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**THE COUNCIL**

**REPORT OF THE INFRASTRUCTURE DIVISION  
ROBERT NEWMAN, LEGISLATIVE DIRECTOR**

**COMMITTEE ON HOUSING AND BUILDINGS  
Hon. Erik Martin Dilan, Chair**

October 13, 2010

**PROPOSED INT. NO. 263-A:**

By: Council Members Dickens, Brewer, Comrie, Foster, James, Lander, Williams, Mark-Viverito, Lappin, Garodnick, Arroyo, Rodriguez, Van Bramer and Gennaro

**TITLE:**

A Local Law to amend the New York city plumbing code, in relation to reducing the waste of potable water for cooling.

**ADMINISTRATIVE CODE:**

Amends sections 202 and chapter 13 of the New York city Plumbing Code and adds a new section PC 428 to such code.

**PROPOSED INT. NO. 264-A:**

By: Council Members Eugene, Foster, James, Lander, Palma, Mark-Viverito, Nelson, Garodnick,

Recchia Jr., Arroyo, Rodriguez, Van Bramer, Gennaro and Lappin

**TITLE:**

A Local Law to amend the New York city plumbing code, in relation to drinking fountains.

**ADMINISTRATIVE CODE:**

Amends section 410 of the New York city Plumbing Code.

**PROPOSED INT. NO. 268-A:**

By Council Members Lander, Barron, Brewer, Chin, Vann, Williams, Mark-Viverito, Lappin, Nelson, Garodnick, Recchia Jr., Arroyo, Rodriguez, Van Bramer and Gennaro

**TITLE:**

A Local Law to amend the administrative code of the city of New York, in relation to preventing water waste in buildings.

**ADMINISTRATIVE CODE:**

Amends sections 202, 605.5.4.1 and 608.16.2 of the New York city Plumbing Code and adds a new section 606.7 to such Code.

**PROPOSED INT. NO. 271-A:**

By Council Members Lappin, Brewer, Gonzalez, Lander, Recchia Jr., Van Bramer, Vann, Williams, Garodnick, Arroyo, Mark-Viverito, Rodriguez and Gennaro

**TITLE:**

A Local Law to amend the New York city plumbing code and the administrative code of the city of new York, in relation to enhancing water efficiency standards.

**ADMINISTRATIVE CODE:**

Amends section 202, table 604.4, section 604 by adding a new subsection 604.4.1 and chapter 13 of the New York city Plumbing Code and amends section 20-689 of title 20.

## **BACKGROUND AND ANALYSIS:**

On October 13, 2010, the Committee on Housing and Buildings, chaired by Council Member Erik Martin Dilan, will conduct a hearing on four bills related to the efficient use of water. On June 22, 2010, the Committee heard earlier versions of these bills and received testimony from representatives of the Department of Buildings and other persons interested in this legislation. The bills before the Committee today, Proposed Int. No. 263-A, Proposed Int. No. 264-A, Proposed Int. 268-A, and Proposed Int. No. 271-A were amended following this initial hearing.

By enacting Local Law 22 of 2008, New York City committed to reducing its greenhouse gas emissions by 30% by 2017 for government operations and by 30% citywide by 2030. PlaNYC, the City's comprehensive sustainability plan, sets an additional goal of reducing New York City's daily water use by 60 million gallons. Buildings are responsible for about 75% of our greenhouse gas emissions<sup>1</sup> and 85% of our water use, making improved building efficiency a crucial component of reaching these environmental goals. New York City has experienced seven droughts over the last 45 years<sup>2</sup> and is vulnerable to future droughts. The Department of Environmental Protection (DEP) has successfully implemented water conservation strategies since the 1990's, reducing daily average water use in New York City from over 208 gallons per person in 1988 to about 134 gallons per person in 2006.<sup>3</sup> Daily use remains high, however, and code improvements have the potential to make further reductions in water use, helping to protect the quality and adequacy of the City's water supply.

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<sup>1</sup> Mayor's Office of Long-Term Planning and Sustainability, September 2009. Inventory of New York City Greenhouse Gas Emissions.

<sup>2</sup> New York City Department of Environmental Protection. Available online at: [http://www.nyc.gov/html/dep/html/drinking\\_water/droughthist.shtml](http://www.nyc.gov/html/dep/html/drinking_water/droughthist.shtml)

Recognizing the important role of building performance, Mayor Bloomberg and Speaker Quinn convened the New York City Green Codes Task Force in July of 2008. The Task Force was composed of industry experts, union representatives, tenant advocates, environmentalists, academics, developers, buildings owners, and representatives of City agencies as well as the Mayor's office and the Speaker's office. This group was divided into nine technical committees, a steering committee, and an industry advisory committee. After two years of work examining each of New York City's building codes, the Task Force presented 111 recommendations for "greening the codes." The recommended improvements are intended to raise the bar for environmental performance in buildings throughout the City.

The four bills before the Committee today are the first of the water efficiency recommendations to come before the Council and each bill is discussed below.

### **Proposed Int. No. 263-A**

Most large cooling systems typically re-circulate water but certain large commercial cooling systems, such as large ice-making machines or walk-in refrigerators use potable water that passes through the system only once before being disposed of as wastewater, thus using large amounts of drinking water unnecessarily. Moreover, when these systems encounter problems, they are likely to use even more water ( i.e., a valve that controls water flow may remain open when it fails) meaning that improperly functioning systems may be running drinking water on a once-through basis 24 hours a day. Proposed Int. No. 263-A would prohibit the use of potable water for once-through cooling systems.

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<sup>3</sup> Green Codes Task Force Proposals: Executive Summary at p. 57, 2010. Available online at: <http://www.urbangreencouncil.org/greencodes/>

Bill section one would add the definition of “once-through cooling” to New York City Plumbing Code (Plumbing Code or PC) section 202 in the appropriate alphabetical order within that section. The definition of this term would be “the use of potable water to cool a condenser, other building equipment or process equipment, excluding equipment used to cool steam condensate, and then discharging the water into the sewage system.”

Bill section two would amend chapter 4 of the Plumbing Code by adding a new section PC 428 entitled, “Prohibited Water Uses.” The heading of new section 428.1 within section 428 would be, “Prohibited potable water uses” and provides that potable water shall not be permitted for those uses prohibited by PC 428. The heading of new section 428.1.1 would be, “Potable water prohibited for once through cooling” and provides that potable water shall not be used for once-through cooling. This new section also provides that “equipment such as ice-making machines, walk-in coolers, refrigerated walk-in boxes, or environmental air conditioning equipment shall be provided with air cooled condensers or recirculating condenser water systems, or supplied with non-potable water as permitted by Appendix C” of the Plumbing Code. An exception would be made for once-through water cooled ice makers which produce less than 500 pounds of ice per day at Standard Rating Conditions as specified in ARI Standard 810 and for once-through water-cooled ice making machines, walk-in coolers, refrigerated walk-in boxes or air conditioning equipment supplied with potable water through piping systems installed prior to January 1, 2011 and any replacements that use the same or lesser amount of potable water.

Bill section three amends Chapter 13 of the Plumbing Code by adding a reference to the standard ARI 810.

Bill section four contains the enactment clause and provides that this local law would take effect on January 1, 2011, and would require the Commissioner of Buildings to take all measures

that are necessary for its implementation, including the promulgation of rules, prior to the effective date.

### **Amendments to Int. No. 263**

- The bill title was amended to more accurately reflect that this bill is meant to address reducing the waste of potable water for cooling.
- Bill section one was amended to revise the definition of once-through cooling to exclude the use of potable water to temper hot water or steam before discharging into a sanitation drain.
- Bill section two was amended by adding an exemption for once-through cooled equipment supplied with potable water through piping systems that were installed prior to January 1, 2011 (the bill's effective date) and any subsequent equipment replacements that use the same or lesser amount of potable water.
- Former bill section three, the enactment clause, was renumbered as bill section four.
- New bill section three contains a reference to the standard ARI 810, which refers to new section PC 428.1.1

### **Proposed Int. No. 264-A**

Drinking water throughout the day is important for health and drinking fountains provide a free source of drinking water in buildings. A prescribed minimum numbers of drinking fountains are required in many buildings by the Plumbing Code but a previous change to the Plumbing Code allowed bottled water dispensers to fulfill up to 50% of this requirement.<sup>4</sup>

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<sup>4</sup> See Section PC 403, attached as an addendum to this report, which details the occupancies where drinking fountains are required.

Bill section one amends section 410 of the Plumbing Code by providing that required drinking fountains must be equipped with both a faucet for direct drinking and a separate faucet designed for filling a container at least 10 inches in height. When drinking fountains are required, up to fifty percent of the required drinking fountains may be substituted by dedicated plumbing fixtures with a faucet designed for filling a container at least 10 inches in height. Bottled water dispensers may not be substituted for the required drinking fountains. Drinking fountains and plumbing fixtures with faucets permitted to be substituted for the required drinking fountains may not be installed in public restrooms.

Bill section two contains the enactment clause and provides that this local law would take effect on July 1, 2012, and would require the Commissioner of Buildings to promulgate any necessary rules to implement its provisions prior to the effective date.

**Amendments to Int. No. 264**

- The description of the required drinking fountain was amended to clarify that the fountain must be equipped with both a faucet for direct drinking and a separate faucet designed for filling a container at least 10 inches in height.
- The bill was also amended to clarify that up to 50% of the required drinking fountains may be substituted for by a device or receptacle that is directly connected to the water supply line of the premises.
- The allowance for the continued use of water bottle dispensers as a substitute for the required drinking fountains was removed from the bill. Such use is now expressly prohibited.
- Finally, the enactment clause was amended to provide for an effective date of July 1, 2012 rather than January 1, 2011.

### **Proposed Int. No. 268-A**

Certain types of commercial facilities such as commercial laundry facilities, commercial cooking facilities and swimming pools use large amounts of water. For these users, equipment leaks and malfunctions can waste enormous amounts of water very quickly. While all commercial buildings have meters that measure building-wide water consumption, identifying water usage by individual water users is not possible absent sub-meters placed strategically throughout a building. For that reason, Proposed Int. No. 268-A would require facilities that are major water users such as swimming pools, commercial kitchens, and commercial laundries, to have separate sub-meters to measure their water use.<sup>5</sup> By measuring the amount of water used, the sub-meter can alert both the operator of the facility and DEP to a potential water leak or equipment malfunction and allow any potential problem to be addressed more quickly.

Bill section one contains the legislative intent expressing the need for this legislation.

Bill section two amends the definition section of the Plumbing Code to add definitions for the terms “water meter” and “water sub-meter.” A water meter is defined as “a device that measures the flow of water supplied from a public water main to a building and that is used by the Department of Environmental Protection to bill for water supplied to the building.” A water sub-meter is defined as “a device, other than a water meter, installed on a water distribution pipe or makeup water pipe that measures the flow of water within a specified space and/or to specified equipment within a building.”

Bill section three amends PC section 606.5.4.1 by requiring that all roof tanks be provided with a high water level alarm which must be located at or slightly below the overflow.



The high water level alarm must be designed to activate when the ball cock, automatic supply valve, or emergency electrical cut-off fails. The alarm would alert the staff of the building of a water leak or equipment malfunction before the roof tank overflows and potable water is wasted.

Bill section four amends section 606 of the PC by adding a new section 606.7, which requires that water distribution pipe lines serving a commercial cooking facility, commercial laundry facility or commercial gym or spa be equipped with at least one water sub-meter to measure the amount of water supplied through such lines to the water using equipment within such facility, gym or spa.<sup>6</sup> The water sub-meter must be equipped with an electronic encoder with absolute or pulse-based output. At least one such sub-meter is also required to be installed on makeup water lines serving an evaporative cooling tower or swimming pool. However, swimming pools accessory to Group R-3 occupancies<sup>7</sup> are not required to have a water sub-meter.

Bill section five amends section 608.16.2 of the PC by requiring that makeup water lines to boilers serving buildings greater than six stories must be equipped with at least one water sub-meter that is equipped with an electronic encoder with absolute or pulse-based output.

Bill section six contains the enactment clause and provides that this local law would take effect on January 1, 2011, except that the Commissioner of Buildings shall take such actions as are necessary for its implementation, including the promulgation of rules, prior to such effective date.

### **Amendments to Int. 268**

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<sup>5</sup> Commercial laundry facilities do not include laundry rooms in residential buildings where such laundry rooms only serve building residents.

<sup>6</sup> According to the Plumbing Code, a water distribution pipe is "A pipe within the structure or on the premises that conveys water from the water service pipe, or from the meter when the meter is at the structure, to the points of utilization." See Section PC 202.

- A new bill section two was added to include definitions for the terms “water meter” and “water sub-meter.”
- With respect to the required water sub-meters, bill sections four and five were amended to clarify that at least one water sub-meter will be required for the water using equipment within a commercial cooking facility, commercial laundry facility or commercial gym or spa and at least one water sub-meter for the makeup water lines serving an evaporative cooling tower or swimming pool. Additionally, the bill now requires that such water sub-meters be equipped with an electronic encoder with absolute or pulse-based output rather than requiring DEP to promulgate a list of approved water sub-meters.

#### **Proposed Int. No. 271-A**

Although New York City usually has abundant rainfall and snow melt in its 2,000 square mile watershed to provide those who reside and work in the City with adequate supplies of water, over the past 10-15 years there have been significant periods where the City’s water supply has not been adequate to meet average daily needs without some limitations being imposed. For example, in the Spring and Summer of 2002, the City’s water supply was only at 33% of capacity, far below the typical capacity of 80-90% and DEP imposed certain restrictions on water use, including restrictions on the availability of drinking water in restaurants, the watering of lawns and the hosing down of sidewalks.

It has been estimated by some that reducing the amount of water used by plumbing fixtures such as toilets and showerheads could ultimately reduce water consumption by 5-7

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<sup>7</sup> Pursuant to Section 310.1.3 of the Building Code of the City of New York, Group R-3 occupancies include one- and-two-family homes, group homes and convents and monasteries with fewer than twenty occupants.

gallons of water per person per day, or 3-4% over the next ten years.<sup>8</sup> Using less water should also reduce wastewater flows, potentially easing the burden on the City's wastewater treatment plants and reducing the incidence of combined sewer overflows. Proposed Int. No. 271-A is intended to aid in this effort by address water efficiency standards for toilets, showerheads, and other plumbing fixtures.

Bill section one amends the list of definitions in section PC 202 by adding definitions for "Dual Flush Water Closet" and "WaterSense Program." A "Dual Flush Closet" is defined as a water closet that enables the user to use different flush volumes depending on the type of waste being disposed of. The "WaterSense Program" is defined as a program of the United States Environmental Protection Agency providing for the third-party certification of plumbing fixtures as meeting performance and efficiency requirements established by such agency and authorizing the labeling of plumbing fixtures as meeting such requirements."

Bill section two amends section PC 604.4 by lowering the maximum flow rate or quantity for the following plumbing fixtures: a private lavatory from 2.2 gmp at 60 psi to 1.5 gmp at 60 psi<sup>9</sup>; a shower head from 2.5 gpm at 80 psi to 2.0 g,p at 80 psi; a urinal from 1.0 gallon per flushing cycle to 0.5 gallons per flushing cycle and a water closet from, 1.6 to 1.28 gallons per flushing cycle or equivalent dual flush. Further, a new subdivision (c) as added to describe the purpose of a dual flush water closet and to establish the water usage criterion for such fixture. Such subdivision would provide that such water closet must provide "one third of the sum of the high flush volume plus twice the low flush volume is less than or equal to 1.28 gallons per flush."

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<sup>8</sup> Green Codes Task Force Proposals. Available online at:<http://www.urbangreencouncil.org/greencodes/>

<sup>9</sup> Psi refers to pounds of pressure per square inch.

Bill section three amends section PC 604 to provide that showerheads, private lavatory faucets, water closets and for urinals, the urinal flush valve or fixture/valve combination must meet the specifications required for the WaterSense program label, bear such label, or be approved in accordance with the Plumbing Code. The WaterSense program label is not required for water closets in public restrooms.

Bill section four amends chapter 13 of the PC by adding a reference to the WaterSense standard promulgated by the United States Environmental Protection Agency (EPA).

Bill section five amends the existing penalty provisions of the Ad. Code, section 20-689, to specify that it is illegal to sell or offer for sale any plumbing fixture that does not comply with the maximum flow rates and water consumption requirements of PC 604.4.

Bill section six contains the enactment clause and provides that this local law would take effect on July 1, 2012, except that the Commissioner of Buildings and the Commissioner of Consumer Affairs shall each take such measures as are necessary for its implementation, including the promulgation of rules, prior to the effective date.

#### **Amendments to Int. 271**

- Technical changes were made throughout the bill to address incorrect references, terminology (“dual flush water closet” rather than “dual flush toilet”) and the removal of certain definitions and bill sections.
- The proposed definition for “non-water urinal” and changes to the Plumbing Code related to the use of such urinals were removed from the bill in response to testimony that called into question the wisdom of altering the current conditions under which they may be used.

- The proposed deletion of the current maximum water consumption flow rates and quantities for “blowout design toilets” and “clinical sinks” referenced in bill section three were removed from the bill.
- The proposed inclusion of a maximum flow rate for a service sink to table 604.4 was removed from the bill.
- The bill now requires the WaterSense program label for certain fixtures (showerheads, private lavatory faucets, water closets and for urinals the flush valve or fixture/valve combinations) or that such fixtures be approved in accordance with the Plumbing Code. Water closets in public restrooms are exempt from the WaterSense program requirements.
- A reference to the WaterSense program standards was added to chapter 13 of the PC.
- The penalty provision of current section 20-689 of the Ad. Code was revised to provide that “it shall be unlawful for any person to sell or offer for sale any plumbing fixture that does not comply with section 604.4 of the New York city plumbing code” rather than prohibiting both the sale and purchase of noncompliant fixtures.
- The enactment clause was amended to provide that the local law shall take effect on July 1, 2012 rather than January 1, 2011 as originally proposed.

### Update

On Wednesday, October 13, 2010 the Committee adopted this legislation.

Accordingly, the Committee recommends its adoption.



Proposed Int. No. 263-A

By Council Members Dickens, Brewer, Comrie, Foster, James, Lander, Williams, Mark-Viverito, Lappin, Garodnick, Arroyo, Rodriguez, Van Bramer and Gennaro

A Local Law

To amend the New York city plumbing code, in relation to reducing the waste of potable water for cooling.

Be it enacted by the Council as follows:

Section 1. Section PC 202 of the New York city plumbing code is amended by adding a certain definition to be placed in the appropriate alphabetical order to read as follows:

**ONCE-THROUGH COOLING.** The use of potable water to cool a condenser, other building equipment or process equipment, excluding equipment used to cool steam condensate, and then discharging the water into the sewage system.

§2. Chapter 4 of the New York city plumbing code is amended by adding a new section PC 428 to read as follows:

**SECTION PC 428**  
**PROHIBITED WATER USES**

**428.1 Prohibited potable water uses.** Potable water shall not be permitted for those uses prohibited by this section.

**428.1.1 Potable water prohibited for once through cooling.** Potable water shall not be used for once-through cooling. Equipment such as ice making machines, walk-in coolers, refrigerated walk-in boxes, or air conditioning equipment shall be provided with air cooled condensers or recirculating condenser water systems, or supplied with non-potable water as permitted by Appendix C of this code.

Exceptions:

1. Once-through water-cooled ice making machines producing less than 500 pounds of ice per day at Standard Rating Conditions as specified in ARI 810.
2. Once-through water-cooled ice making machines, walk-in coolers, refrigerated walk-in boxes or air conditioning equipment supplied with potable water through piping systems installed prior to January 1, 2011 and any subsequent replacements that use the same or lesser amount of potable water.

§3. Chapter 13 of the New York city plumbing code is amended by adding a reference to the standard ARI 810 immediately following the reference to standard ARI 1010—94, to read as follows:

810—06      Standard Rating Conditions      428.1.1

§4. This local law shall take effect on January 1, 2011, except that the commissioner of buildings shall take such measures as are necessary for its implementation, including the promulgation of rules, prior to such effective date.

10/5/2010 11:28 PM



Proposed Int. No. 264-A

By Council Members Eugene, Foster, James, Lander, Palma, Mark-Viverito, Nelson, Garodnick, Recchia Jr., Arroyo, Rodriguez, Van Bramer, Gennaro and Lappin

A LOCAL LAW

To amend the New York city plumbing code, in relation to drinking fountains.

Be it enacted by the Council as follows:

Section 1. Section PC 410 of the New York city plumbing code, as added by local law number 33 for the year 2007, is amended to read as follows:

**SECTION PC 410**

DRINKING FOUNTAINS

**410.1 Approval.** Drinking fountains shall conform to ASME A112.19.1M, ASME A112.19.2M or ASME A112.19.9M, and water coolers shall conform to ARI 1010. Drinking fountains and water coolers shall conform to NSF 61, Section 9. [Where water is served in restaurants, drinking fountains shall not be required. In other occupancies, where drinking fountains are required, bottled water dispensers shall be permitted to be substituted for not more than 50 percent of the required drinking fountains.] Drinking fountains required by table 403.1 shall be equipped with both a bubbler faucet for drinking and a separate faucet designed for filling a container at least 10 inches in height.

**410.2 Required drinking fountains.** Where water is served in restaurants, drinking fountains shall not be required. In other occupancies, where drinking fountains are required, up to 50 percent of required drinking fountains conforming to Section 410.1 may be substituted by dedicated plumbing fixtures with faucets designed for filling a container at least 10 inches in height. Bottled water dispensers shall not be substituted for required drinking fountains.

[410.2] **410.3 Prohibited location.** Drinking fountains and plumbing fixtures with faucets permitted to be substituted for required drinking fountains shall not be installed in public restrooms.

§2. This local law shall take effect on July 1, 2012, except that the commissioner of buildings shall take such actions as are necessary for its implementation, including the promulgation of rules, prior to such effective date.

10/5/2010 11:29 PM

Proposed Int. No. 268-A

By Council Members Lander, Barron, Brewer, Chin, Vann, Williams, Mark-Viverito, Lappin, Nelson, Garodnick, Recchia Jr., Arroyo, Rodriguez, Van Bramer and Gennaro

A LOCAL LAW

To amend the administrative code of the city of New York, in relation to preventing water waste in buildings.

Be it enacted by the Council as follows:

Section 1. Statement of findings and purpose. Leaks and equipment malfunctions in buildings have the potential to waste a tremendous amount of water and can persist undetected for years. The council therefore finds that alarms and sub-meters attached to piping supplying water-using equipment will help building managers quickly detect such leaks and malfunctions, and save significant amounts of water from being wasted.

§2. Section PC 202 of the New York city plumbing code is amended by adding two new definitions to be placed in appropriate alphabetical order to read as follows:

**WATER METER.** A device that measures the flow of water supplied from a public water main to a building and that is used by the Department of Environmental Protection to bill for water supplied to the building.

**WATER SUB-METER.** A device, other than a water meter, installed on a water distribution pipe or makeup water pipe that measures the flow of water within a specified space and/or to specified equipment within a building.

§3. Section 606.5.4.1 of the New York city plumbing code, as added by local law number 33 for the year 2007, is amended to read as follows:

**606.5.4.1 Water piping control and location.** Water inlets to gravity house tanks shall be controlled by a ball cock or other automatic supply valve or emergency electrical cut-off so installed as to prevent the overflow of the tank in the event that the pumps filling the tanks do not shut off at the predetermined level or the street pressure rises to a point where it can fill the tank. The water inlet to a suction tank shall be controlled by a ball cock or other automatic supply valve. The inlet shall be terminated so as to provide an accepted air gap but in no case shall it be less than 4 inches (102 mm) above the top of the overflow. The outlet from a gravity tank to the distribution system shall be equipped with a strainer located at least 2 inches (51 mm) above the tank bottom to prevent solids from entering the piping system. All down-feed supplies from a tank cross connected in any manner with distribution supply piping in a building supplied by direct street or pump pressure, shall be equipped with a check valve on the main cold water down supply to prevent backflow of water into the roof tank. All roof tanks shall be equipped with a high water level alarm, at or slightly below the overflow, designed to activate when the ball cock, automatic supply valve, or emergency electrical cut-off fails.

§4. Section PC 606 of the New York city plumbing code is amended by adding a new subsection 606.7 to read as follows:

**606.7 Water sub-meters required.** Water distribution pipe lines serving a commercial cooking facility, commercial laundry facility or commercial gym or spa shall be equipped with at least one water sub-meter to measure the amount of water supplied through such lines to the water using equipment within such facility, gym or spa. Such water sub-meter shall be equipped with an electronic encoder with absolute or pulse-based output. Makeup water lines serving an evaporative cooling tower or swimming pool shall be equipped with at least one water sub-meter to measure the amount of water supplied through such lines to such cooling tower or swimming

pool. Such water sub-meter shall be equipped with an electronic encoder with absolute or pulse-based output.

Exception. Swimming pools accessory to Group R-3 occupancies.

§5. Section 608.16.2 of the New York city plumbing code, as added by local law number 33 for the year 2007, is amended to read as follows:

**608.16.2 Connections to boilers.** The potable supply to the boiler shall be equipped with a backflow preventer with an intermediate atmospheric vent complying with ASSE 1012 or CAN/CSA B64.3. Where conditioning chemicals are introduced into the system, the potable water connection shall be protected by an air gap or a reduced pressure principle backflow preventer, complying with ASSE 1013, CAN/CSA B64.4 or AWWA C511. Makeup water lines to boilers serving buildings greater than six stories shall be equipped with at least one water sub-meter to measure the amount of water supplied through such lines to such boilers. Such water sub-meter shall be equipped with an electronic encoder with absolute or pulse-based output.

§6. This local law shall take effect on January 1, 2011, except that the commissioner of buildings shall take such actions as are necessary for its implementation, including the promulgation of rules, prior to such effective date.

10-5-10 11:20 pm

Proposed Int. No. 271-A

By Council Members Lappin, Brewer, Gonzalez, Lander, Recchia Jr., Van Bramer, Vann, Williams, Garodnick, Arroyo, Mark-Viverito, Rodriguez and Gennaro

A Local Law

To amend the administrative code of the city of New York, in relation to enhancing water efficiency standards.

Be it enacted by the Council as follows:

Section 1. Section PC 202 of the New York city plumbing code is amended by adding certain definitions to be placed in appropriate alphabetical order, to read as follows:

**DUAL FLUSH WATER CLOSET.** A water closet that enables the user to select a high flush for solid waste or a reduced volume, low flush for liquid waste.

**WaterSense PROGRAM.** A program of the United States Environmental Protection Agency providing for the third-party certification of plumbing fixtures as meeting performance and efficiency requirements established by such agency and authorizing the labeling of plumbing fixtures as meeting such requirements.

§2. Table 604.4 of the New York city plumbing code, as added by local law number 33 for the year 2007, is amended to read as follows:

TABLE 604.4  
MAXIMUM FLOW RATES AND CONSUMPTION FOR PLUMBING FIXTURES AND  
FIXTURE FITTINGS

PLUMBING FIXTURE OR FIXTURE FITTING	MAXIMUM FLOW RATE OR QUANTITY <sup>b</sup>
Lavatory, private	[2.2] <u>1.5</u> gpm at 60 psi
Lavatory, public (metering)	0.25 gallon per metering cycle
Lavatory, public (other than metering)	0.5 gpm at 60 psi
Shower head <sup>a</sup>	[2.5] <u>2.0</u> gpm at 80 psi
Sink faucet	2.2 gpm at 60 psi
Urinal	[1.0] <u>0.5</u> gallon per flushing cycle
Water closet	[1.6] <u>1.28</u> gallons per flushing cycle <u>or</u>

equivalent dual flush<sup>c</sup>

For SI: 1 gallon = 3.785 L, 1 gallon per minute = 3.785 L/m,

1 pound per square inch = 6.895 kPa.

- a. A hand-held shower spray is a shower head.
- b. Consumption tolerances shall be determined from referenced standards.
- c. A dual flush water closet where one third of the sum of the high flush volume plus twice the low flush volume is less than or equal to 1.28 gallons per flush.

§3. Section PC 604 of the New York city plumbing code is amended by adding a new subsection 604.4.1, to read as follows:

**604.4.1 WaterSense program label required.** Showerheads, private lavatory faucets, water closets and for urinals, the urinal flush valve or fixture/valve combination, shall meet the specifications required for the WaterSense program label and shall bear such label, or shall be approved in accordance with this code.

Exception: Water closets in public restrooms.

§4. Chapter 13 of the New York city plumbing code is amended by adding a new referenced standard “WaterSense” after “PDI”, to read as follows:

<u>WaterSense</u>	<u>WaterSense</u>	<u>Referenced</u>
<u>Version number and</u>	<u>Title</u>	<u>in code</u>
<u>effective date</u>		<u>section number</u>
<u>v. 1.0 – Oct. 1, 2007</u>	<u>High-Efficiency Lavatory Faucet Specifications</u>	<u>604.4.1</u>
<u>v. 1.0 – Jan. 24, 2007</u>	<u>Tank-Type High-Efficiency Toilet Specification</u>	<u>604.4.1</u>

<u>v. 1.0 – Aug. 14, 2009</u>	<u>WaterSense Specification for Flushing Urinals</u>	<u>604.4.1</u>
<u>v. 1.0 – Mar. 4, 2010</u>	<u>WaterSense Specification for Showerheads</u>	<u>604.4.1</u>

§5. Section 20-689 of the administrative code of the city of New York, as added by local law number 29 for the year 1989, is amended to read as follows:

§20–689 Water saving plumbing fixtures. (1) It shall be unlawful for any person to [distribute,] sell[,] or offer for sale [or import] any plumbing fixture [which] that does not [meet the standards of subdivision P.104.2 of section P.104.0 of reference standard RS-16 of the appendix to chapter one of title twenty-seven of this code] comply with section 604.4 of the New York city plumbing code.

§6. This local law shall take effect on July 1, 2012, except that the commissioner of buildings and the commissioner of consumer affairs shall each take such measures as are necessary for its implementation, including the promulgation of rules, prior to such effective date.

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**402.3 Sheet copper.** Sheet copper for general applications shall conform to ASTM B 152 and shall not weigh less than 12 ounces per square foot (3.7 kg/m<sup>2</sup>).

**402.4 Sheet lead.** Sheet lead for pans shall not weigh less than 4 pounds per square foot (19.5 kg/m<sup>2</sup>) coated with an asphalt paint or other approved coating.

**SECTION PC 403**  
**MINIMUM PLUMBING FACILITIES**

**403.1 Minimum number of fixtures.** Plumbing fixtures shall be provided for the type of occupancy and in the minimum number shown in Table 403.1. Types of occupancies not shown in Table 403.1 shall be considered individually by the commissioner. The number of occupants shall be determined by the New York city building code. Occupancy classification shall be determined in accordance with the New York city building code.

**TABLE 403.1**  
**MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES**  
(See Sections 403.2 and 403.3)

NO.	CLASSIFICATION	OCCUPANCY	DESCRIPTION	WATER CLOSETS (URINALS SEE SECTION 419.2)		LAVATORIES		BATHTUBS/ SHOWERS	DRINKING FOUNTAIN (SEE SECTION 410.1)	OTHER
				MALE	FEMALE	MALE	FEMALE			
1	Assembly (see Sections 403.2, 403.5 and 403.6)		Theaters usually with fixed seats and other buildings for the performing arts and motion pictures	1 per 70 for the first 210 and 1 per 125 for the remainder exceeding 210	1 per 35 for the first 210 and 1 per 65 for the remainder exceeding 210	1 per 200		:	1 per 500	1 service sink
			Nightclubs, bars*, taverns, dance halls and buildings for similar purposes	1 per 75	1 per 40	1 per 75		:	1 per 500	1 service sink
			Restaurants*, banquet halls and food courts	1 per 75	1 per 75	1 per 200		:	1 per 500	1 service sink
			Auditoriums without permanent seating, art galleries, exhibition halls, museums, lecture halls, libraries, arcades and gymnasiums	1 per 70 for the first 210 and 1 per 125 for the remainder exceeding 210	1 per 35 for the first 210 and 1 per 65 for the remainder exceeding 210	1 per 200		:	1 per 500	1 service sink
			Passenger terminals and transportation facilities	1 per 500	1 per 500	1 per 750		:	1 per 1,000	1 service sink

		Places of worship and other religious services, Churches without assembly halls	1 per 150	1 per 75	1 per 200	:	1 per 1,000	1 service sink
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**TABLE 403.1—continued**  
**MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES**  
(See Sections 403.2 and 403.3)

NO.	CLASSIFICATION	OCCUPANCY <sup>1</sup>	DESCRIPTION	WATER CLOSETS (URINALS, SEE SECTION 419.2)		LAVATORIES		BATHTUBS/ SHOWERS	DRINKING FOUNTAIN (SEE SECTION 410.1)	OTHER
				MALE	FEMALE	MALE	FEMALE			
			Coliseums, arenas, skating rinks, pools and tennis courts for indoor sporting events and activities	1 per 75 for the first 1,500 and 1 per 120 for the remainder exceeding 1,500	1 per 40 for the first 1,500 and 1 per 60 for the remainder exceeding 1,500	1 per 200	1 per 150	:	1 per 1,000	1 service sink
			Stadiums, amusement parks, bleachers and grandstands for outdoor sports and events	1 per 75 for the first 1,500 and 1 per 120 for the remainder exceeding 1,500	1 per 40 for the first 1,500 and 1 per 60 for the remainder exceeding 1,500	1 per 200	1 per 150	:	1 per 1,000	1 service sink
2	Business (see Sections 403.2, 403.4 and 403.6)		Buildings for the transaction of business, professional services, other services involving merchandise, office buildings, banks, light industrial and similar uses	No. of persons each sex	No. of fixtures	No. of persons	No. of fixtures	:	1 per 100	1 service sink
				1-15	1	1-20	1			
				16-35	2	21-40	2			
				36-55	3	41-60	3			
				56-80	4	61-90	4			
				81-110	5	91-125	5			
				111-150	6	1 fixture for each additional 45 persons				
3	Educational		Educational facilities	1 per 50		1 per 50		:	1 per 100	1 service sink
4	Factory and industrial		Structures in which occupants are engaged in work fabricating, assembling or processing of products or materials	1 per 100		1 per 100		(see Section 411)	1 per 400	1 service sink
5	Institutional		Residential care	1 per 10		1 per 10		1 per 8	1 per 100	1 service sink
			Hospitals, ambulatory nursing home patients <sup>2</sup>	1 per room <sup>2</sup>		1 per room <sup>2</sup>		1 per 15	1 per 100	1 service sink per floor
			Employees, other than residential care <sup>3</sup>	1 per 25		1 per 35		:	1 per 100	:
			Visitors, other than residential care	1 per 75		1 per 100		:	1 per 500	:
			Prisons <sup>4</sup>	1 per cell		1 per cell		1 per 15	1 per 100	1 service sink
			Reformatories, detention centers, and correctional centers	1 per 15		1 per 15		1 per 15	1 per 100	1 service sink
			Adult daycare and childcare <sup>5</sup>	1 per 15		1 per 15		1 per 15 <sup>d</sup>	1 per 100	1 service sink

(continued)

**TABLE 403.1—continued**  
**MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES**  
**(See Sections 403.2 and 403.3)**

NO.	CLASSIFICATION	OCCUPANCY	DESCRIPTION	WATER CLOSETS (URINALS, SEE SECTION 419.2)		LAVATORIES		BATHTUBS/ SHOWERS	DRINKING FOUNTAIN (SEE SECTION 419.1)	OTHER
				MALE	FEMALE	MALE	FEMALE			
6	Mercantile (see Sections 403.2, 403.5 and 403.6)		Retail stores, service stations, shops, salesrooms, markets and shopping centers	1 per 500		1 per 750		=	1 per 1,000	1 service sink
7	Residential		Hotels, motels, boarding houses (transient)	1 per guestroom		1 per guestroom		1 per guestroom	=	1 service sink
			Dormitories, fraternities, sororities and boarding houses (not transient)	1 per 10		1 per 10		1 per 8	1 per 100	1 service sink
			Apartment house	1 per dwelling unit		1 per dwelling unit		1 per dwelling unit	=	1 kitchen sink per dwelling unit, 1 automatic clothes washer connection per 20 dwelling units
			One- and two-family dwellings	1 per dwelling unit		1 per dwelling unit		1 per dwelling unit	=	1 kitchen sink per dwelling unit, 1 automatic clothes washer connector per dwelling unit*
			Residential care/assisted living facilities	1 per 10		1 per 10		1 per 8	1 per 100	1 service sink
8	Storage (see Sections 403.2 and 403.4)		Structures for the storage of goods, warehouses, storehouse and freight depots, Low and Moderate Hazard.	1 per 100		1 per 100		1 per 1,000	See Section 411	1 service sink

- a. The fixtures shown are based on one fixture being the minimum required for the number of persons indicated. Any fraction of the number of persons requires an additional fixture. The number of occupants shall be determined by the New York city building code.
- b. Toilet facilities for employees shall be separate from facilities for inmates or patients.
- c. A single-occupant toilet room with one water closet and one lavatory serving not more than two adjacent patient rooms shall be permitted where such room is provided with direct access from each patient room and with provisions for privacy.
- d. For day nurseries, a maximum of one bathtub shall be required.
- e. For attached one- and two-family dwellings, one automatic clothes washer connection shall be required per 20 dwelling units.
- f. Use a calculation based on 1 person/125 net square feet.
- g. For the purposes of this table only, "Bar" shall mean a business establishment or a portion of a non-profit entity devoted primarily to the selling and serving of alcoholic beverages for consumption by the public, guests, patrons, or members on the premises and in which the serving of food is only incidental.
- h. The total number of occupant for a single establishment comprising a restaurant with an accessory bar shall be considered as a restaurant for the purposes of determining the minimum number of plumbing fixtures.
- i. As per the New York city building code.
- j. The requirements for the number of water closets for a total occupancy of 150 persons or fewer shall not apply to bars except that there shall be at least one water closet for men and at least one water closet for women or at least two unisex toilet rooms.

**403.2 Separate facilities.** Where plumbing fixtures are required, separate facilities shall

