Department of Water and Power the City of Los Angeles

ANTONIO R. VILLARAIGOSA
*Mayor*

Commission
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BARBARA E. MOSCHOS, *Secretary*

H. DAVID NAHAI,
*Chief Executive Officer and General Manager*

April 9, 2009

The Honorable City Council
City of Los Angeles
Room 395, City Hall
Los Angeles, California 90012

Dear Members:

Subject: Amendment to Los Angeles Municipal Code Adding Article V

Pursuant to Charter Section 240, enclosed for approval by your Honorable Body is Resolution No. 009-227, adopted by the Board of Water and Power Commissioners (Board) on April 7, 2009, approved as to form and legality by the City Attorney, which recommends that the City Council adopt an Ordinance amending the Los Angeles Municipal Code, by adding Article V (High Efficiency Plumbing Fixtures for the Construction of New Buildings and the Installation of New Plumbing Fixtures in Existing Buildings) to Chapter XII of the Code (the City's Water Conservation Plan). As directed by the Board, transmitted to you are supporting documents.

If there are any questions regarding this item, please contact Ms. Winifred Yancy, LADWP Council Liaison, at (213) 367-0025, or Mr. James H. Caldwell, Jr. at (213) 367-0926.

Sincerely,

Barbara E. Moschos

Barbara E. Moschos
Board Secretary

BEM:rg

Enclosures: LADWP Resolution
Board Letter

(Ordinance transmitted under separate cover)

c/enc: Mayor Antonio Villaraigosa
Ms. Jan C. Perry, Chair, Energy and the Environment Committee
Mr. Gerry F. Miller, Chief Legislative Analyst
Mr. Raymond P. Ciranna, Interim City Administrative Officer
Mr. Rafael Prieto, Legislative Analyst, CLA
Mr. William R. Koenig, Chief Administrative Analyst
Ms. Winifred Yancy
Mr. James H. Caldwell, Jr.

bc: H. David Nahai
City Attorney's Office w/o enc. (2)
Board File

**WHEREAS,** the City of Los Angeles Board of Water and Power Commissioners (Board) is committed to fulfilling its obligation to the next generation of Angelenos by creating sustainable sources of water for the future; and

**WHEREAS,** current water supply conditions require short-term strategies and long-range planning to sustain a reliable supply of water to meet current and future demand for water supplies; and

**WHEREAS,** on May 15, 2008, the Mayor of Los Angeles unveiled the City of Los Angeles' Water Action Plan, calling for increased water conservation, water recycling, and other water management measures to ensure a sustainable water supply for City of Los Angeles (City); and

**WHEREAS,** the Mayor also encouraged regional conservation measures in order to achieve conservation goals; and

**WHEREAS,** water conservation constitutes a legitimate and critical public health, safety, welfare, economic and sanitation concern; and

**WHEREAS,** the LADWP has prepared a proposed addition to the City of Los Angeles' Water Conservation Plan which will mandate the installation of water saving technologies which will conserve water resources and reduce demand for new water in the City in new buildings and the installation of new plumbing fixtures in existing buildings.

**ARTICLE V**
**WATER EFFICIENCY REQUIREMENTS FOR NEW DEVELOPMENT AND RENOVATION OF EXISTING BUILDINGS**

Section

## Sec. 125.00 TITLE AND PURPOSE

This article shall be known as Water Efficiency Requirements for the construction of new buildings and the installation of new plumbing fixtures in existing buildings in the City. The purpose of this article is to impose water efficiency requirements for the construction of new buildings and the installation of new plumbing fixtures in existing buildings to minimize the effect of any water shortages to the customers of the City; and, by means of this article, to adopt provisions that will reduce the consumption of water over an extended period of time, thereby extending the available water required for customers while reducing hardship on the City and the general public to the greatest extent possible, voluntary conservation efforts having proved to be insufficient.

## Sec. 125.01 DECLARATION OF POLICY

It is hereby declared that it is in the interest of the City to advance water efficiency measures for new development in the City. To enhance the sustainability of the City's water supply, water resources available to the City shall be put to the maximum beneficial use to the extent possible.

## Sec. 125.02 DEFINITIONS AND STANDARDS

The following terms have been defined for this ordinance based on recognized industry terms. Other definitions relating to plumbing fixtures are in the City of Los Angeles Plumbing Code.

1. **"ASME"** is the American Society of Mechanical Engineers.

2. **"Commercial Pre-rinse Spray Valves (PRSV)"** are assemblies consisting of a flexible hose and spray head for attachment to a faucet with a built-in diverter. Commercial kitchen pre-rinse spray valves shall be equipped with an integral automatic shut off.

3. **"Cooling Tower"** is a large exterior heat exchanger that transfers heat from condenser water to the outside air.

4. **"CSA"** is the Canadian Standards Association.

5. **"Cycles of concentration"** is the accumulation of dissolved minerals in a cooling tower recirculating water.

6. **"Dual Flush"** means a toilet that has two flush modes, one at 1.1 gallons per flush or less and one at 1.6 gallons per flush or less.

7. **"Energy Star®"** is a government-backed program helping businesses and individuals protect the environment through energy efficiency.

8. **"High Efficiency Toilet"** is a toilet that flushes with no more than 1.28 gallons of water. A dual flush toilet is equivalent to a high efficiency toilet.

9. **"High Efficiency Urinal"** is a fixture that flushes with no more than 0.5 gallons of water. A non-water use urinal is a high efficiency urinal.

10. **"IAPMO"** is the International Association of Plumbing and Mechanical Officials.

11. **"Kitchen or Bar Sink Faucet"** is a device opening that drains water into an approved receptacle in domestic or commercial installations. Faucets that drain into other types of sinks, such as clinic sinks, floor sinks, service sinks and other similar sinks are not included.

12. **"Lavatory Faucet"** is a faucet that drains into a lavatory basin in a domestic or commercial installation.

13. **"Metering Faucet"** is a faucet that after actuation dispenses water of a predetermined volume or for a predetermined period of time. The volume or cycle duration can be fixed or adjustable.

14. **"Non-Water Urinals"** are plumbing fixtures that are designed to receive and convey only liquid waste (urine) through a trap seal and into the gravity drainage system without the use of water for such function. Zero-water, Water-less or Water-free urinals are equivalent terms for Non-water urinals.

15. **"Potable Water"** is water that is satisfactory for drinking, culinary, and domestic purposes that meets the requirements of the health authority having jurisdiction.

16. **"Private or Private Use"** refers to plumbing fixtures in residences and apartments, private bathrooms in hotels and hospitals, and restrooms in commercial establishments where the fixtures are intended for the use of a family or an individual.

17. **"Public or Public Use"** means all uses of fixtures or structures that are not defined as private or private use.

18. **"Self-Closing Faucet"** is a faucet designed to close itself as the activating mechanism is released.

19. **"Single-Pass Cooling Systems"** are systems within which water is circulated only once to cool equipment before disposal.

20. **"US EPA"** is the United States Environmental Protection Agency.

21. **"Water Closet, Electro-Hydraulic Tank Type"** is a water closet of the siphonic or washdown type that utilizes motors, pumps, and controllers to assist the flushing action by monitoring and controlling the flush and dictating the exact discharge from the tank into the bowl. All electro-hydraulic tank type water closets shall have a

maximum effective flush volume of not more than 1.28 gallons (4.8 liters) of water per flush in accordance with ASME A112.19.2/CSA B45.1 or ASME A112.19.14 and shall also be listed to the EPA WaterSense Tank-Type High Efficiency Toilet Specification. The effective flush volume for dual flush toilets is the composite, average flush volume of two reduced flushes and one full flush.

22. **"Water Closet, Gravity"** is a water closet that is designed to flush the bowl by gravity. All gravity type water closets shall have a maximum effective flush volume of not more than 1.28 gallons (4.8 liters) of water per flush in accordance with ASME A112.19.2/CSA B45.1 or ASME A112.19.14 and shall also be listed to the EPA WaterSense Tank-Type High Efficiency Toilet Specification. The effective flush volume for dual flush toilets is the composite, average flush volume of two reduced flushes and one full flush.

23. **"Water Closet, Pressure-Assist Type"** is a water closet with a pressure vessel installed within its tank that uses water supply pressure to compress entrapped air. When the flushing mechanism is activated, the energy stored in the compressed air is released, causing a surge of water into the bowl. All pressure-assist type water closets shall have a maximum effective flush volume of not more than 1.28 gallons (4.8 liters) of water per flush in accordance with ASME A112.19.2/CSA B45.1 or ASME A112.19.14 and shall also be listed to the EPA WaterSense Tank-Type High Efficiency Toilet Specification. The effective flush volume for dual flush toilets is the composite, average flush volume of two reduced flushes and one full flush.

24. **"Water Factor"** is the number of gallons of water per cycle per cubic foot ($ft^3$) that the clothes washer uses. The Water Factor for a clothes washer (residential or commercial) shall be calculated by the quantity of water in Liter/Gallon (L/G) used to wash each cubic meter ($m^3$) or each cubic foot ($ft^3$) of machine drum capacity. The Water Factor for a residential dishwasher shall be calculated by the quantity of water use in L/G per full machine wash and rinse cycle.

**Sec. 125.03 REQUIREMENTS**

Effective December 1, 2009, all plumbing installations in new buildings and installations of new plumbing fixtures in existing buildings shall meet the following requirements:

(a) Toilets

All toilets installed shall be high efficiency fixtures. The maximum flush volume for high efficiency toilets shall not exceed 1.28 gallons of water (effective) per flush (gpf).

(b) Urinals

All urinals installed shall be high efficiency fixtures. The maximum flush volume of high efficiency urinals shall not exceed 0.5 gallon of water per flush. Effective October 1, 2010, the maximum flush volume of high efficiency urinals shall not exceed 0.125 gallon

of water per flush.

(c) Faucets

All faucets in public restrooms must be self-closing. The flow rate for all indoor faucets shall be 2.2 gallons per minute (gpm) except as follows:

- The maximum flow rate for private or private use lavatory faucets shall be 1.5 gpm (5.6 Lpm).
- The maximum flow rate for public use lavatory faucets, shall be 0.5 gpm. Exception. Metering faucets shall deliver not more than 0.25 gallon (1.0 liter) of water per cycle.
- The maximum flow rate for a pre-rinse spray valve installed in a commercial kitchen to remove food waste from cookware and dishes prior to cleaning shall be 1.6 gpm (6.0 Lpm).

(d) Showerheads

All showerheads must be low-flow with a maximum flow rate that does not exceed 2.0 gallons per minute. This requirement shall not apply to any emergency showerhead installed for health or safety purposes.

(e) Dishwashers

1. The maximum water use for high efficiency commercial dishwashers shall be in accordance with Table 1.

**TABLE 1**
**HIGH EFFICIENCY COMMERCIAL DISHWASHER WATER USE**

| Type | High-Temperature Maximum gallons per rack | Chemical-Maximum gallons per rack |
|---|---|---|
| Conveyer | 0.70 | 0.62 |
| Door | 0.95 | 1.16 |
| Undercounter | 0.90 | 0.98 |

2. The maximum water use per washing cycle for high efficiency domestic dishwashers shall be 5.8 gallons.

All installed dishwashers must be Energy Star® rated.

(f) Cooling Towers

All cooling towers must be operated at a minimum of 5.5 cycles of concentration.

(g) Use of Single-Pass Cooling Systems

Single-pass cooling systems are strictly prohibited for use in devices, processes, or equipment installed in commercial, industrial, or multi-family residential buildings. This prohibition shall not apply to devices, processes, or equipment installed for health or safety purposes that cannot operate safely otherwise.

**Sec. 125.04 AUTHORIZATION**

The various officers, boards, departments, bureaus and agencies of the City are hereby authorized and directed to immediately implement the applicable provisions of this Article upon the effective date hereof.

**Sec. 125.05 APPLICATION**

The provisions of this Article shall apply to all customers and properties served by the Department of Water and Power wherever situated, and shall also apply to all property and facilities owned, maintained, operated or under the jurisdiction of the various officers, boards, departments, bureaus or agencies of the City.

**Sec. 125.06 EXEMPTIONS**

Buildings for which building plans were accepted by the Department of Building and Safety and a fee paid prior to the effective date of this Article are exempt from this Article.

Any exemption from the requirements of this Article requires written approval from the Department of Water and Power. Such exemption will only be granted for existing buildings where use of High Efficiency fixtures is infeasible because their installation will compromise public health, safety, or welfare. Any petition for exemption must be accompanied by a registered engineer's report documenting the need for such exemption and such exemption must be approved in writing by the Department of Water and Power.

**Sec. 125.07 SEVERABILITY**

If any section, subsection, clause or phrase in this Article or the application thereof to any person or circumstances is for any reason held invalid, the validity of the remainder of the Article or the application of such provision to other persons or circumstances shall not be affected thereby. The City Council hereby declares that it would have passed this Article and each section, subsection, sentence, clause or phrase thereof, irrespective of the fact that one or more sections, subsections, sentences, clauses or phrases or the application thereof to any person or circumstances be held invalid.

**BE IT FURTHER RESOLVED,** that this Board recommends that the Council of the City adopt an ordinance amending the Los Angeles Plumbing Code by amending Section 103.1.2.9 to read as follows, wit:

**Sec. 103.1.2.9 HIGH EFFICIENCY FIXTURES**

**(a) Residential.** Whenever new fixtures are installed, all water closets, shower heads, faucets and dishwashers shall be High Efficiency fixtures installed in accordance with the regulations of the City's **Water Conservation Plan**. A plumbing permit is not required for the installation of High Efficiency water closets, shower heads, faucets and dishwashers in existing one and two family dwelling units when done as part of the City's **"Water Conservation Retrofit Program"** pursuant to the City's water conservation regulations. These permit exempted installations shall be limited to the replacement of non-water efficient water closets, shower heads, faucets and dishwashers with new High Efficiency water closets, shower heads, faucets, and dishwashers installed on the existing rough-in plumbing outlets. Plumbing permits shall be required for all High Efficiency fixtures in new buildings. This Code Section does not waive the requirement for a licensed plumbing contractor to perform the installation of a High Efficiency water fixture in an apartment unit or non-owner-occupied single-family dwellings.

**(b) Commercial.** Whenever new fixtures are installed, all water closets, urinals, shower heads, faucets and dishwashers shall be High Efficiency fixtures installed in accordance with the regulations of the City's **Water Conservation Ordinance**. A plumbing permit shall be obtained for both new and replacement installations of all High Efficiency water closets, urinals, and dishwashers to confirm that the new installation or replacement is in accordance with the regulations of the City's **Water Conservation Ordinance.** In all commercial occupancies, a Qualified Installer, as defined in Section 94.219.0 shall perform the installation of any High Efficiency water fixture or appliance.

I HEREBY CERTIFY that the foregoing is a full, true, and correct copy of a Resolution adopted by the Board of Water and Power Commissioners of the City of Los Angeles at its meeting held APR 7 2009

Barbara E. Moschos
Secretary

APPROVED AS TO FORM AND LEGALITY
ROCKARD J. DELGADILLO, CITY ATTORNEY

MAR 27 2009

BY Mark K. for David Hotchkiss
S. DAVID HOTCHKISS
Assistant City Attorney

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# LADWP BOARD APPROVAL LETTER

| TO: BOARD OF WATER AND POWER COMMISSIONERS | DATE: March 26, 2009 |
|---|---|
| RAMAN RAJ<br>Chief Operating Officer<br><br>H. DAVID NAHAI<br>Chief Executive Officer<br>and General Manager<br><br>JAMES H. CALDWELL JR.<br>Assistant General Manager<br>Environmental Affairs<br><br>CECILIA K.T. WELDON<br>Chief<br>Administrative Officer<br><br>RECEIVED<br>MAR 31 2009<br>Board of Water & Power Com'rs.<br>OFFICE OF THE SECRETARY | SUBJECT:<br><br>**Adding Article V High Efficiency Plumbing Fixtures for the Construction of New Buildings and the Installation of New Plumbing Fixtures in Existing Buildings to Chapter XII Water Conservation Plan of the City of Los Angeles**<br><br>FOR COMMISSION OFFICE USE:<br><br>RES. No. 009 227<br>APR 7 2009 |
| ITY COUNCIL APPROVAL REQUIRED: Yes ☒ No ☐ | IF YES, BY WHICH CITY CHARTER SECTION: 240 |

## PURPOSE:

To adopt a resolution recommending to City Council the adoption of an ordinance amending the Los Angeles Municipal Code, adding Article V (High Efficiency Plumbing Fixtures for the Construction of New Buildings and the Installation of New Plumbing Fixtures in Existing Buildings) to Chapter XII of the code (the City's Water Conservation Plan).

## BACKGROUND:

Uncertainty regarding the adequacy of California's long-term water supply requires that the Los Angeles Department of Water and Power (LADWP) be proactive in ensuring water supply reliability for the City of Los Angeles (City). The proposed ordinance modifications will codify the required installation of specific high efficiency plumbing fixtures and appliances (more efficient than that required by current codes or standards) in all new and retrofit projects in the City. The intent of the new requirements is to achieve significant water savings without adversely affecting customers' quality of life.

Voluntary conservation efforts, while significant, will not sufficiently mitigate increased water demand resulting from the City's projected growth. The proposed ordinance requirements will ensure a sustained reduction in potable water use for the construction of new buildings and the installation of new plumbing fixtures in existing buildings from the first day of occupancy.

Currently, the City uses on average 580 million gallons of water per day. By adopting this ordinance, it is estimated that the required installation of high efficiency plumbing fixtures will both reduce water consumption in residential new construction by 20 percent and by 30 percent in commercial new construction. Thus, the proposed water conservation requirements are an important component of LADWP's overall plan to achieve the goal of meeting all new demand for water with a combination of water conservation and water recycling, as prescribed in the Mayor's *City of Los Angeles Water Supply Action Plan.*

The proposed requirements also support and complement the City's *Green Building Program*, and will result in water efficiency point eligibility in the Leadership in Energy and Environmental Design (LEED) certification process.

As a modification of the Los Angeles Municipal Code, this proposed amendment to the Water Conservation Ordinance requires approval by the Los Angeles City Council.

In general, the requirements of this ordinance follow Assembly Bill (AB) 715 Standards which become mandatory by January 1, 2014. However, after researching product availability and cost effectiveness, LADWP recommends that this ordinance exceed AB 715 Standards and California Green Building Standards Code in some areas. In particular, the LADWP recommends the use of 1 pint (0.125 gallon per flush) urinals rather than using 0.5 or 1.0 gallon per flush urinals.

The LADWP has received many support letters from engineers, contractors, plumbers, architects, and professional engineering and contractor associations regarding enforcing the use of high-efficiency plumbing products. In addition, all the departments that are part of Integrated Resources Plan (IRP) have expressed their support for this ordinance.

Currently, the LADWP is evaluating the implementation of a few other water conservation ordinances, such as gray water systems and sub-metering for multi-family units. As soon as all issues with respect to Municipal Codes and other City departments are resolved, the LADWP will go forward to submit these new ordinances. We estimate that these proposed ordinances will be presented to your Honorable Board in December 2009. In addition, the LADWP is assisting other City departments with new ordinances covering landscape, hillside, stream protection, and low impact development. These City departments meet regularly to coordinate efforts on water conservation.

If the entire building stock in the City were to instantly comply with this ordinance, we would save approximately 60,000 acre-foot per year (AFY). Because this ordinance applies both to new construction and retrofits/renovations, and will be accompanied at a later date by revisions to our rebate program to accelerate the market transformation to

use more efficient fixtures, it will result in a permanent savings of a significant fraction of this 60,000 AFY. We are currently estimating a net savings of roughly 15,000 AFY and will conduct surveys documenting experience gained on retrofitting LADWP's own buildings and other buildings to refine this estimate and guide future policy decisions.

A waiver of the requirements of Executive Directive No. 4 was received from the City Administrative Officer.

**COST AND DURATION:** Not applicable

**FUNDING SOURCE:** Not applicable

**FISCAL IMPACT STATEMENT:** Not applicable

**TYPE OF INSURANCE COVERAGE:** Not applicable

**PRE-AWARD CHECKLIST:**

Not applicable since the LADWP and other City departments will be implementing the plan; and, as governmental agencies, City departments are exempt from these business policies.

**CONTRACT ADMINISTRATION:** Not applicable

**FORMAL OBJECTIONS TO AWARD OF CONTRACT:** Not applicable

**JOB OPPORTUNITIES AND TRAINING POLICY:** Not applicable

**INTERNAL AUDIT:** Not applicable

**EXTERNAL AUDIT:** Not applicable

**CHARTER SECTION 1022 FINDINGS AND BASIS THEREOF:**

This Ordinance is not a contract for labor/professional services and does not involve labor bargaining work.

**MEMORANDUM OF UNDERSTANDING PROPOSED CONTRACT REVIEW PROCESS:** Not applicable

**METHOD OF SELECTION:** Not applicable

**OUTREACH EFFORTS TAKEN:** Not applicable

**MINORITY/WOMEN BUSINESS ENTERPRISE (MBE/WBE) SUBCONTRACTING PARTICIPATION:** Not applicable

**VENDOR HISTORY:** Not applicable

**VENDOR PERFORMANCE:** Not applicable

**ENVIRONMENTAL DETERMINATION:**

In accordance with the California Environmental Quality Act (CEQA), it has been determined that amending the Water Conservation Ordinance for the purpose of executing more aggressive water conservation policies is exempt pursuant to the General Exemption described in CEQA Guidelines Section 15061(b)(3). General Exemptions apply in situations where it can be seen that there is no possibility that the activity in question may have a significant effect on the environment.

**CONFLICT OF INTEREST STATEMENT:** Not applicable

**RECOMMENDATION:**

It is recommended that the Board adopt the Resolution recommending the City Council's approval of an ordinance amending the Los Angeles Municipal Code by adding the proposed Article V to Chapter XII in words and figures substantially as attached.

AT:sc/rp
Attachment
c/att: H. David Nahai
Raman Raj
Richard M. Brown
Aram Benyamin
James B. McDaniel
Jeffery L. Peltola
Cecilia K.T. Weldon
John X. Chen
Maria Sison-Roces
James H. Caldwell Jr.
Amir Tabakh