capacity charge eligible and are excluded from the calculation of the capacity charge.

Combined Methodology: A generally accepted methodology used to calculate a capacity charge which considers both the value of the existing assets of the utility along with the value of future capacity/expansion related improvements.

Equivalent Dwelling Unit (EDU): One EDU is the level of service in gallons per day for an average residential dwelling.

Existing Facilities: Assets which are currently in service and booked as an asset on the City's plant asset records.

Gallons Per Day (GPD): The average gallons per day (gpd) that a customer or group of customers use. Gallons per day may be further defined as being related to average day use or peak day use.

Master Plan: A planning document used by the utility to assess current and future conditions and needs, particularly as they relate to future customer growth and expansion infrastructure. A master plan is typically accepted and adopted by the utility governing body.

System Capacity Charge: For the purposes of this analysis, California Government Code defines System Capacity Charges as follows: "a 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. A "capacity charge" does not include a commodity charge."

Introduction

The County commissioned this Study to determine a cost-based System Capacity Charges for the District 29 water system. District 29¹ encompasses the City of Malibu and the unincorporated area of Topanga. District 29 provides water service to over 31,000 people via approximately 7,712 connections. The majority of the connections are single family residential connections (7,174). District 29's water is primarily supplied by the West Basin Municipal Water District (West Basin)². West Basin imports water from the Metropolitan Water District of Southern California (Metropolitan). District 29 also provides water to Marina Del Rey (MDR), which is included as a component of the MDR System Capacity Charge study.

The purpose of this report is to document the development of the proposed System Capacity Charges for District 29. The purpose of the System Capacity Charges is to recover the costs of public facilities both in existence at the time the charge is imposed and the costs of planned future capital investments identified as part of this Study that provide additional capacity. These are charged to new customers connecting to the system, and to existing customers increasing their demands compared to the value of their existing (pre-expansion) capacity. By establishing cost-based System Capacity Charges, the County's Goal is to have growth-pay-for-growth by having new customers pay their proportional share of the infrastructure in place that will serve them, while also reflecting the system costs that the existing utility customers have funded for available capacity in the current system. The System Capacity Charges will not remove the necessity of developer agreements, as it will only accounts for the identified projects at the current time. Where applicable, developer agreements will still be needed to account for the additional capacity needs that exceed the current system's ability to provide capacity. The Fire-Flow Component is in place to account for the water infrastructure available to provide water in sufficient quantities and pressures to fight fire on parcels served by the District. This component is imposed as the existing rate payers have invested into the system's ability to provide public fire protection, and a new customer will buy into the portion of the system available to address the fire capacity.

Study Overview

The System Capacity Charges for District 29 includes two components: a Meter Component and a Fire-Flow Component. The Meter Component reflects the cost of the existing capacity in the water system and a portion of the future cost of capacity-related infrastructure. The Fire-Flow Component is in place to account for the water infrastructure available to provide water in sufficient quantities and pressures during a fire event on parcels served by the District. The System Capacity Charges for District 29 are calculated in conformance with generally accepted rate and fee setting practices, California legal requirements, and are based on District 29's planning and design criteria and customer characteristics.

¹ District 29, 2020 UWMP, Section 3 System Description, page 3-1

² District 29, 2020 UWMP, page 3-3

As noted, System Capacity Charges are based on the available capacity in existing infrastructure, and the portion of planned future capacity improvements providing additional capacity, divided by the number of equivalent dwelling units (EDUs) that will be served by the capacity. The total number of EDUs within this report is based on District 29 planning information provided by County staff. A component by component (distribution, pumping, and storage) approach is often taken in developing the System Capacity Charges as each component can have different planning and design criteria. The District 29 service area is near maximum capacity across the district, and some capacity enabling capital projects are identified in the short-term. As a result, the analysis and development of the fees is based on existing infrastructure and the cost of eligible improvements. This approach is categorized as a form of the “combined” methodology as it accounts for both existing capacity and future improvements.

The American Water Works Association (AWWA) states:

“The Combined approach is based on a blended value of both the existing and expanded system’s capacity. This method is typically used where some capacity is available in parts of the existing system (e.g., source of supply), but new or incremental capacity will need to be built in other parts (e.g., treatment plant) to serve new development at some point in the future.”³

For District 29, future capital improvements have been included, which provide limited additional capacity. As a result, the existing capacity of the system and eligible planned future capital improvements will provide some additional capacity. This makes District 29 most suitable for the combined approach. Note that while the System Capacity Charges are based on the cost of adding additional connections to the system based on current planning. It will not eliminate the need for developer’s agreements to address the need for additional capacity expansion not included in this study to serve new connections.

At its simplest form, the System Capacity Charges are based on the value of existing capital infrastructure divided by the number of total EDUs served by the available capacity. The calculations also take into account the financing mechanisms of capital improvements. Based on the sum of the value of the existing component costs, the net allowable System Capacity Charges are determined. “Net” refers to the calculated “gross” System Capacity Charges, net of any debt service credits or contributions made from developers or grant funding. A debt service credit avoids double charging the customer for the asset value in the existing or buy-in component of the System Capacity Charges, and also in the debt service component included within the current water rates. The System Capacity Charges are based on infrastructure the County funded and therefore the developer contributions or grant funding is not included in the calculations. District 29 does not currently have any debt related to capital. Therefore, the maximum allowable fee may be calculated without the inclusion of any debt credits. “Allowable” refers to the concept that the calculated System Capacity Charges are District 29’s maximum cost-based charge. The County, as a matter of policy, may charge any amount up to the cost-based System Capacity Charges, but not in excess of the calculated amount.

³ American Water Works Association (AWWA), M-1 Manual, 7th Edition, p. 330.

The System Capacity Charges for District 29 includes two components: a Meter Component and a Fire-Flow Component. The Meter Component is a charge reflecting the development's proportionate share of the capacity of the District's distribution system attributable to the size and capacity of the water meter required to serve the property. The Fire-Flow Component is the cost of the percentage of water mains that can contribute to fire protection needs, excluding smaller mains related to distribution. The Fire-Flow Component also includes reservoirs with sufficient capacity to aid fire control. That cost is then divided across the fire flow requirements of the District. In essence, the Fire-Flow Component addresses the portion of the system that can serve both water needs and fire protection needs. This was determined through a system capacity analysis, and through separating out infrastructure that does not directly contribute to fire protection. For example, the small customer distribution lines are not included in the Fire-Flow Component as these assets do not contribute to the system's overall fire flow capacity. A portion of the costs of these assets is removed from the Meter Component calculation and used in the Fire-Flow Component calculation. Therefore, the Fire-Flow Component does not "double count" asset costs contained in the Meter Component.

The System Capacity Charges should be implemented according to the capacity requirement (i.e., the impact) each new EDU places on the water system. This way, the System Capacity Charges are related to the costs the new customer places on the systems and the benefit they derive from infrastructure in place to serve them. It is recommended that the customer meter size be used as the basis for implementing the Meter Component as it reflects capacity demands of the customer and is the basis for the calculation of the System Capacity Charge. Table ES-1, below, shows the calculated Meter Component based on the meter size.

Table ES-1 Summary of the Calculated Meter Component	
Meter Size	District 29
3/4"	\$14,454
1"	\$28,908
1 1/2"	\$43,362
2"	\$72,270
2 1/2"	\$101,178
4"	\$245,719
6"	\$476,984
8"	\$766,065
10"	\$1,112,962
12"	\$1,445,405

[1] Based on "Combined" methodology established in AWWA M1, Seventh Edition, pages 330-331.

Note: It is recommended that the Calculated Meter Component for meter sizes above 2" be reviewed by County staff.

The result of the Meter Component analysis is \$14,454 for the standard single family home meter size (3/4").

The Fire-Flow Component should be implemented based on the fire flow requirements a new connection requires. The Fire-Flow Component is set by the gallon and different sized fire flow requirements are charged according to the gallons of fire flow required and a fire flow factor applied to account for the disproportionate burden of greater fire flows. Fire flow factors were based on the County's existing fire flow factors. Table ES-2 lists the calculated Fire-Flow Component by fire flow need.

Table ES-2 Summary of the Calculated Fire-Flow Component				
Fire Flow Demand (gpm)	Fire Flow Duration (min)	Fire Flow Cost per Gallon	Fire Flow Factor	Fire Flow Fee
1,250	60	\$0.0212	1	\$1,590
1,500	60	\$0.0212	1.2	\$2,290
2,000	120	\$0.0212	3.2	\$16,282
2,500	120	\$0.0212	4	\$25,440
3,000	180	\$0.0212	7.2	\$82,426
3,500	180	\$0.0212	8.4	\$112,190
3,750	180	\$0.0212	9	\$128,790
4,000	240	\$0.0212	12.8	\$260,506

This analysis valued the assets at Replacement Cost New Less Depreciation (RCNLD). RCNLD is the original cost escalated to current-day dollars and depreciated according to the age of the asset. The RCNLD method reflects the value of the existing system at the time the new customer is connected to the system and therefore reflects the carrying costs of the capacity built into the system in advance of the new customer's connection.

Consultant's Recommendation

Based on the review and analysis of the District 29 planning materials and asset costs, HDR makes the following recommendations:

- ✓ The County should adopt the District 29 System Capacity Charges for new EDUs which are no greater than the net allowable System Capacity Charges as set forth in this report.
- ✓ The System Capacity Charges will work in tandem with developer agreements when additional capacity improvements are needed to support new expansion infrastructure not covered by the System Capacity Charges calculation.
- ✓ Existing connection fees will be evaluated and updated if/when the System Capacity Charges are implemented so not to double count or over recover costs.
- ✓ The County should update the District 29 actual calculations for the System Capacity Charges at such time when a new capital improvement plan, public facilities plan, comprehensive system plan, or a comparable plan is approved or updated, or every five years.

Disclaimer

HDR, in its calculation presented in this report, has used generally accepted engineering, planning, and rate and fee making principles. HDR recommends that County legal counsel provide guidance on the final charge level and implementation approach prior to adoption for compliance with California legal and legislative requirements.

Summary

The System Capacity Charges for District 29 as presented in this report are based on the planning and engineering design criteria of the District 29 water system, the value of existing assets, and generally accepted principles. The calculated fees will provide multiple benefits to District 29 by accounting for the addition of new customers in accordance with the additional burden they impose on existing systems and future improvements.



1.0 Introduction and Overview

1.1 Introduction

The purpose of a System Capacity Charge is to fund a proportionate share of capital costs for both existing and planned future infrastructure. However, it is important to note that not all capacity improvements have been identified at the current time. Given this, future capacity enabling projects not included in this study would be applicable for a developer agreement. The objective of the analysis is to calculate the cost-based fees for new customers connecting to, or requesting additional capacity on, the District 29 water system. By establishing cost-based System Capacity Charges, the County has growth-pay-for-growth by having new customers connecting to the system and customers enlarging their connections pay their proportional share of the infrastructure that will serve them, while also capturing the value of the portion existing customers have paid for funding the available capacity in the existing system, thereby shielding existing customers from the financial impacts of growth to the extent possible. General industry recommendations are to update the charges every three to five years, or when comprehensive planning documents for the water system have been updated.

1.2 Overview of the District 29 Water System

The 47-square mile district contains the city of Malibu, and the unincorporated area of Topanga. The district purchases water from the West Basin Municipal Water District (West Basin). West Basin's primary source of water is imported from the Metropolitan Water District of Southern California (Metropolitan). Figure 1 depicts District 29's service areas. The existing water system consists of 220 miles of water lines and 52 potable water tank reservoirs. District 29 serves over 31,000 people.⁴

⁴ District 29, 2020 UWMP, Section 3 System Description, page 3-1 to 3-5

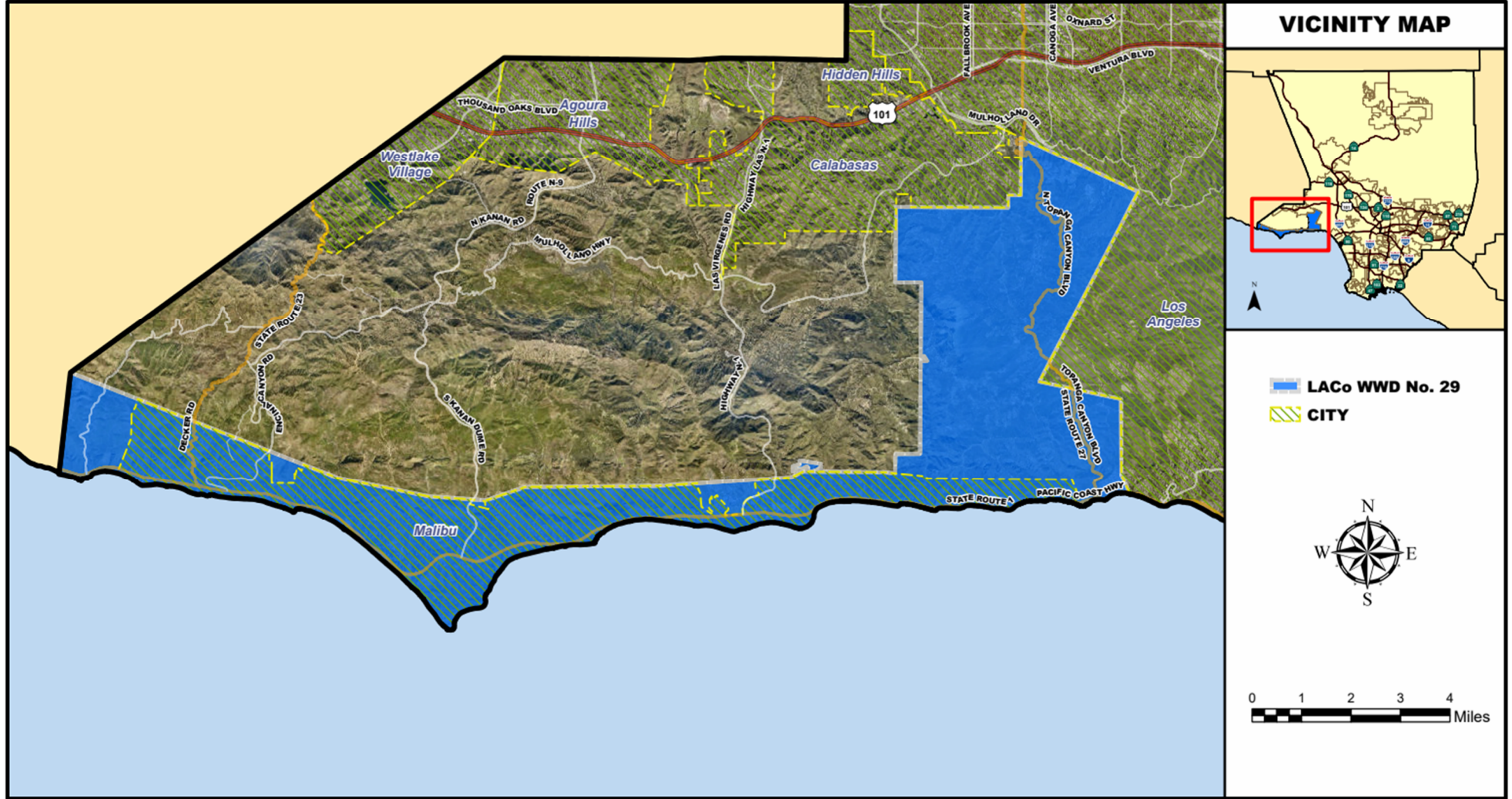


Figure 1. Map of District 29

1.3 Existing Fees

The County has an existing fee program in place that applies to new connections on the system. If, and when, the System Capacity Charges are implemented, it will be necessary to review and determine if existing fees overlap and result in a double charge to the customer for the same purpose and adjust the current fee program as necessary.

Table 2-1
Definitions of Existing Fees

Fee Title	Abbreviated Description
Meter Processing Fee (Rule 3-A-11k)	For the County to process water service applications including issuance of standard plans and specifications, inspection of the installation, processing of a new account for billing purposes.
Capital Improvement (Acreage) Charge (Rule 4-A-1b(5))	Capital Improvement Charge based on the number of acres benefitted by the use of district water.
Frontage (Rule 3-A-4a)	The charge is based on the benefitted frontage of a parcel where district water is to be used.
Billing Unit Rule 4-A-1k(4)	The Capital Improvement Billing Unit Charge for upgrading a metered service from a smaller to a larger size will be the difference in the billing units multiplied by said amount.
Tank Capacity Rule 4-A-1b(6)	The charge for participation in the construction of additional water storage and other water facilities in addition to the Capital Improvement (acreage) charges.

1.4 Defining System Capacity Charges

The first step in establishing cost-based System Capacity Charges is to gain an understanding of the definition of a System Capacity Charge. For the purposes of this analysis, California Government Code defines a System Capacity Charge as follows:

“a 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. A “capacity charge” does not include a commodity charge.”

System Capacity Charges are generally imposed as a condition of service. The objective of System Capacity Charges is not to generate revenue for the utility, but to create a fiscal balance (proportionality) between existing customers and new customers. In this way, all customers seeking to connect to the utility’s system bear a proportional share of the cost of capacity that is invested in the existing system. Through the implementation of proportional and cost-based System Capacity Charges, existing customers will not be unduly burdened with the cost of new development (e.g., system expansion).

1.5 Methodology to Establish System Capacity Charges

There are several approaches that can be used to establish System Capacity Charges which ultimately depend on the available capacity in the utility system to meet customer demands. The AWWA M-1 Manual discusses three generally accepted System Capacity Charges methods:

- The **buy-in method** is based on the value of the existing system's capacity. This method is typically used when the existing system has sufficient capacity to serve new development now and into the future.
- The **incremental cost method** is based on the value or cost to expand the existing system's capacity. This method is typically used when the existing system has limited or no capacity to serve new development now and into the future.
- The **combined approach** is based on a blended value of both the existing and expanded system's capacity. This method is typically used where some capacity is available in parts of the existing system (e.g., water or wastewater treatment), but new or incremental capacity will need to be built in other parts (e.g., water storage, wastewater lift station) to serve new development at some point in the future.⁵

For District 29 there is limited capacity available within the existing system. However, there are planned capital improvements that will provide some additional capacity on the system. Given this, a "Combined" method (existing assets + future assets) was deemed to be the most appropriate methodology to establish the Meter Component and Fire-Flow Component for District 29. The County is only applying the System Capacity Charges to account for the burden placed on the existing systems and future capital by new connections not accounted for in developer agreements.

Within the generally accepted System Capacity Charge methodologies⁶, there are a number of different steps used to establish cost-based and proportional System Capacity Charges. These steps are as follows:

Step 1 – Determination of system planning criteria

Step 2 – Determination of connections

Step 3 – Valuation of system component costs

Step 4 – Determination of any credits

Step 1 – Determination of System Planning Criteria

The first step in establishing System Capacity Charges is the determination of the system planning criteria. This implies calculating the amount of capacity required per EDU. The use of an adopted facility plan or master plan for the utility provides the basis for the System Capacity Charges system planning criteria. These planning documents provide the rational planning basis and criteria for the facilities and investment needed to operate and maintain the system properly and

⁵ AWWA M-1 Manual, 7th Edition, p. 330-337.

⁶ Methodologies established in industry documents referenced as System Development Charges for Water, Wastewater, and Stormwater Facilities, by Arthur C. Nelson; AWWA M-1 Manual, 7th Edition.

adequately. In this case, it was based on the number of equivalent meters and additional growth on the system to reflect current capacity on the system.

Step 2 – Determination of Number of EDUs

The next step is the determination of the number of EDUs. An EDU provides a “common denominator” for assessing impact on a utility system. The determination of the total system connections is an important calculation in that it provides the linkage between the amounts of infrastructure necessary to provide service to a set number of customers. This implies that the expected growth over the duration of time the system is expected to provide for must be the denominator to divide any cost dedicated to that expansion. To establish the value in the existing system, the County conducted an evaluation to determine the level of additional capacity available in the system under existing conditions. The evaluation concluded that there is limited capacity within existing systems to support significant growth.

Step 3 – Valuation of System Component Costs

Once the number of EDUs, or capacity for the system, is determined, a component-by-component analysis is undertaken of the assets to determine the portion of the System Capacity Charge attributable to each component in dollars per connection basis. In this process, the existing assets must be valued. Existing assets may be valued in a number of different ways. Valuation methods may include the following:

- Original Cost (OC), which is the cost of construction in year of construction
- Original Cost Less Depreciation (OCLD)
- Replacement Cost New (RCN), which is the current day dollars of replacing existing plant (infrastructure)
- Replacement Cost New Less Depreciation (RCNLD)

Given these four different methods for valuing the assets, the selection of the valuation method certainly arises. The American Water Works Association M-1 Manual notes the following concerning these generally accepted valuation methods:

“Using the OC and OCLD valuations, the SDC [System Capacity Charge] reflects the original investment in the existing capacity. The new customer “buys in” to the capacity at the OC or the net book value cost (OCLD) for the facilities and as a result pays an amount similar to what the existing customers paid for the capacity (OC) or the remaining value of the original investment (OCLD).

Using the RCN and the RCNLD valuations, the SDC [System Capacity Charge] reasonably reflects the cost of providing new expansion capacity to customers as if the capacity was added at the time the new customers connected to the water system. It may be also thought of as a valuation method to fairly compensate the existing customers for the carrying costs of the excess capacity built into the system in advance of when the new customers connect to the system. This is because, up to the point of the new customer

connecting to the system, the existing customers have been financially responsible for the carrying costs of that excess capacity that is available to development.”⁷

As a point of reference for the Study, the District 29 System Capacity Charge analysis will use the RCNLD methodology for all assets in the Study. District 29’s existing assets are valued at replacement cost based on original cost escalated to current dollars then depreciated based on the installation date. This value reasonably reflects the carrying costs of the excess (available) capacity paid by existing customers.

The next step in the analysis is to determine the valuation of the system infrastructure. The combined approach is based on existing infrastructure and future eligible capital improvements. To evaluate existing infrastructure, the County provided asset data sorted by region and pressure zone. The cost of each asset type was calculated according to relevant design features (storage, horsepower, etc.), installation date, and engineering cost. The installation data allowed for the RCN value (i.e., today’s value) to be converted to the RCNLD value (i.e., depreciated value).

Step 4 – Determination of Any Credits

The last step in the calculation of the System Capacity Charge is the determination of any credits. The credit takes into account the method used to finance infrastructure on the system so that customers are not paying twice for infrastructure – once through the System Capacity Charges and again through rates. The double payment can come in through the imposition of System Capacity Charges and then the requirement to pay debt service within a customer’s user rates.

This component accounts for the outstanding debt principal on existing assets. By segregating the debt service, the cost can be clearly identified and calculated appropriately. To avoid double-counting of the assets financed with debt, the remaining principal associated with those assets would be deducted from the existing infrastructure value. Since District 29 does not have outstanding debt principals for the assets included in the calculation, a credit is not necessary to ensure the customers will not double pay for an asset through rates and a System Capacity Charge.

The “gross System Capacity Charge” less any debt credits, results in the net “maximum allowable fee”. As a matter of policy, the County’s Board of Supervisors (Board) can set the final water System Capacity Charges up to this level.

1.6 Summary

This section of the report has defined System Capacity Charges and provided an overview of the approach, which establishes an appropriate apportionment of costs to the new connections in relation to benefits those connections will reasonably receive from the system. The next section of the report will provide a discussion of the calculation of District 29’s System Capacity Charges.

⁷ AWWA M-1 Manual, 7th Edition, p. 332.



2.0 Calculation of the System Capacity Charge

2.1 Introduction

This section of the report presents the key assumptions and details used in calculating the District 29 System Capacity Charges. The System Capacity Charges are a one-time charge for new connections or existing connections requesting to increase their capacity needs. The calculation of the System Capacity Charges is based on District 29-specific accounting, financial, and planning information. Specifically, the charges are based on the fixed asset records for the District 29 service area and the eligible projects provided in the short-term capital improvement plan. As noted, the System Capacity Charge includes two components for District 29, a Meter Component and a Fire-Flow Component. Each of these components is discussed in more detail in the following sections.

2.2 Calculation of the Meter Component

As discussed in Section 1, the process of calculating the Meter Component of the System Capacity Charges is based on a four-step process. In summary form, these steps are as follows:

- **Step 1** - Determination of system planning criteria
- **Step 2** - Determination of EDUs
- **Step 3** - Valuation of system component costs
- **Step 4** - Determination of any credits

Each of these steps is discussed in more detail below.

2.2.1 Water System Planning Criteria

District 29 is near maximum capacity in terms of adding additional connections; however, some planned short-term capital improvements will provide some additional limited capacity. Any additional growth will impose a burden primarily on the existing facilities, and the System Capacity Charge will be used to account for some of that burden. As a result, additional capacity improvements not included in the System Capacity Charge Meter or Fire-Flow Component would be recovered through developer agreements where applicable.

2.2.2 Water System Determination of EDUs

The County provided meter data to aid in the estimation of the number of EDUs. Meter sizes were assigned a multiplier to calculate the proper number of equivalents by meter size. The 3/4" and 5/8" meters were assigned a factor of 1 since both are treated as standard sizes, although the 5/8" meter is no longer used for new connections in the district. This means that a 3/4" meter equates to one EDU and larger meters equate to progressively more EDUs. Based on this system, District 29 contains 20,641 EDUs as shown in Table 2-1.

Table 2-1
Meter Component – Determination of EDUs

Meter Size	Number of Meters	EDU Factor	Number of EDUs
3/4" or 5/8"	3,008	1	3,008
1"	3,677	2	7,354
1 1/2"	583	3	1,749
2"	256	5	1,280
2 1/2"	3	7	21
3"	8	11	88
4"	57	17	969
6"	37	33	1,221
8"	60	53	3,180
10"	23	77	1,771
12"	0	100	0
Total	7,712	--	20,641

These EDUs will serve as the denominator to divide the cost of assets for the system to calculate the Meter Component.

2.2.3 Water Valuation of System Components

The next step of the analysis is to review the system infrastructure to determine the Meter Component for the system. This includes the system and infrastructure in place today that provides service (buy-in). The methodology and approach used to calculate each of these components is described below.

EXISTING BUY-IN COMPONENT – To calculate the value of the existing assets for the buy-in component, the methodology considered the original cost of each asset. The County provided the most recent District 29 asset listing for the existing infrastructure and the installation date of each asset as of January 2026. The original cost of the asset was then adjusted to today's value to reflect replacement cost. As was noted in Section 1, there are different methods for valuing existing assets. In this case, a replacement cost new less depreciation method was used to reflect the value of the infrastructure in place to serve new customers. This method reflects the value of the capacity that has been installed and funded by existing customers at today's value, less depreciation based on the age of the asset. To accomplish this, the original cost of each asset was escalated to current, January 2026 dollars. The RCN asset total was \$721.04 million, and the depreciated asset total was \$235.97 million. Either total may be used in the calculation of the System Capacity Charges. The depreciated value was used to determine the value of the existing assets in the system

DEBT SERVICE COMPONENT – The final component of the existing buy-in fee is the debt service credit. The inclusion of a debt service credit avoids double charging the customer for the asset value in the buy-in component of the Meter Component and in the debt service component of the rates. By segregating the debt service out, the cost can be clearly identified and calculated appropriately. District 29 does not have any outstanding debt associated with capital

improvement or expansion. Because there is no outstanding debt, there is no potential for customers to be double charged, and because there is no outstanding debt and no potential for customers to be double charged, a debt credit does not need to be applied.

SUMMARY OF EXISTING (BUY-IN) METER COMPONENT - Based on the existing system infrastructure, the net existing (buy-in) component was calculated to be \$10,101 per EDU. It is important to note that the existing components are divided through by total existing EDUs. Table 2-2 summarizes the calculation of the Meter Component for a standard meter size (3/4”).

Table 2-2 Meter Component Existing Component			
District	RCNLD Total ¹	Number of EDUs	\$/EDU
District 29	\$208,499,315	20,641	\$10,101

[1] Excludes fire-enabling infrastructure.

FUTURE COMPONENT – The next component in the Meter Component calculation is the linkage between the anticipated future growth, or expansion, on the system and the necessary facilities (infrastructure) required to accommodate that growth and additional capacity needs. The District 29 short-term capital improvement plan includes some planned projects that will provided a limited amount of additional capacity on the system. Given this, County staff reviewed the proportion of additional EDUs that could be served by the improvements that provided additional system capacity. The total cost of eligible capital was divided by the number of EDUs it could support as shown in Table 2-3.

Table 2-3 Meter Component Future Component			
Project Type	Eligible Cost	Number of EDUs	\$/EDU
Reservoirs	\$13,095,000	4,572	\$1,919
Mains	\$9,270,000	4,128 ^[1]	\$1,998
Other	\$1,800,000	4,128 ^[1]	\$436

[1] Based on an anticipated 20% increase in serviceable EDUs.

2.2.4 Maximum Allowable Meter Component

The methodology used to establish the Meter Component is a combined approach. The buy-in components reflect the existing capacity, and the future capital reflects the planned capital improvements that will provide some additional capacity in the system, resulting in the maximum allowable Meter Component. Note that additional capacity needs for new growth not included in the Meter Component would be recovered through specific developer agreements. “Allowable” refers to the concept that the calculated Meter Component are District 29’s cost-based Charges. The County, as a matter of policy, may charge any amount up to the allowable

Meter Component, but not over that amount. Charging an amount greater than the allowable Meter Component would not meet the practical basis of a cost-based charge.

Based on the sum of the component costs calculated above, the net allowable Meter Component is \$14,454 per EDU. The assets that were not funded by the County such as developer contributions or grants were not included in the analysis. This analysis valued the assets at replacement cost new less depreciation. RCNLD is the original cost escalated to current-day dollars less the depreciation of the asset over time.⁸ The RCNLD method reflects the cost of the existing facilities capacity and therefore reflects the costs of the capacity built into the system in advance of the new customer's connection. Table 2-4 provides the calculated Meter Component by meter size.

Table 2-4
Summary of the Calculated Meter Component Charges

Meter Size	District 29
3/4"	\$14,454
1"	\$28,908
1 1/2"	\$43,362
2"	\$72,270
2 1/2"	\$101,178
4"	\$245,719
6"	\$476,984
8"	\$766,065
10"	\$1,112,962
12"	\$1,445,405

Note: It is recommended that the Meter Component for meter sizes above 2" be reviewed by County staff.

2.3 Calculation of the Fire-Flow Component

The Fire-Flow Component is based on the infrastructure required to provide public fire protection service to the properties in the District. The same approach developed to determine the value of infrastructure for the Meter Component was used to establish the Fire-Flow Component. Note that the infrastructure component for the Fire-Flow Component was subtracted from the Meter Component so not to double count between the two different components. The components of the system that are most relevant to providing public fire service are the transmission and storage capacity of the system. To capture the value of the existing rate payers' investments in those systems, the Fire-Flow Component is calculated based on the portion of the mains and reservoirs capable of providing public fire protection. Since a large portion of the cost in mains is related to average and peak day needs, only the portion of the system dedicated to transmission was captured in the calculation of the Fire Flow Fee. Similarly, since larger reservoirs are more capable of aiding fire flow, only reservoirs with storage of 1 million gallons or greater were included in the calculation of the Fire-Flow Component. Since the reservoirs are not exclusively for fire service, the cost of reservoirs was only applied at a rate of 33% of the total cost. The portion of

⁸ AWWA M1 Manual, Seventh Edition, page 332.

both the mains and reservoirs costs included in the Fire-Flow Component were removed from the Meter Component to prevent double counting of assets.

The cost of the infrastructure in these two categories was then divided by amount of fire flow in gallons, that the district requires, to calculate a Fire-Flow Component per gallon. To account for the disproportionate burden imposed by large fire flow requirements, a fire flow factor was set based on the ratio between the standard residential fire flow (1,250 GPM for 1 hour) and the larger requirement. Table 2-6 lists the calculated Fire-Flow Component by fire flow requirement.

Table 2-6 Summary of the Calculated Fire-Flow Component				
Fire Flow Demand (gpm)	Fire Flow Duration (min)	Fire Flow Cost per Gallon	Fire Flow Factor	Fire Flow Fee
1,250	60	\$0.0212	1	\$1,590
1,500	60	\$0.0212	1.2	\$2,290
2,000	120	\$0.0212	3.2	\$16,282
2,500	120	\$0.0212	4	\$25,440
3,000	180	\$0.0212	7.2	\$82,426
3,500	180	\$0.0212	8.4	\$112,190
3,750	180	\$0.0212	9	\$128,790
4,000	240	\$0.0212	12.8	\$260,506

2.4 Total System Capacity Charges

The Meter Component and Fire-Flow Component are the two components of the System Capacity Charges recommended for implementation by the County. If a new connection qualifies for the System Capacity Charges, then the new connection will pay the sum of each fee according to the meter size and fire flow requirement.

2.5 Key Assumptions

In developing the System Capacity Charges for the District 29 water system, a number of key assumptions were utilized. These are as follows:

- The County's District 29 fees were developed on the basis of planning documents, and capacity EDUs.
- The County provided the asset records for District 29 as of January 2026 which were used to determine the value of existing infrastructure assets.
- There was no applicable debt to use as a credit toward the fees.

2.6 Consultant's Recommendations

Based on our review and analysis of District 29's capacity infrastructure, HDR makes the following recommendations:

1. The County should adopt the District 29 System Capacity Charges for new EDUs which are no greater than the net allowable System Capacity Charges as set forth in this report.
2. The System Capacity Charges will work in tandem with developer agreements when additional capacity improvements are needed to support new expansion infrastructure not covered by the System Capacity Charges calculation.
3. Existing connection fees should be evaluated and updated when the System Capacity Charges are implemented to not over recover costs or double charge new connections.
4. The County should update the District 29 actual calculations for the fees at such time when a new capital improvement plan, public facilities plan, comprehensive system plan, or a comparable plan is approved or updated, or every five years.

2.7 Summary

The System Capacity Charges, consisting of the Meter and Fire-Flow Components developed and presented in this report are based on the planning and engineering design criteria of the District 29 water system, the value of the existing assets, and generally accepted rate and fee setting principles. Reviewing the fees every five years would continue to create equitable and cost-based charges for new customers connecting to the District 29 water systems.



Technical Appendix

Los Angeles County Public Works
Exhibit 1
Calculated System Capacity Charge
District 29

Meter Component

Meter Size	Number of EDUs	Calculated Capacity Charge
3/4"	1	\$14,454
1"	2	\$28,908
1 1/2"	3	\$43,362
2"	5	\$72,270
2 1/2"	7	\$101,178
4"	17	\$245,719
6"	33	\$476,984
8"	53	\$766,065
10"	77	\$1,112,962
12"	100	\$1,445,405

Fire Flow Component

Fire Flow Demand (gpm)	Fire Flow Duration (min)	Fire Flow Cost per Gallon	Fire Flow Factor	Fire Flow Fee
1,250	60	\$0.0212	1	\$1,590
1,500	60	\$0.0212	1.2	\$2,290
2,000	120	\$0.0212	3.2	\$16,282
2,500	120	\$0.0212	4	\$25,440
3,000	180	\$0.0212	7.2	\$82,426
3,500	180	\$0.0212	8.4	\$112,190
3,750	180	\$0.0212	9	\$128,790
4,000	240	\$0.0212	12.8	\$260,506

Los Angeles County Public Works
Exhibit 2
Development of System Capacity Charges - Combined Method
District 29

Meter Component		
Plant Description	Asset Cost Less Fire Component (RCN)	Asset Cost Less Fire Component (RCNLD)
Assets		
Water Mains	\$463,103,772	\$146,827,847
Supply Reservoirs	\$95,257,360	\$41,895,676
Pumping	\$82,359,500	\$19,775,792
Total Assets	\$640,720,632	\$208,499,315
Less: Contributed Capital		
Water Mains	\$0	\$0
Supply Reservoirs	\$0	\$0
Pumping	\$0	\$0
Wells	\$0	\$0
NET ASSETS	\$640,720,632	\$208,499,315
Less: Outstanding Debt Principal	\$0	\$0
SELECTED TOTAL		\$208,499,315
Plant Description		
Equivalent Dwelling Units		20,641
Existing Cost Component per EDU		\$10,101
Future Cost Component per EDU		\$4,353
Total Existing and Future Cost per EDU		\$14,454

Fire Flow Component		
	Fire Component (RCN)	Fire Component (RCNLD)
Assets (Fire Allocation)		
Water Mains (Fire Allocation)	\$57,398,485	\$18,198,288
Supply Reservoirs (Fire Allocation)	\$22,921,140	\$9,269,209
Pumping (Fire Allocation)	N/A	N/A
Total Assets (Fire Allocation)	\$80,319,625	\$27,467,497
Less: Contributed Capital (Fire Allocation)		
Water Mains (Fire Allocation)	\$0	\$0
Supply Reservoirs (Fire Allocation)	\$0	\$0
Pumping (Fire Allocation)	\$0	\$0
Wells (Fire Allocation)	\$0	\$0
NET ASSETS (Fire Allocation)	\$80,319,625	\$27,467,497
Less: Outstanding Debt Principal	\$0	\$0
SELECTED TOTAL	\$27,467,497	
Future Cost (Fire Allocation)	\$5,343,601	
Total Fire Cost Allocation (Future + Existing)	\$32,811,098	
Cost per Gallon of Fire Protection	\$0.0212	

Los Angeles County Public Works

Exhibit 3

Water Debt

District 29

Item	
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Outstanding Principal Payments	\$1,416,000
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Water Capacity Fee Eligible	0.0%
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Total Allocable to Capacity Fee	\$0
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NOTES:

District has no outstanding debt related to capacity.

Los Angeles County Public Works
Exhibit 4
Water EDUs
District 29

Size of Meter		5/8"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	6"	8"	10"	12"	Total	% of
Equivalency Factor		1.00	1.00	2.00	3.00	5.00	7.00	11.00	17.00	33.00	53.00	77.00	100.00		Total
Number of Existing EDUs															
		Number of Meters													
Single Family	RE	267	2,660	3,572	494	152	2	2	2	4	18	1	0	7,174	93.0%
Multi Residential	MF	6	20	46	31	39	0	1	5	10	3	2	0	163	2.1%
Commercial	CO	0	34	45	47	50	1	2	46	16	35	18	0	294	3.8%
Industrial	IN	0	1	0	0	1	0	0	1	0	0	0	0	3	0.0%
Government	GO	2	17	14	11	14	0	3	3	7	4	2	0	77	1.0%
Other	OT	0	1	0	0	0	0	0	0	0	0	0	0	1	0.0%
		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Total Meters		275	2,733	3,677	583	256	3	8	57	37	60	23	0	7,712	100%
		Equivalent Meters													
Single Family		267	2,660	7,144	1,482	760	14	22	34	132	954	77	0	13,546	65.6%
Multi Residential		6	20	92	93	195	0	11	85	330	159	154	0	1,145	5.5%
Commercial		0	34	90	141	250	7	22	782	528	1,855	1,386	0	5,095	24.7%
Industrial		0	1	0	0	5	0	0	17	0	0	0	0	23	0.1%
Government		2	17	28	33	70	0	33	51	231	212	154	0	831	4.0%
Other		0	1	0	0	0	0	0	0	0	0	0	0	1	0.0%
		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Total Existing Equivalent Meters or EDUs		275	2,733	7,354	1,749	1,280	21	88	969	1,221	3,180	1,771	0	20,641	100%
Total Future Equivalent Meters or EDUs															0 0.0%
Total Existing and Future Equivalent Meters or EDUs															20,641 100%

Notes:

Gallons of Fire Protection	1,548,075,000
Future EDUs of Fire Protection Mains	4,128

Los Angeles County Public Works
Exhibit 5
Water Short Term Capital Improvement Program Projects
District 29

	Classification	Gate Phase	TBD	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31	FY 2031-32	Total	% Eligible
Coastline Drive 12-Inch Waterline Improvements	Main	Construction						\$6,000,000							\$6,000,000	0.0%
Carbon Canyon and Carbon Mesa Road Waterline Improvements	Main	Construction							\$14,100,000						\$14,100,000	20.0%
Trancas Creek Permanent Waterline (Phase 2)	Main	Construction							\$4,900,000						\$4,900,000	0.0%
Lower Encinal Pump Station Improvements	Pump	Construction							\$5,900,000						\$5,900,000	0.0%
Lower Busch Tank Improvement	Reservoir	Construction							\$4,150,000	\$4,150,000					\$8,300,000	20.0%
Encinal Canyon Road Emergency Interconnection	N/A	Procurement							\$4,500,000	\$4,500,000					\$9,000,000	20.0%
PCH 8-inch Waterline Improvements (Zumirez Drive to Escondido Beach Road)	Main	Design								\$11,900,000					\$11,900,000	0.0%
New Sweetwater Mesa Tank Improvements	Reservoir	Design								\$13,500,000					\$13,500,000	10.0%
Upper Encinal Tank Improvement	Reservoir	Design								\$3,750,000	\$3,750,000				\$7,500,000	15.0%
Fernwood Tank Site Improvements	Reservoir	Planning											\$2,200,000		\$2,200,000	0.0%
Grandview Dr 8 Inch Water Line Improvements	Main	Pre-Design										\$4,000,000			\$4,000,000	20.0%
PCH Water Supply Resilience	N/A	Pre-Design										\$19,300,000			\$19,300,000	0.0%
Sweetwater Mesa Waterline Improvements	Main	Design											\$3,950,000	\$3,950,000	\$7,900,000	10.0%
Advanced Metering Infrastructure	N/A	Construction						\$362,500	\$362,500	\$362,500	\$362,500				\$1,450,000	0.0%
Malibu Backup Generators	N/A	Procurement							\$3,300,000						\$3,300,000	0.0%
Las Flores Water Main Improvement Project	Main	Design							\$7,300,000						\$7,300,000	20.0%
Topanga Beach Security Fence Replacement	N/A	Pre-Design									\$1,050,000	\$1,050,000			\$2,100,000	0.0%
Malibu Canyon Rd Interconnection Project	N/A	Planning	\$25,000,000												\$25,000,000	0.0%
Sweetwater Canyon Dr Water Line Improvements	Main	Planning	\$6,500,000												\$6,500,000	20.0%
Topanga Canyon Bl Water Main Improvements	Main	Planning	\$10,500,000												\$10,500,000	20.0%
Corral Canyon/Escondido Creek Pipe Replacement	Main	Planning	\$1,100,000												\$1,100,000	0.0%
Point Dume Tank Improvement	Reservoir	Planning	\$22,400,000												\$22,400,000	20.0%
Sunset Mesa Tank Improvement	Reservoir	Planning	\$22,400,000												\$22,400,000	20.0%
Topanga Backup Generators	N/A	Planning	\$3,100,000												\$3,100,000	0.0%
SCADA Control and Electrical Improvements	N/A	Planning	\$7,000,000												\$7,000,000	0.0%
Malibu Road Water Main Replacement	Main	Design							\$1,800,000						\$1,800,000	0.0%
District 29 Creek Crossing Repair Project	N/A	Design							\$3,400,000						\$3,400,000	0.0%
Various Pavement Restoration (Malibu/Topanga Canyon)	N/A	Design							\$1,000,000						\$1,000,000	0.0%
Oakwood Drive Water Main Improvements	Main	Design								\$3,400,000					\$3,400,000	0.0%
Old Topanga Canyon Water Main Relocation	Main	Design								\$500,000					\$500,000	0.0%
Saddle Peak Water Main Replacement	Main	Design								\$1,000,000					\$1,000,000	0.0%
Malibu Branch Feeder Valve Replacement	Main	Design								\$1,800,000					\$1,800,000	0.0%
Total			\$98,000,000	\$0	\$0	\$0	\$0	\$6,362,500	\$50,712,500	\$44,862,500	\$5,162,500	\$24,350,000	\$6,150,000	\$3,950,000	\$239,550,000	-----
Total Connection Charge Eligible Projects			\$12,360,000	\$0	\$0	\$0	\$0	\$0	\$6,010,000	\$3,642,500	\$562,500	\$800,000	\$395,000	\$395,000	\$23,770,000	

Notes:

Based on existing Short Term Capital Improvement Program Projects.

Cost Component	Reservoirs	Mains	Pump	Other
Total Eligible Cost	\$13,095,000	\$9,270,000	\$0	\$1,800,000
Total Capacity	4,490,000			
EDUs Served	4,572	4,128	4,128	4,128
Fire Capacity	1,481,700			
NonFire Capacity	3,008,300			
Future Capacity for tank per EDU	658			
Fire Cost	\$4,321,350	\$1,022,251		
Capacity Cost	\$1,919	\$1,998	\$0	\$436

Los Angeles County Public Works
Exhibit 6
Development of Asset Listing
District 29

	REPLACEMENT COST NEW	REPLACEMENT COST NEW LESS DEPR.
ASSETS		
Water Mains	\$520,502,257	\$165,026,136
Supply Reservoirs	\$118,178,500	\$51,164,885
Pumping	\$82,359,500	\$19,775,792
Wells	\$0	\$0
TOTAL	\$721,040,257	\$235,966,813
CONTRIBUTED		
Water Supply	\$0	\$0
Supply Reservoirs	\$0	\$0
Pumping	\$0	\$0
Wells	\$0	\$0
TOTAL	\$0	\$0
NET ASSETS	\$721,040,257	\$235,966,813