



CITY OF BEVERLY HILLS
PUBLIC WORKS SERVICES DEPARTMENT
MEMORANDUM

TO: PUBLIC WORKS COMMISSION

FROM: Vince Damasse, Water Resources Manager
Trish Rhay, Assistant Director of Public Works Services

DATE: July 14, 2016

SUBJECT: WATER SUPPLY EXACTION FEE

ATTACHMENT: Water Supply Exaction Fee Draft Report dated July 7, 2016, by Bucknam & Associates

OBJECTIVE

That the Public Works Commission make recommendations to the City Council regarding the establishment of a Water Supply Exaction Fee to pay for additional groundwater supply needed to maintain the City's goal of reducing its reliance on imported water.

BACKGROUND

The 2015 Water Enterprise Plan (WEP) reported that the City currently relies primarily on the purchase of water from Metropolitan Water District of Southern California (MWD) for 90% of its water supply and receives only 10% from local water supply sources from the Hollywood Groundwater Basin. The WEP analysis recommended that the City undertake capital improvements to decrease the City's reliance on the purchase of water from MWD to 75% and develop local groundwater sources to supply 25%. This portfolio was accepted to be the most feasible and cost effective suite of projects at the time to increase the City's overall water supply reliability.

The City is currently implementing the Capital Improvement Program, based upon the WEP. Implementation includes construction of additional wells, transmission pipelines and treatment plant capacity.

Additionally, the City has adopted a Water Capacity Charge (WCC) that allocates to new connections a proportionate share of the cost of existing facilities and planned capital improvements needed to achieve the City's current local water supply goals.

As new connections are established or redevelopment occurs, the increased water demand will decrease the percentage share of the water supply from local water sources, will increase dependence on MWD, reduce local control and reduce reliability of the City's water supply unless additional local water sources are developed. In order to maintain the reliability of the City's water supply and reduce dependence on MWD, it will be necessary for additional local water production to be developed beyond that identified in the WEP.

A key objective of this analysis is to establish a Water Supply Exaction Fee (WSEF) that will pay for the cost of facilities to provide additional local water supplies needed as new connections are established or redevelopment occurs. The proposed facilities include a High Capacity Well to supply additional groundwater to serve new development, and facilities to utilize non-potable water sources in the Coldwater Canyon area for irrigation to reduce the use of potable water and increase the supply of potable water to serve new development.

The proposed WSEF is in addition to the City's Water Capacity Charge and will fund facilities not included in the determination of the Water Capacity Charge.

The facilities funded with the WSEF include an additional **High Capacity Well**, beyond the 3 wells planned in the WEP, with an estimated capacity to produce **700 AFY** from the La Brea Subarea of the Unadjudicated Central Basin and a connecting Transmission Main to convey the groundwater to the City's Treatment Plant. The estimated total project cost to develop the proposed high capacity well is **\$10,173,469 or \$14,534 per acre-foot per year**.

Table 1 lists the projected costs to develop the High Capacity Well, Transmission Main and Treatment Project:

Table 1. High Capacity Well and Transmission Main & Treatment Project Cost

Description	Cost
Land Acquisition (Land Value)	4,500,000
Well Drilling Design	\$51,188
Well Drilling Contract	\$1,023,750
Well Equipping and Transmission Main Design	\$157,500
Well Equipping and Transmission Main Contract	\$1,575,000
Water Treatment Design	\$31,500
Water Treatment Construction	\$210,000
Environmental Documentation – CEQA	\$112,350
Permitting	\$56,175
Construction Management and Inspection	\$421,313
Subtotal Project Cost	\$8,138,775
Contingency (20%)	\$2,034,694
Subtotal Project Cost with Land	\$10,173,469
Estimated Production of New Well (AFY)	700
Projected Cost per AF with Land Purchase	\$14,534

The estimated total projected cost to develop the proposed **Coldwater Canyon Non-Potable Water Supply** for irrigation of City parks is **\$3,950,000**. Engineers in the City's Public Works Services Department provided the estimated costs for construction and engineering services. Actual costs of design and construction will need to be confirmed upon receipt of engineering proposals and construction bids. The one-time cost to provide a local water supply using non-potable water to irrigate City parks and free up potable water to meet a portion of the water demand of new development is **\$15,019 per acre-foot per year**.

Table 2 below lists the projected costs to develop the Coldwater Canyon Non-Potable Water Supply for Irrigation.

**Table 2. Project Cost Projection
Cabrillo Reservoir Non-Potable Water Distribution System in Coldwater Canyon**

Description	Cost
Land Acquisition (Land Value)	\$0
Design and Construction Management	\$450,000
Relining of Cabrillo Reservoir 3B	\$550,000
Water Treatment	\$200,000
Pipeline (3B Res. to Intersection of N. Beverly and N. Rexford – Approx. 3,500 feet)	\$700,000
Pipeline (N. Beverly and N. Rexford to Intersection of N. Rexford and Santa Monica Boulevard) – Approx. 6,300 feet	\$1,260,000
Total Projected Construction Cost (excludes Design and Construction Management)	\$2,710,000
Environmental Documentation – CEQA	\$0
Permitting	\$0
Subtotal Project Cost (includes Design and Construction Management)	\$3,160,000
Contingency (25%)	\$790,000
Estimated Project Cost	\$3,950,000
Estimated Irrigation Usage (AFY)	263
Total Projected Cost with Land (per AFY)	\$15,019

Combined Estimated Cost and Water Supply

The combined cost to develop a local groundwater source in the La Brea Subarea of the Unadjudicated Central Basin and to develop a local non-potable water source in the Coldwater Canyon area for irrigation of City parks, which will free up potable water to meet the water supply demands of new development, is **\$14,123,469**. The one-time cost to utilize local water supplies to meet a portion of the water demand of new development is **\$14,666 per acre-foot per year**.

Table 3. Combined Estimated Cost and Water Supply

Combined Total Projected Cost	\$14,123,469
Combined Additional Water Supply for New Development (AFY)	963
Combined Projected Cost per AFY	\$14,666

A. Meter Fee Calculation

The City uses a standard of 925.7 gallons per day, which is approximately one acre-foot per year to supply water to a single-family residence (SFR) that is approximately 5,000 square feet in size and with a 1-inch meter connection. Therefore, the Water Supply Exaction Fee for a new SFR with a 1-inch meter is \$14,666.

Meter capacity factors are used to determine the Water Supply Exaction Fee for different meter sizes. **Table 4** below summarizes graduated Water Supply Exaction Fees based on meter size.

Table 4. Water Supply Exaction Fee by Meter Size

Meter Size	Meter Capacity Factor	Fee
3/4"	0.60	\$8,800
1"	1	\$14,666
1-1/2"	2	\$29,332
2"	3.2	\$46,932
3"	6	\$87,997
4"	10	\$146,661
6"	20	\$293,322

Calculation examples are shown below for various scenarios for new connections and expansions. The calculations conform to the existing methodology for determining the City's WCC and uses the examples in the 2014 WCC Report to maintain uniformity in calculating the City's capacity fees.

(1) WSEF Calculation Example 1: Residential Account Requiring a Meter Upgrade

A **Residential Account** requiring a meter upgrade would be charged a WSEF based on the difference between the fee associated with the current meter size and the fee associated with the new meter size. For example, a meter upgrade to a 1-1/2-inch meter from a 1-inch meter would be the difference between \$29,332 and \$14,666, or **\$14,666**.

A **Redevelopment Fee** is associated with Building Expansion, Redevelopment or Renovation, when a meter upgrade is not required. To maintain uniformity in the calculation of the City's water fees, the WSEF for Redevelopment uses 5,000 square feet as the average house size in the City. The typical single-family residence uses approximately 50% of total water use for indoor use. The resulting cost for redevelopment or expansion is **\$1.47 per square foot (SF)** as noted below in **Table 5**.

Table 5. WSEF for Redevelopment or Expansion

Indoor Use AFY (50% of Average)	Cost per AFY	Fee
0.5	\$14,666	\$7,333
Average SFR Size (square feet)		5,000
Fee for Redevelopment or Expansion per SF		\$1.47

Please note that this report adheres to the existing practice of the City to exempt residential additions or redevelopment of less than 1,000 square feet of additional space.

(2) WSEF Calculation Example 2: Remodel or Redevelopment of Less than 1,000 SF

The WSEF in this case is not charged because the project is less than 1,000 SF.

(3) WSEF Calculation Example 3: Remodel or Redevelopment of More than 1,000 SF

For Redevelopment or Additions of more than 1,000 square feet, the WSEF of \$1.47 per square foot is used to calculate the fee. For example, a New Addition of 1,500 square feet is charged a WSEF of **\$2,205**.

B. Non-Residential Fee Calculation

This cost per GPD is used to calculate the WSEF for Non-Residential projects without meter upgrades using the standard convention the City uses to calculate the City's WCC.

To calculate the WSEF for Commercial Redevelopment projects, the \$14,666 per acre-foot equals an equivalent fee of \$16.43 per GPD. The cost of the WSEF for non-residential projects is added to the City's established WCC for Non-Residential uses.

For example, the WSEF Fee for an Auditorium, which requires 4.4 GPD per seat, would be **\$72 per seat**. The additional fee of \$72 per seat is added to the existing WCC shown in **Table 6** below.

(1) WSEF Calculation Example 4: Commercial Account with Service Unit Increase Not Requiring a Meter Upgrade

In cases where a project's expansion changes its total number of Service Units and does not require a meter upgrade, the project pays for the resulting additional demand. For example, a Restaurant that adds 30 seats would pay **\$16,260** (\$542 multiplied by 30 seats).

(2) Calculation Example 5: Commercial Change in Use

Changes in Commercial Use of a property are the difference between estimated usage per day between the previous usage and the current usage. For example, a 1,000 square foot Retail Store converted to a 1,000 square foot Coffee House would be **\$4,009** (\$5,471 minus \$1,462).

Table 6. Water Supply Exaction Fees for Non-Residential Customers

Customer Class	Estimated GPD	Service Unit	Proposed Water Supply Exaction Fee	Existing Water capacity charge	Total Fees
Auditorium or Community Center	4.4	per seat	\$72	\$90	\$162
Bank	167	per 1,000 sq. ft.	\$2,744	\$3,380	\$6,124
Gymnasium	278	per 1,000 sq. ft.	\$4,567	\$5,633	\$10,200
Health Spa	667	per 1,000 sq. ft.	\$10,958	\$13,519	\$24,477
Hotel, per room	144	per room	\$2,366	\$2,929	\$5,295
Medical Office	278	per 1,000 sq. ft.	\$4,567	\$5,633	\$10,200
Office Building	167	per 1,000 sq. ft.	\$2,744	\$3,380	\$6,124
Shopping Center	167	per 1,000 sq. ft.	\$2,744	\$3,380	\$6,124
Coffee House	333	per 1,000 sq. ft.	\$5,471	\$6,759	\$12,230
Restaurant-Full Service	33	per seat	\$542	\$676	\$1,218
Retail Store	89	per 1,000 sq. ft.	\$1,462	\$1,803	\$3,265
School – Private	222	per 1,000 sq. ft.	\$3,647	\$4,506	\$8,153
Supermarket	167	per 1,000 sq. ft.	\$2,744	\$3,380	\$6,124

RECOMMENDATIONS

Staff recommends the City adopt an ordinance to establish the WSEF pursuant to Government Code Sections 66013, 66016, 66022 and 66023, similar to the WCC, rather than impose exactions or fees on an ad-hoc basis.

The City should **Separately Account for All Revenue** collected in a separate fund to be established and maintained by the City titled “**Water Supply Exaction Fee Fund,**” to avoid co-mingling with other City revenues.

Within 180 days after the end of each fiscal year, City staff should provide the City Council with an **Annual WSEF Report** showing:

- A description of the charges deposited in the fund;
- The beginning and ending balance of the fund and the interest earned from the investment of moneys in the fund;
- The amount of charges collected in that fiscal year;
- An identification of the following:
 1. Each public improvement on which charges were expended and the amount of the expenditure for each improvement, including the percentage of the total cost of the public improvement that was funded with those charges if more than one source of funding was used.
 2. Each public improvement on which charges were expended that was completed during that fiscal year.
 3. Each public improvement that is anticipated to be undertaken in the following fiscal year.

- A description of each interfund transfer or loan made from the capital facilities fund. The information provided, in the case of an interfund transfer, shall identify the public improvements on which the transferred moneys are, or will be, expended. The information, in the case of an interfund loan, shall include the date on which the loan will be repaid and the rate of interest that the fund will receive on the loan.

The report detailing the above may be part of the annual audit prepared for the City each year.

Ordinance No. 15-O-2674 adopted February 17, 2015, established a WCC and provides that the WCC is due upon occurrence of the following:

- 1) Installation of a New Water Meter,
- 2) Change in the Size of a Water Meter, or
- 3) The Final Inspection of a Project.

The **WSEF Annual Report** should be due at the same time and in the same manner as the WCC Annual Report. It is also recommended that the adequacy of the WSEF be reviewed when City staff conduct their periodic reviews of capital expenses. Modifications to be included in future WSEF analyses should include the costs of any Auxiliary Projects^A, which could provide additional local groundwater supplies. Additionally, changes to modify projected costs for the Hi-Capacity Well, Transmission Main and Water Treatment Project and the Coldwater Canyon Project, based upon design and construction costs, would need to be incorporated into future WSEF analysis updates.

The City should establish a **Procedure** for the Community Development Department that, upon its receipt of an Application for a New Development or Redevelopment that may require a new meter or change in meter size, it would go through a water feasibility analysis and/or plan check process as part of a water will serve procedure.

The **California Environmental Quality Act (CEQA)** requires cities to evaluate the impacts of developments that request approvals and provide a notice to affected jurisdictions of the determination made relative to the project. Upon receipt of **Notices of Determination (NOD)** under **CEQA** from the City of West Hollywood, the Community Development Department should distribute a copy of the NOD to the **Public Works Services Department** for determination of the impact on the City's water system and the corresponding meter size requirements for the New Development or Redevelopment projects in that City, with the City of Beverly Hills' water service area.

The City should coordinate with the City of West Hollywood, to establish a **Process for the City of West Hollywood** to notify owners of property in West Hollywood that are within the City of Beverly Hills' Water Service Area requiring them to contact the City's **Public Works Services Department** regarding the details of the new connection or redevelopment project's water system demands.

Note: A. Future Auxiliary Projects may include: Springwater capture for potable use, Stormwater capture for Groundwater Replenishment.



City of Beverly Hills

Water Supply Exaction Fee Report

July 7, 2016

DRAFT

Prepared by:

Bucknam & Associates, Inc.



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I. EXECUTIVE SUMMARY

The purpose of this report is to evaluate options for developing additional water supplies to meet water supply demands of new development and to establish a "Water Supply Exaction Fee Structure for New Development." The scope of services includes:

- Compile a description of facilities and land needed to develop additional local water sources based upon information in the City's 2015 Water Enterprise Plan (WEP) and the City's 2015 Urban Water Management Plan, and consult with the City relative to:
 - A new well field planned for the La Brea Subarea of the Unadjudicated Central Basin to meet water supply demands of new development, and
 - Groundwater sources in the Coldwater Canyon to be used for irrigation to reduce the use of potable water resulting in an increase of potable water demand to serve new development.
- Prepare a projection of the potential additional water supplies that can be developed within the La Brea Subarea of the Unadjudicated Central Basin and the Coldwater Canyon to meet demands not included in the 2015 WEP's analysis.
- Compile a conceptual cost projection, for future facilities and land needed to develop additional water sources in the La Brea Subarea of the Unadjudicated Central Basin and the Coldwater Canyon.
- Consult with the City Administration and City Attorney's Office to prepare a justification analysis for the allocation of the cost of future supply facilities to new development.
- Prepare an allocation of costs on the basis of Equivalent Dwelling Units (EDU) to new service connections.
- Prepare sample illustrations of the projection of the amount of a Water Supply Exaction Fee to be charged to new service connections, expansions and meter upgrades.

The WEP reported that the City currently relies primarily on the purchase of water from the Metropolitan Water District of Southern California (MWD) for its water supply and receives only 10% from local water supply sources from the Hollywood Groundwater Basin. The WEP recommended that the City undertake capital improvements to decrease the City's reliance on the purchase of water from MWD to 75% and develop local groundwater sources to supply 25% of the City's water needs.

The City has implemented a Capital Improvement Program (CIP) to construct additional



wells, transmission pipelines and treatment plant capacity as well as a Coldwater Canyon Springwater capture project; to reduce dependence on MWD, increase reliability and achieve local control of water supplies.

The City has also adopted a Water Capacity Charge (WCC) that allocates to new connections a proportionate share of the value of existing facilities and the cost of development of additional local water sources and modernization of the City's water treatment plant. The Water Supply Exaction Fee (WSEF) recommended in this report is in addition to the City's current WCC and is intended to fund facilities that are not included in the determination of the current WCC but are required to meet the additional water supply demand of new development.

As new connections are established or redevelopment occurs, the increased water demand will decrease the percentage share of the water supply from local water sources, will increase dependence on MWD, reduce local control and reduce reliability of the City's water supply unless additional local water sources are developed. In order to maintain the reliability of the City's water supply and reduce dependence on MWD, it will be necessary for additional local water production to be developed beyond that identified in the WEP.

A key objective of this analysis is to establish a WSEF that will pay for the cost of facilities to provide additional local water supplies needed as new connections are established or redevelopment occurs. The proposed facilities include a High Capacity Well to supply additional groundwater to serve new development, and facilities to utilize non-potable water sources in the Coldwater Canyon for irrigation to reduce the use of potable water and increase the supply of potable water to serve new development.

The proposed High Capacity Well is located in the La Brea Subarea (LBSA) and has a capacity to produce an estimated 700 acre-feet per year (equivalent to 624,920 gallons per day or GPD; water supply capacity is expressed in acre feet per year). This well will provide additional water supply to serve the water supply needs of new development.

The estimated total projected cost to develop the proposed High Capacity Well is \$10,173,469 or \$14,534 per acre-foot per year; \$10,173,469 divided by 700 acre-feet per year. The Coldwater Canyon project will develop a local non-potable water source for irrigation of City parks; which will provide an additional 263 acre-feet per year to augment potable water supplies. This would amount to a benefit of \$3,950,000 or \$15,019 per acre-foot per year; when divided by 263 acre-feet per year (AFY). The combined benefit of both projects would then be \$14,123,469 / 963 acre-feet = \$14,666 per AFY.

According to the 2014 Water Capacity Fee Study, the City uses a standard of 925.7 gallons per day (GPD), which is approximately 1.00 AFY to supply water to a single-family residence



of 5,000 square feet supplied through a one-inch water meter.

As an example, the WSEF for a new Single-Family Residence with a one-inch meter is determined to be **\$14,666 per AFY**.

The City calculates its existing WCC for redevelopment of **Residential Projects** that do not require a water meter upgrade based on square footage added to the residence. The assumed indoor water usage for a single-family residence is assumed at 50% of the total usage or 462.85 gallons per day (GPD), which is approximately equal to 0.5 AFY. Using this assumption, the proposed WSEF for expansions that do not require a meter upgrade is **\$1.47 / square foot (SF)** (0.5 AFY for water supply x \$14,666 per AFY / 5,000 SF).

For **Commercial Development or Redevelopment** projects that do not require a meter upgrade, square footage or an assigned service unit factor is used. For each building use classification, the projected capacity demand is determined based on the GPD calculated using the service unit factor assigned to a customer class. To calculate the WSEF for commercial development or redevelopment projects, the \$14,666 per AFY is converted to an equivalent fee of **\$16.43 per GPD** (\$14,666 per AFY x 365 days per year / 325,829 GPD per AF).

It is important to note that the calculations presented in this report for the proposed WSEF will change if the actual water production and facility costs vary from the projections and estimates used in this report or if other variables change, such as the current usage standard of 925.7 gpd for a single family residence. The adequacy of the WSEF will need to be reviewed when City staff re-evaluates the cost and water production for the new well and the non-potable water system in their periodic review of planned capital improvements.

Changes in the commercial use of a property can result in an increase in its water supply requirement based on the difference between estimated usage per day between the previous usage and the current usage. For example, a 1,000 square foot retail store converted to a 1,000 square foot coffee house would be **\$4,009** (\$5,471 minus \$1,462). A coffee house requires 333 GPD per 1,000 square feet and a retail store requires 89 GPD per 1,000 square feet. The WSEF for a coffee house is \$5,471 per 1,000 square feet and for a retail store it is \$1,462 per 1,000 square feet. The methodology to calculate these fees are shown in this report and summarized in Table 6.

II. SUMMARY OF CHARACTERISTICS OF THE CITY'S WATER SYSTEM

According to the 2015 Water Enterprise Plan, the City's water system characteristics are as follows:



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- The service area of the City's water enterprise includes the City and a portion of the City of West Hollywood.
 - In general, the City relies on MWD for approximately 90% of its water supplies and groundwater from the Hollywood Groundwater Basin for 10% of its water supplies.
 - From 1996 through 2002, one hundred percent (100%) of the City's water supply was imported from MWD.
 - MWD water has supplied an average of 94.9% of the City's total demand since 1996 and, since 2003 (the year the treatment plant was placed into service), the City has purchased an average of 91.5% of its water from MWD, with the remaining 8.5% coming from its own groundwater production (average between 2004 and 2014).
 - As of 2014, the City imported 11,632 acre-feet of water from MWD (94.8%) and pumped 637 acre-feet of groundwater (5.2%) for a total of 12,269 acre-feet of water.
 - Groundwater is treated at the City's Reverse Osmosis Treatment Plant.
 - The City has four (4) groundwater wells in the Hollywood Groundwater Basin that each pump to the Reverse Osmosis Treatment Plant.
 - Hollywood Groundwater Basin is Unadjudicated and managed by the City through municipal ordinances.
 - Since the water treatment plant became operational in 2003, the average groundwater production between 2004 and 2014 was 1,032 acre-feet per year. However, groundwater production has decreased since 2010, with only 637 acre-feet of groundwater pumped in 2014.
 - The City has the potential to develop additional groundwater supplies within the Hollywood Groundwater Basin and the Unadjudicated Central Basin.
 - The City has no artificial groundwater recharge capacity, because it lacks injection wells or spreading basins.

III. WATER ENTERPRISE PLAN

The **2015 Water Enterprise Plan (WEP)** identified potential alternative water supply sources to increase the overall reliability of the City's water system. The WEP observed that MWD has always been a reliable source of supply for the City; however, given the ongoing drought



and the current cutback in imported water allocations by MWD, and the potential for even higher future cutbacks (according to the WEP, the City's Senate Bill SBx7-7 mandated water goal by the year 2025 is 11,313 AFY), the WEP recommended that the City seek alternative water supplies to reduce the amount of water purchased from MWD.

The WEP reported that the City purchases an average of 90% of its water supply from MWD. To increase the City's supply reliability, the WEP recommended reducing dependence on imported water from MWD to 75%.

To achieve 25% independent water supplies from MWD, the WEP recommended:

- Development of three (3) new groundwater wells in the Unadjudicated Central Basin;
- Construction of related Transmission Mains, and;
- Improvements to the Reverse Osmosis Treatment Plant.

For the City to maintain a water supply goal of 11,313 AFY with the prospect of MWD supply reductions, the WEP recommended the construction of 3 new wells that would provide the City with approximately 1,708 AFY in new groundwater supplies. This new supply along with the 1,120 AFY of potential groundwater production from existing and planned shallow groundwater wells in the Hollywood Basin, are projected to supply approximately 25% of the City's total water demand by 2025 ($1,708 \text{ AFY} + 1,120 \text{ AFY} = 2,828 \text{ AFY}$; $2,828 \text{ AFY} / 11,313 \text{ AFY} = 0.25$, or 25% groundwater).

IV. EXISTING WATER CAPACITY CHARGES

The City retained a consultant in 2014 to develop water capacity charges for the City's water system. The 2014 WCC Report used a combination of an equity buy-in approach and the incremental cost approach to determine the WCC.

The consultant allocated a portion of the value of the existing water system facilities and the cost of improvements identified in the WEP to new customers to determine the water capacity charge.

As new connections are established and redevelopment occurs, the increased water supply demands will decrease the share of the water supply from local water sources unless local water supplies beyond those anticipated in the WEP are developed. In order to meet the water demand needed to serve new development, it will be necessary for additional local water production to be developed.

V. ORDINANCE TO ESTABLISH WATER CAPACITY CHARGE

On February 17, 2015, the City Council adopted Ordinance No. 15-O-2674 ("Water Capacity



Charge Ordinance”), which amended the City’s municipal code to establish a water capacity charge. Section 6-1-251 of the Water Capacity Charge Ordinance states:

“The user of city water service shall pay a water capacity charge in an amount established by resolution of the city council. The water capacity charge is due upon the occurrence of one of the following events, as deemed appropriate by the Director of Public Works Services, or his or her designee: (1) installation of a new water meter, (2) change in the size of a water meter, or (3) the final inspection of a project.”

The Water Capacity Charge Ordinance provides that the City may collect the WCC from the water user with a bill for water service charges, or by delivering a separate bill for the WCC. The water user may pay the WCC in two or more installments and City Council, by resolution, may allow for an alternative procedure for the collection of the WCC.

VI. WATER EXACTION FEES

Capacity fees or charges are governed by **Government Code Section 66013, 66016, 66022 and 66023**. The Government Code defines a capacity charge as a charge for existing public facilities or charges for new public facilities to be acquired or constructed in the future, which benefit the person or property being charged. In 2007, the definition of capacity charge was expanded to include supply or capacity charges for rights, entitlements, or property interests involving capital expenses of local public facilities.

Government Code Section 66013 provides that the revenues produced by the capacity charge are kept in a separate fund so as to avoid co-mingling with other City funds, and that the City provides an accounting after the end of each fiscal year, which reveals the total amount of capacity charge revenue collected and interest earned thereon, expenses from that fund during the previous fiscal year, and the balance remaining in the fund at the end of the fiscal year. Capacity charges do not include costs for operation and maintenance.

Accounting and Reporting Requirements

In setting up the WSEF, the City would need to separately account for all revenue collected in a fund to be established and maintained by the City titled **“Water Supply Exaction Fee Fund,”** to avoid co-mingling with other City revenues. Pursuant to Government Code Section 66013, the local agency collecting the fee is required to make available to the public the following within 180 days after the end of each fiscal year:

- A description of the charges deposited in the fund;
- The beginning and ending balance of the fund and the interest earned from the investment of moneys in the fund;



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- The amount of charges collected in that fiscal year;
 - An identification of the following:
 - Each public improvement on which charges were expended and the amount of the expenditure for each improvement, including the percentage of the total cost of the public improvement that was funded with those charges if more than one source of funding was used.
 - Each public improvement on which charges were expended that was completed during that fiscal year.
 - Each public improvement that is anticipated to be undertaken in the following fiscal year.
 - A description of each interfund transfer or loan made from the capital facilities fund. The information provided, in the case of an interfund transfer, shall identify the public improvements on which the transferred moneys are, or will be, expended. The information, in the case of an interfund loan, shall include the date on which the loan will be repaid, and the rate of interest that the fund will receive on the loan.

The report detailing the above may be part of the annual audit prepared for the City each year.

VII. METHODOLOGY FOR THE WATER SUPPLY EXACTION FEE

The proposed WSEF was determined by allocating the cost to develop new water supplies required to meet the water supply needs of new development.

The City has implemented a **Capital Improvement Program (CIP)** to construct additional wells, transmission pipelines and treatment plant capacity to achieve a water supply goal that reduces reliance on MWD and increases local water sources to meet its water supply needs for existing development, based upon the finding of its WEP.

The City has also adopted a **WCC** that allocates to new connections a proportionate share of the cost of existing facilities and planned capital improvements. The WSEF recommended in this report is in addition to the City's current WCC and will fund facilities not included in the determination of the current WCC.

As new connections are established or redevelopment occurs, the increased water supply demand will decrease the percentage share of the water supply from local water sources unless additional local water supplies are developed beyond those planned in the WEP.



A key objective of our analysis is to establish a WSEF that will pay for the cost of additional water supply needed to serve new development as new connections are established or redevelopment occurs.

A. Additional Water Supply to Meet Demands of New Development

High Capacity Well, Transmission Main & Treatment

An additional High Capacity Well, beyond the 3 wells planned in the WEP, with an estimated capacity to produce **700 AFY** from the La Brea Subarea of the Unadjudicated Central Basin and a connecting Transmission Main to convey the groundwater to the City’s Treatment plant, is recommended. The estimated total project cost to develop the proposed high capacity well is **\$10,173,469**. The one-time cost to provide a local water supply to meet a portion of the water demand of new development is **\$14,534 per acre-foot per year**.

Table 1 below lists the projected costs to develop the High Capacity Well, Transmission Main and Treatment Project.

**Table 1. Project Cost Projection
 High Capacity Well and Transmission Main & Treatment Project Cost**

Description	Cost
Land Acquisition (Land Value)	\$4,500,000
Well Drilling Design	\$51,188
Well Drilling Contract	\$1,023,750
Well Equipping and Transmission Main Design	\$157,500
Well Equipping and Transmission Main Contract	\$1,575,000
Water Treatment Design	\$31,500
Water Treatment Construction	\$210,000
Environmental Documentation – CEQA	\$112,350
Permitting	\$56,175
Construction Management and Inspection	\$421,313
Subtotal Project Cost	\$8,138,775
Contingency (25%)	\$2,034,694
Total Projected Cost with Land	\$10,173,469
Estimated Production of New Well (AFY)	700
Cost per Acre-Foot of Water Produced (per AFY)	\$14,534



Coldwater Canyon Non-Potable Water Supply for Irrigation

Coldwater Canyon has a source of non-potable water that can be collected, treated, stored in the City’s Cabrillo Reservoir and distributed to irrigate five City parks. The Cabrillo Reservoir was originally constructed in 1918 and retrofitted in 1927. Based on the age of the Cabrillo Reservoir, the remaining undepreciated value of the reservoir based on its useful life is at or near zero. The City plans to refurbish the Cabrillo Reservoir to extend the useful life of the reservoir and use it to store non-potable water.

The estimated annual demand for non-potable water to irrigate the five City parks (Beverly Gardens Park, Sunset Medians, Maltz Park, Will Rogers Park and Coldwater Park) is **263 acre-feet per year**.

The use of non-potable water for irrigation will reduce the demand for potable water, which will free-up potable water to be used to meet a portion of the water supply demand of new development.

The estimated total project cost to develop the proposed Coldwater Canyon Non-Potable Water Supply for irrigation of City parks is **\$3,950,000**. Engineers in the City’s Public Works Services Department provided the estimated costs for construction and engineering services. Actual costs of design and construction will need to be confirmed upon receipt of engineering proposals and construction bids. The one-time cost to provide a local water supply using non-potable water to irrigate City parks and free up potable water to meet a portion of the water demand of new development is **\$15,019 per acre-foot per year**.

Table 2 below lists the projected costs to develop the Coldwater Canyon Non-Potable Water Supply for Irrigation.

[Table content is extremely faint and illegible]



Table 2. Project Cost Projection
Cabrillo Reservoir Non-Potable Water Distribution System in Coldwater Canyon

Description	Cost
Land Acquisition (Land Value)	\$0
Design and Construction Management	\$450,000
Relining of Cabrillo Reservoir 3B	\$550,000
Water Treatment	\$200,000
Pipeline (3B Res. to Intersection of N. Beverly and N. Rexford – Approx. 3,500 feet	\$700,000
Pipeline (N. Beverly and N. Rexford to Intersection of N. Rexford and Santa Monica Boulevard) – Approx. 6,300 feet	\$1,260,000
Total Projected Construction Cost (excludes Design and Construction Management)	\$2,710,000
Environmental Documentation – CEQA	\$0
Permitting	\$0
Subtotal Project Cost (includes Design and Construction Management)	\$3,160,000
Contingency (25%)	\$790,000
Estimated Project Cost	\$3,950,000
Estimated Irrigation Usage (AFY)	263
Total Projected Cost with Land (per AFY)	\$15,019

Combined Estimated Cost and Water Supply

The combined cost to develop a local groundwater source in the La Brea Subarea of the Unadjudicated Central Basin and to develop a local non-potable water source in the Coldwater Canyon for irrigation of City parks, which will free up potable water to meet the water supply demands of new development is **\$14,123,469**. The one-time cost to utilize local water supplies to meet a portion of the water demand of new development is **\$14,666 per acre-foot per year**.

Table 3. Combined Estimated Cost and Water Supply

Combined Total Projected Cost	\$14,123,469
Combined Additional Water Supply for New Development (AFY)	963
Combined Projected Cost per AFY	\$14,666

B. Meter Fee Calculation

The City uses a standard of 925.7 gallons per day, which is approximately one acre-foot per year to supply water to a single-family residence (SFR) that is approximately 5,000 square feet in size and with a 1-inch meter connection. Therefore, the Water Supply Exaction Fee for a new SFR with a 1-inch meter is **\$14,666**.



Meter capacity factors are used to determine the Water Supply Exaction Fee for different meter sizes. **Table 4** below summarizes graduated Water Supply Exaction Fees based on meter size.

Table 4. Water Supply Exaction Fee by Meter Size

Meter Size	Meter Capacity Factor	Fee
3/4"	0.60	\$8,800
1"	1	\$14,666
1-1/2"	2	\$29,332
2"	3.2	\$46,932
3"	6	\$87,997
4"	10	\$146,661
6"	20	\$293,322

Calculation examples are shown below for various scenarios for new connections or expansions. The calculations conform to the existing methodology for determining the City's WCC and uses the examples in the 2014 WCC Report to maintain uniformity in calculating the City's capacity fees.

(1) WSEF Calculation Example 1: Residential Account Requiring a Meter Upgrade

A **Residential Account** requiring a meter upgrade would be charged a WSEF based on the difference between the fee associated with the current meter size and the fee associated with the new meter size. For example, a meter upgrade to a 1-1/2-inch meter from a 1-inch meter would be the difference between \$29,332 and \$14,666, or **\$14,666**.

A **Redevelopment Fee** is associated with Building Expansion, Redevelopment, or Renovation, when a meter upgrade is not required. To maintain uniformity in the calculation of the City's water fees, the WSEF for Redevelopment uses 5,000 square feet as the average house size in the City. The typical single family residence uses approximately 50% of total water use for indoor use. The resulting cost for redevelopment or expansion is **\$1.47 per square foot (SF)** as noted below in **Table 5**.

Table 5. WSEF for Redevelopment or Expansion

Indoor Use AFY (50% of Average)	Cost per AFY	Fee
0.5	\$14,666	\$7,333
Average SFR Size (square feet)		5,000
Fee for Redevelopment or Expansion per SF		\$1.47



Please note that this report adheres to the existing practice of the City to exempt residential additions or redevelopment of less than 1,000 square feet of additional space.

(2) WSEF Calculation Example 2: Remodel or Redevelopment of less than 1,000 SF

The WSEF in this case is not charged because the project is less than 1,000 SF.

(3) WSEF Calculation Example 3: Remodel or Redevelopment of More than 1,000 SF

For Redevelopment or Additions of more than 1,000 square feet, the WSEF of \$1.47 per square foot is used to calculate the fee. For example, a New Addition of 1,500 square feet is charged a WSEF of **\$2,205**.

C. Non-Residential Fee Calculation

This cost per GPD is used to calculate the WSEF for Non-Residential projects without meter upgrades using the standard convention the City uses to calculate the City's WCC.

To calculate the WSEF for Commercial Redevelopment projects, the \$14,666 per acre-foot equals an equivalent fee of \$16.43 per GPD. The cost of the WSEF for non-residential projects is added to the City's established WCC for Non-Residential uses.

For example, the WSEF Fee for an Auditorium, which requires 4.4 GPD per seat, would be **\$72 per seat**. The additional fee of \$72 per seat is added to the existing WCC shown in **Table 6** below.

(1) WSEF Calculation Example 4: Commercial Account with Service Unit Increase Not Requiring a Meter Upgrade

In cases where a project's expansion changes its total number of Service Units and does not require a meter upgrade, the project pays for the resulting additional demand. For example, a Restaurant that adds 30 seats would pay **\$16,260** (\$542 multiplied by 30 seats).

(2) Calculation Example 5: Commercial Change in Use

Changes in Commercial Use of a property are the difference between estimated usage per day between the previous usage and the current usage. For example, a 1,000 square foot Retail Store converted to a 1,000 square foot Coffee House would be **\$4,009** (\$5,471 minus \$1,462).



Table 6. Water Supply Exaction Fees for Non-Residential Customers

Customer Class	Estimated GPD	Service Unit	Proposed Water Supply Exaction Fee	Existing Water capacity charge	Total Fees
Auditorium or Community Center	4.4	per seat	\$72	\$90	\$162
Bank	167	per 1,000 sq. ft.	\$2,744	\$3,380	\$6,124
Gymnasium	278	per 1,000 sq. ft.	\$4,567	\$5,633	\$10,200
Health Spa	667	per 1,000 sq. ft.	\$10,958	\$13,519	\$24,477
Hotel, per room	144	per room	\$2,366	\$2,929	\$5,295
Medical Office	278	per 1,000 sq. ft.	\$4,567	\$5,633	\$10,200
Office Building	167	per 1,000 sq. ft.	\$2,744	\$3,380	\$6,124
Shopping Center	167	per 1,000 sq. ft.	\$2,744	\$3,380	\$6,124
Coffee House	333	per 1,000 sq. ft.	\$5,471	\$6,759	\$12,230
Restaurant–Full Service	33	per seat	\$542	\$676	\$1,218
Retail Store	89	per 1,000 sq. ft.	\$1,462	\$1,803	\$3,265
School – Private	222	per 1,000 sq. ft.	\$3,647	\$4,506	\$8,153
Supermarket	167	per 1,000 sq. ft.	\$2,744	\$3,380	\$6,124

VIII. CONCLUSIONS AND RECOMMENDATIONS

The City should consider adopting an ordinance to establish the WSEF pursuant to Government Code Sections 66013, 66016, 66022 and 66023, similar to the WCC, rather than impose exactions or fees on an ad-hoc basis.

The City is required to **Separately Account for All Revenue** collected in a segregated fund to be established and maintained by the City titled “**Water Supply Exaction Fee Fund,**” to avoid co-mingling with other City revenues.

Within 180 days after the end of each fiscal year, City staff is required to prepare an **Annual WSEF Report** showing:

- A description of the charges deposited in the fund;
- The beginning and ending balance of the fund and the interest earned from the investment of moneys in the fund;
- The amount of charges collected in that fiscal year;
- An identification of the following:
 1. Each public improvement on which charges were expended and the amount of the expenditure for each improvement, including the percentage of the total cost of the public improvement that was funded with those charges if more than one source of funding was used.



2. Each public improvement on which charges were expended that was completed during that fiscal year.
 3. Each public improvement that is anticipated to be undertaken in the following fiscal year.
- A description of each interfund transfer or loan made from the capital facilities fund. The information provided, in the case of an interfund transfer, shall identify the public improvements on which the transferred moneys are, or will be, expended. The information, in the case of an interfund loan, shall include the date on which the loan will be repaid, and the rate of interest that the fund will receive on the loan.

The report detailing the above may be part of the annual audit prepared for the City each year.

Ordinance No. 15-O-2674 adopted February 17, 2015 established the WCC and provides that the WCC is due upon occurrence of the following:

- 1) Installation of a New Water Meter;
- 2) Change in the Size of a Water Meter, or
- 3) The Final Inspection of a Project.

The WSEF Annual Report should be due at the same time and in the same manner as the WCC Annual Report. It is also recommended that the adequacy of the WSEF be reviewed when City staff conduct their periodic reviews of capital expenses. Modifications to be included in future WSEF analyses should include the costs of any Auxiliary Projects (refer to note A below); which could provide additional local groundwater supplies. Additionally changes to modify projected costs for the Hi-Capacity Well, Transmission Main & Water Treatment Project and the Coldwater Canyon Project; based upon design and construction costs, would need to be incorporated into future WSEF analysis updates.

The City should establish a **Procedure** for the Community Development Department that, upon its receipt of an Application for a New Development or Redevelopment that may require a new meter or change in meter size, it would go through a plan check process as part of a will serve procedure.

Note: A. Future Auxiliary Projects may include: Springwater Capture for potable use, Stormwater Capture for Groundwater Replenishment.



The **California Environmental Quality Act (CEQA)** requires cities to evaluate the impacts of developments that request approvals and provide a notice to affected jurisdictions of the determination made relative to the project. Upon receipt of **Notices of Determination (NOD)** under **CEQA** from the City of West Hollywood, the Community Development Department should distribute a copy of the NOD to the **Water Department** for determination of the impact on the City's water system and the corresponding meter size requirements for the New Development or Redevelopment projects in that City, with the City of Beverly Hills' water service area.

The City should coordinate with the City of West Hollywood, to establish a **Process for the City of West Hollywood** to notify owners of property in West Hollywood that are within the City of Beverly Hills' Water Service Area requiring them to contact the City's **Public Works Services Department** regarding the details of the new connection or redevelopment project's water system demands.



IX. REFERENCES

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