

**COLLATERAL MATERIALS TO SUPPORT THE ADOPTION AND IMPLEMENTATION
OF A
INDOOR WATER USE EFFICIENCY ORDINANCE
December 2009**

The following information has been provided to assist the BAWSCA member agencies in the adoption and implementation of an Indoor Water Use Efficiency Ordinance.

- BAWSCA Indoor Water Use Efficiency Ordinance
- Indoor Water Use Efficiency Checklist
- Template Staff Report – Indoor Water Use Efficiency Ordinance
- Indoor Ordinance Frequently Asked Questions (FAQs)
- Memorandum: *Implementation and Timing of the BAWSCA Indoor Water Use Efficiency Ordinance Relative to the California Plumbing Code and Related Regulations*

Reference Websites:

Lists of Qualifying Fixtures and Appliances:

- EPA Water Sense - <http://www.epa.gov/WaterSense/pp/index.htm>
- Energy Star - http://www.energystar.gov/index.cfm?c=appliances.pr_appliances
- CUWCC - <http://www.cuwcc.org/resource-center/resource-center.aspx>
- PG&E - <http://www.pge.com/myhome/saveenergymoney/rebates/>
- Fishnick - <http://www.fishnick.com/>
- BAWSCA - http://www.bawasca.org/res_indoor.html

Water Conservation Rebates

- www.BAWSCA.org
- [[Agency Website](#)]

ORDINANCE NO. _____

AN ORDINANCE OF [*insert name of GOVERNING BODY OF JURISDICTIONAL ENTITY*] ESTABLISHING INDOOR WATER CONSERVATION REGULATIONS

THIS ORDINANCE is adopted in light of the following facts and circumstances, which are hereby found and declared by the [*Council/Board of Directors/Board of Supervisors*]:

WHEREAS, a reliable minimum supply of potable water is essential to the public health, safety and welfare of the people and economy of [*insert City or County name*], California.

WHEREAS, Northern California [*or insert County name*] is a Semi-Arid region and is largely dependent upon [*local surface water/ground water/imported water supplies*]. Factors, such as drought, a growing population, climate change, and environmental and regulatory concerns affect our region's water reliability and make the region highly susceptible to water supply challenges.

WHEREAS, careful water management requires active water conservation measures, not only in times of drought but at all times, in order to ensure a reliable minimum supply of water to meet current and future water supply needs.

WHEREAS, Article X, Section 2 of the California Constitution and Section 100 of the California Water Code declare that the general welfare requires water resources be put to beneficial use, waste or unreasonable use or unreasonable method of use of water be prevented, and conservation of water be fully exercised with a view to the reasonable and beneficial use thereof.

WHEREAS, the San Francisco Public Utilities Commission has imposed an interim water supply limitation on its wholesale customers, including local water suppliers, until at least 2018.

WHEREAS, current supply and demand projections for the Bay Area Water Supply and Conservation Agency member agencies indicate that, in the absence of increased water conservation, water demands will exceed available water supplies in 2015 and implementation of water conserving ordinances is one mechanism by which agencies can reduce future water demands and remain within existing supplies.

WHEREAS, The [*City Council/Board of Directors/Board of Supervisors*] finds and determines that this Ordinance is consistent with the provisions requiring high efficiency water conserving fixtures and reductions in indoor water use in the 2007 California Plumbing Code and the California Green Building Standards Code, respectively, as such provisions will be implemented in the coming years. Implementation of this Ordinance is necessary to expedite the use of high efficiency water conserving fixtures and assist BAWSCA member agencies in achieving water savings.

WHEREAS, the State Legislature has identified the provision of a more reliable water supply and the protection, restoration and enhancement of the Delta ecosystem as a high priority for the State. Pursuant to this, in November 2009, the State Legislature passed Senate Bill 7 (7th Extraordinary Session) requiring certain urban water suppliers to reduce per capita urban water use by 20% by the year 2020. Accordingly, the [*City Council/ Board of Directors/*

Board of Supervisors] finds that the implementation of this Ordinance is consistent with the policies and goals established by the State Legislature in enacting Senate Bill 7 (7th Extraordinary Session).

WHEREAS, the State Legislature has identified urban water conservation as a cost-effective approach to addressing water supply needs and determined that there are many water conservation practices that produce significant energy and water resource savings that should be encouraged as a matter of state policy. Pursuant to this finding, the State Legislature passed Senate Bill 407 (Chapter 587, Stats. 2009), requiring all residential and commercial property owners to replace existing plumbing fixtures with water-conserving fixtures by 2017 and 2019, respectively, and to upgrade existing plumbing fixtures upon any remodel initiated after January, 1 2014. Senate Bill 407 further authorizes a city, county, or retail water supplier to enact local ordinances that promote compliant use of water efficient plumbing fixtures or which will result in a greater amount of water savings than those provided for in Senate Bill 407. Accordingly, the [*City Council/Board of Directors/Board of Supervisors*] finds and determines that this Ordinance is consistent with the mandates of Senate Bill 407 and will result in water savings as provided for in Senate Bill 407.

WHEREAS, [*For Cities and Counties only*] Article XI, Section 7 of the California Constitution declares that a city or county may make and enforce within its limits all local, policy, sanitary, and other ordinances and regulations not in conflict with general laws.

WHEREAS, [*For Water Districts*] the District has the power to perform all acts necessary to carry out fully the provisions of the County Water District Law (Water Code Section 31001), may establish rules and regulations for the distribution and use of water supplies (Water Code Section 31024), may adopt and enforce a comprehensive water conservation program to reduce potable water consumption and conserve supplies (Water Code Section 375), and may require as a condition of new service, that reasonable water-saving devices and water reclamation devices be installed to reduce water use (Water Code Section 31035).

WHEREAS, [*For Water Districts*] the District has followed the procedures for notice, public participation and adoption set forth in Section 375 of the California Water Code.

WHEREAS, the [*City Council/Board of Directors/Board of Supervisors*] finds and determines that the more restrictive building standards for water conserving fixtures provided for in this Ordinance are reasonably necessary because of local climatic, geological or topographical conditions. [*Comment for Cities & Counties -- see Cal. Health and Safety Code 17958.5*]

WHEREAS, the [*City Council/Board of Directors/Board of Supervisors*] finds and determines that this Ordinance is not subject to the California Environmental Quality Act (Public Resources Code Section 2100 et seq.) ("CEQA") pursuant to Section 15307 (the activity assures the maintenance, restoration, enhancement, or protection of a natural resource) and Section 15378(b)(2) (the activity is not a project as it involves general policy and procedure making) of the State CEQA Guidelines, California Code of Regulations, Title 14, Chapter 3, since it makes and implements policies and procedures for ensuring that water resources are conserved by reducing water consumption through the use of water efficient indoor plumbing fixtures.

WHEREAS, the adoption and enforcement of this Ordinance is necessary to manage the [*Entity*]'s potable water supply in the short and long-term and to avoid or minimize the effects of

drought and shortage within the [Entity]. This Ordinance is essential to ensure a reliable and sustainable minimum supply of water for the public health, safety and welfare.

NOW, THEREFORE, THE [COUNCIL/BOARD OF CITY/COUNTY OR DISTRICT] DOES ORDAIN AS FOLLOWS:

I. Title

THIS ORDINANCE shall be known as the [insert name of Entity] Indoor Water Use Efficiency Ordinance.

II. Coordination with the Plumbing Code

[For Cities and Counties]

The code of rules and regulations printed in one volume and published by the International Association of Plumbing and Mechanical Officials, under the title “California Plumbing Code, 2007 Edition,” and the appendices printed therein, and all supplements subsequently issued thereto, hereinafter collectively called the “Plumbing Code,” prescribing regulations for the installation of all plumbing fixtures, printed in book form and filed in the office of the city clerk as of [insert date for city/county] is adopted, and by reference incorporated herein as if set forth, as the Plumbing Code of the [City/County] establishing the rules, regulations, and standards within the [City/County] as to all matters therein contained; subject however, to the amendments, additions, and deletions set forth in this chapter. The mandatory requirements of the adopted appendix to the California Plumbing Code, 2007 Edition, shall be enforceable to the same extent as if contained in the body of the Plumbing Code. One copy of the Plumbing Code shall at all times be kept on file in the office of the [City/County] clerk.

To the extent the provisions of this Ordinance conflict with any provisions in the existing Plumbing Code, the California Building Standards Code, or [insert other applicable code or regulation known to be in conflict] then the provisions of this Ordinance shall supersede and control with regard to the indoor fixture requirements described herein.

[For Water Districts]

The District acknowledges that it is not legally empowered to adopt or enforce the code of rules and regulations printed in one volume and published by the International Association of Plumbing and Mechanical Officials, under the title “California Plumbing Code, 2007 Edition,” and the appendices printed therein, and all supplements subsequently issued thereto, hereinafter collectively called the “Plumbing Code,” prescribing regulations for the installation of all plumbing fixtures. However, the District intends to implement the measures provided for in this Ordinance in connection with an application for new or expanded water service.

III. Applicability

A. The provisions of this Ordinance shall apply to the following projects:

1. All new construction, regardless of building classification, requiring a building permit, plan check or design review, or requiring new or expanded water service.
 2. All kitchen and bathroom remodels requiring a building permit, plan check, design review, new or expanded water service, except that the provisions of this Ordinance will only apply to the fixtures normally included in the kitchen or bathroom, as the case may be, to be remodeled; and
 3. Any remodel:
 - a. the cost of which exceeds [insert dollar amount or ____ % of property value]; or
 - b. the size of which exceeds [____] square feet, as determined by the local agency, in its sole discretion; or
 - c. requires expanded water service.
- B. This provisions of this Ordinance shall not apply to:
1. Existing buildings not seeking a building permit, plan check or design review;
 2. Registered local, state or federal historical sites;
 3. Remodels where, in the discretion of the [*chief building official/other city/district official with proper authority*], the unique configuration of the building, its drainage system or portions of the public sewer, or both, are incompatible with efficiency standards listed in the Indoor Water Use Efficiency Table and require a greater quantity of water to flush the system in a manner that is consistent with public health.

IV. Definitions

- A. “certified professional” means a licensed contractor, licensed architect or licensed professional engineer.
- B. “Energy Star Qualified” means that a given fixture meets the United States Environmental Protection Agency standard for an energy efficient product.
- C. “gal/cycle” means gallons per cycle.
- D. “gal/100 lbs ice” means gallons per hundred pounds of ice.
- E. “gpf” means gallons per flush.
- F. “gpm” means gallons per minute.

- G. “local agency” means a city or county, including a charter city or charter county, or water district that is responsible for adopting and implementing the Ordinance. The local agency is also responsible for the enforcement of this Ordinance, including but not limited to, in the case of a city or county, approval of a permit and plan check or design review of a project; and in the case of a district, approval of a new or expanded water service application.
- H. “LSI” means Langlier Saturation Index providing an indication of the degree of saturation of water with respect to calcium carbonate related to cooling tower efficiency.
- I. “local water purveyor” means any entity, including a public agency, city, county, or private water company that provides retail water service.
- J. “permit” means the document issued by local agencies in connection with new construction, remodels or renovations and which authorizes the lawful initiation of construction, improvements or repairs to a building or structure.
- K. “Project applicant” means the individual or entity submitting a Indoor Water Use Efficiency Checklist as required under Section VII, and requesting a permit, plan check, design review, or new or expanded water service application from the local agency. A Project applicant may be the property owner or his or her designee.
- L. “RMF” means residential multi-family.
- M. “sq. ft.” means square feet.

V. Minimum Indoor Fixture Requirements

All new construction and applicable remodels will have, at a minimum, fixtures that comply with the efficiency standards listed below (the “Indoor Water Use Efficiency Table”):

INDOOR WATER USE EFFICIENCY TABLE

Fixture	Residential	Non-Residential
Toilets	≤ 1.28 gpf, and ≥ 350 grams	≤ 1.28 gpf, and ≥ 350 grams
Urinals	≤ 0.5 gpf	≤ 0.5 gpf
Showers	≤ 2.0 gpm	≤ 2.0 gpm
Bathroom faucets	≤ 1.5 gpm	≤ 0.5 gpm
Kitchen faucets	≤ 2.2 gpm	≤ 2.2 gpm
Clothes washers	≤ 6.0 Water Factor	≤ 6.0 Water Factor
Dishwashers	≤ 6.5 gal/cycle, or Energy Star Qualified	Energy Star Qualified
Cooling towers	≥ 5 - 10 cycles, or ≥ 2.5 LSI	≥ 5 - 10 cycles, or ≥ 2.5 LSI
Food steamers	--	Boiler less, or Self-contained
Ice machines	-- --	≤ 25 gal/100 lbs ice, or Air-cooled
Pre-rinse spray valves	--	≤ 1.15 gpm
Automatic vehicle wash facilities	--	≥ 50% of water that is recycled on site
Commercial refrigeration	--	Closed loop, or Air-cooled
Meters	Submeters for RMF, and Separate meter for outdoor if landscape >5000 sq. ft.	Submeters, and Separate meter for outdoor if landscape >5000 sq. ft.

VI. Compliance with Ordinance

A. The local agency shall:

1. Provide the Project applicant with the Ordinance and the Indoor Water Use Efficiency Checklist requirements when it provides applicant with the procedures for permits, plan checks, design reviews or new or expanded water service applications;

2. Review the Indoor Water Use Efficiency Checklist submitted by the Project applicant;
 3. Approve or deny the Project applicant's Indoor Water Use Efficiency Checklist submittal;
 4. Only upon approval of the Indoor Water Use Efficiency Checklist, issue a permit or approve the plan check, design review or new or expanded water service application for the Project applicant;
 5. In its discretion, inspect the installation of the water efficient fixtures and appliances to verify that they have been installed and are performing at the required use levels; and
 6. Submit a copy of the complete Indoor Water Use Efficiency Checklist to the local water purveyor or land use authority, as the case may be.
- B. The Project applicant shall:
1. Meet the minimum water use efficiency standards for indoor fixtures and appliances provided for in the Indoor Water Use Efficiency Table and Checklist.
 2. Prior to construction, submit all portions of the Indoor Water Use Efficiency Checklist to the local agency for verification.

VII. Components of the Indoor Water Use Efficiency Checklist

The Indoor Water Use Efficiency Checklist shall require, at a minimum:

- A. Project Information;
- B. Quantity and unit water use factors of all indoor fixtures and appliances relative to the standards listed in the Indoor Water Use Efficiency Table and Checklist;
- C. Contain the following statement to be completed by the Project applicant: "I certify that the subject project meets the specified requirements of the Indoor Water Use Efficiency Ordinance"; and
- D. Bear the signature of the Project applicant, or that of a certified professional.

VIII. Penalties and Enforcement

A local agency may establish and administer penalties to the Project applicant for non-compliance with this Ordinance to the extent permitted by law.

[Note: The precise provisions of this section should be tailored to the specific policies and goals of your organization.]

- A. Violation and Notice of Correction.

It is unlawful for any person, firm, partnership, association, or corporation subject to the requirements of this Ordinance to fail to comply with the water use efficiency requirements or to alter or replace the fixtures and appliances required by this Ordinance with other noncompliant fixtures or appliances after the completion of construction or remodel. Whenever the *[insert appropriate City/County/Water District official]* determines that a violation of this Ordinance has occurred, the *[insert appropriate City/County/Water District official]* may serve a notice of correction on the owner(s) of the property on which the violation is situated. The owner(s) of record shall have ninety (90) days to take corrective action.

B. **[For Cities and Counties]** Administrative Enforcement.

In addition to any other remedy provided by the *[insert entity's name]'s* Municipal Code, any provision of this Ordinance may be enforced by an administrative order issued pursuant to any one of the administrative processes set forth in Section _____ of the *[insert entity's name]'s* Municipal Code. The *[insert commission/governing body]* shall serve as the administrative enforcement hearing officer for the purposes of considering any appeals.

C. **[For Water Districts]** Enforcement.

If an applicant for new or expanded water service fails to comply with the provisions of this Ordinance, the District may require the applicant to resubmit its water service application and revised Indoor Water Use Efficiency Checklist for approval and may withhold approval of the application until the applicant complies with the terms of this Ordinance. In addition to any other remedy provided herein, the District may also refer enforcement of violations under this Ordinance to the City Attorney of the municipality *[or District Attorney/County Counsel/County]* where the violation occurred.

IX. Public Education

The local agency shall provide information to all applicants regarding the installation of water efficient fixtures and appliances.

X. Severability

If any section, subsection, provision or part of this Ordinance, or its application to any person or circumstance, is held to be unconstitutional or otherwise invalid, the remainder of this Ordinance, and the application of such provision to other person or circumstances, shall not be affected thereby and shall remain in full force and effect and, to that end, the provisions of this Ordinance are severable.

XI. Effective Date

This Ordinance shall become effective on _____, 2009/2010. *[For Cities/Counties, 30 days after enactment]*

INTRODUCED at a regular meeting of the [*City Council/Board of Directors/Board of Supervisors*] held on _____, 2009/2010.

PASSED AND ADOPTED at a regular meeting of the [*City Council/Board of Directors/Board of Supervisors*] of the [City of _____/District/County of _____] held on _____, 2009/2010, by the following vote:

AYES:

NOES:

ABSENT:

[MAYOR/PRESIDENT OF THE BOARD]

ATTEST:

[CITY CLERK/BOARD SECRETARY]

INDOOR WATER USE EFFICIENCY CHECKLIST

To Be Completed by Applicant

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I certify that the subject project meets the specified requirements of the Indoor Water Use Efficiency Ordinance.

Signature _____

Date _____

Project Information

Single Family Multi-Family Commercial Institutional Irrigation only Industrial Other:

Applicant Name (print): _____

Contact Phone #: _____

Project Site Address: _____

Project Area (sq.ft. or acre): _____

of Units: _____

of Meters: _____

Fixture	Requirements			Number of Devices and Unit Water Use	Agency Review	
	Single-Family Residential	Multi-Family and Non-Residential	Units		(Pass)	(Fail)
Toilets	< 1.28 and ≥ 350	< 1.28 and ≥ 350	gpf grams		<input type="checkbox"/>	<input type="checkbox"/>
Urinals	--	≤ 0.5	gpf		<input type="checkbox"/>	<input type="checkbox"/>
Showers	≤ 2.0	≤ 2.0	gpm		<input type="checkbox"/>	<input type="checkbox"/>
Bathroom faucets	≤ 1.5	≤ 0.5	gpm		<input type="checkbox"/>	<input type="checkbox"/>
Kitchen faucets	≤ 2.2	≤ 2.2	gpm		<input type="checkbox"/>	<input type="checkbox"/>
Clothes washers	≤ 6.0	≤ 6.0	Water Factor		<input type="checkbox"/>	<input type="checkbox"/>
Dishwashers	≤ 6.5 or Energy Star	Energy Star	gal/cycle		<input type="checkbox"/>	<input type="checkbox"/>
Cooling towers	--	≥ 5 to 10 or ≥ 2.5	cycles LSI		<input type="checkbox"/>	<input type="checkbox"/>
Food steamers	--	Boilerless or Self-Contained	--		<input type="checkbox"/>	<input type="checkbox"/>
Ice machines	--	≤ 25 or Air-cooled	gal/100 lbs ice		<input type="checkbox"/>	<input type="checkbox"/>
Pre-rinse spray valves	≤ 1.15	≤ 1.15	gpm		<input type="checkbox"/>	<input type="checkbox"/>
Automatic vehicle wash facilities	--	> 50% of the water is recycled	--		<input type="checkbox"/>	<input type="checkbox"/>
Commercial refrigeration	--	Closed loop or Air-cooled	--		<input type="checkbox"/>	<input type="checkbox"/>
Meters	--	Submeters	--		<input type="checkbox"/>	<input type="checkbox"/>
	Separate meter for outdoor if landscape is greater than 5,000 sq.ft.	Separate meter for outdoor if landscape is greater than 5,000 sq.ft.	--		<input type="checkbox"/>	<input type="checkbox"/>

[Agency Name, Address, Telephone#, Fax #]

INDOOR WATER USE EFFICIENCY CHECKLIST

To Be Completed by Agency

Page 2 of 2

Auditor:

Materials Received and Reviewed:

- Indoor Water Use Efficiency Checklist
- Project Plans

Date Reviewed:

- Follow up required (explain):

Date Resubmitted:

Date Approved:

Material Distributed to Applicant

- Indoor Water Use Efficiency Ordinance
- Information on qualifying fixtures and appliances
- Other:

Measures Recommended to Applicant

- On-demand/tankless water heater
- Leak detection methods
- Water-efficient landscaping
- Other:

Comments:

Selected Definitions:

gal/100 lbs ice	gallons per hundred pounds of ice
gal/cycle	gallons per cycle
gpf	gallons per flush
gpm	gallons per minute
LSI	Langlier Saturation Index
sq.ft.	square feet
>	greater than
≤	less than or equal to
≥	greater than or equal to

TEMPLATE STAFF REPORT
INDOOR WATER USE EFFICIENCY ORDINANCE

RECOMMENDATION:

That the [*City Council or Water District Board*] adopt the proposed Indoor Water Use Efficiency Ordinance (Ordinance).

SUMMARY:

On October 31, 2008 the San Francisco Public Utilities Commission (SFPUC) made a unilateral decision to limit the water supply available from the San Francisco Regional Water System to the City of San Francisco and to the Bay Area Water Supply and Conservation (BAWSCA) member agencies until at least 2018. As a result, in absence of increased water conservation, water demands within the BAWSCA service area are projected to exceed available supplies by 2015. In addition to needing to save water to live within current supplies, the BAWSCA agencies are also being required by new state regulations to conserve additional water and to enforce new indoor water efficiency standards in the near future.

Adoption and implementation of the Ordinance was identified as one mechanism by which [*agency*] could augment current water conservation efforts to comply with the new state regulations, reduce future water demands, and live within current supplies. The Ordinance was developed by a working group that consisted of BAWSCA, representatives from BAWSCA's member agencies, and representatives from the associated land use jurisdictions in Alameda, Santa Clara, and San Mateo Counties.

The Ordinance requires the installation of water efficient fixtures and appliances in all new development and select remodels. The Ordinance is designed to achieve a 20% savings on indoor water use at applicable projects and is consistent with, or exceeds, the standards set forth in new state regulations and changes to the Plumbing and Green Building Codes. Furthermore, the Ordinance provides [*agency*] with a tool that can be used to comply with the new state regulations (e.g., requirements to reduce urban per capita consumption 20% by 2020) and will aid [*agency*] in achieving the much needed water savings sooner than would otherwise occur by simply relying on the scope and timing of other regulations.

DESCRIPTION OF THE ORDINANCE:

The Ordinance has been designed to achieve a 20% water savings in indoor water use at all new development and major remodels (as defined by [*agency*]) relative to the current plumbing

code and other building standards. In addition, the Ordinance also requires water efficient fixtures and appliances to be installed in all remodeled kitchens and bathrooms.

The Ordinance was developed through extensive research and as part of a multi-agency, multi-county stakeholder process that was facilitated by BAWSCA. The Ordinance was designed to be at least as effective as the new state regulations and changes to the Plumbing and Green Building Codes in terms of achieving water savings. The Ordinance was also designed to be as simple as possible (i.e., facilitating a checklist format) to make the process straightforward for the project applicant and to make it easy for [agency] staff to review a project for compliance.

The parameters that are addressed in the Ordinance and the proposed efficiency standards are summarized below in Table 1.

TABLE 1
Indoor Water Efficiency Standards

Fixture	Residential	Non-Residential
Toilets	≤ 1.28 gpf, and ≥ 350 grams	≤ 1.28 gpf, and ≥ 350 grams
Urinals	≤ 0.5 gpf	≤ 0.5 gpf
Showers	≤ 2.0 gpm	≤ 2.0 gpm
Bathroom faucets	≤ 1.5 gpm	≤ 0.5 gpm
Kitchen faucets	≤ 2.2 gpm	≤ 2.2 gpm
Clothes washers	≤ 6.0 Water Factor	≤ 6.0 Water Factor
Dishwashers	≤ 6.5 gal/cycle, or Energy Star Qualified	Energy Star Qualified
Cooling towers	≥ 5 – 10 cycles, or ≥ 2.5 LSI	≥ 5 – 10 cycles, or ≥ 2.5 LSI
Food steamers	--	Boiler less, or Self-contained
Ice machines	-- --	≤ 25 gal/100 lbs ice, or Air-cooled
Pre-rinse spray valves	--	≤ 1.15 gpm
Automatic vehicle wash facilities	--	≥ 50% of water that is recycled on site
Commercial refrigeration	--	Closed loop, or Air-cooled
Meters	Submeters for RMF, and Separate meter for outdoor if landscape >5000 sq.ft.	Submeters, and Separate meter for outdoor if landscape >5000 sq.ft.

The water-efficient fixtures and appliances that comply with the standards set forth by the Ordinance are readily available on the market and their performance has been verified by third parties, where available (e.g., EPA Water Sense, EnergyStar, PG&E). In many cases, applicants may also be eligible for rebates for the purchase of water conserving fixtures and appliances (i.e., from the water agency and/or PG&E). These rebates are designed help offset the cost of the more water-efficient models, making them more attractive options. Staff will supply project applicants with information regarding potential rebates and resources to help them select qualifying fixtures.

BACKGROUND:

There are two main reasons why the Ordinance was developed.

(1) Without Additional Conservation, the Water Demand of the BAWSCA Agencies is Projected to Exceed Supplies by 2015

The SFPUC provides water to all of the BAWSCA member agencies. On October 31, 2008 the SFPUC made the unilateral decision to limit the water supply available from the San Francisco Regional Water System to the BAWSCA member agencies to 184 MGD until at least 2018. As a result, based on current projections, and in absence of increased water conservation, water demands within the BAWSCA service area will exceed available supplies by 2015.

Furthermore, the SFPUC has determined that, in addition to limiting BAWSCA's aggregate deliveries to 184 MGD, it will impose an interim supply limitation on each BAWSCA member agency. The sum of the individual BAWSCA agency interim supply limitations will be equal to the 184 MGD. In the event that the supply limitation established by SFPUC is exceeded in a given year on an overall, system-wide basis, agencies that exceed their individual interim supply limitations will be subject to environmental surcharge fees, which will also be set forth by SFPUC.

Lastly, it is uncertain what, if any, additional supplies will be available from SFPUC after 2018. Demand projections through 2035 indicate that, in absence of additional supplies developed by the SFPUC, BAWSCA, or the individual member agencies, there may be a significant gap between demand and available supply. Thus, it is prudent to take steps at this time to reduce demand in conjunction with exploration of alternative supplies. To this end, BAWSCA, in coordination with the member agencies, prepared a Water Conservation Implementation Plan (WCIP) in 2009 to identify additional water conservation measures that the member agencies could potentially implement to achieve the water savings necessary to maintain water demands within available supplies until at least 2018. Based on the WCIP development and analysis

process, BAWSCA and the member agencies identified the adoption of an Indoor Water Use Efficiency Ordinance as one of five new water conservation measures, which, if fully implemented throughout the BAWSCA service area, could help the member agencies reduce water demands and live within current supply limitations.

(2) The Ordinance Provides a Tool for Compliance With New State Legislation and Changes to the Plumbing and Building Codes that Mandate Changes to Indoor Water Use Efficiency

There are efforts at the State level to reduce water consumption throughout California. The Governor has called for a 20% reduction in per capita water use by 2020, and, as described below, recent legislation adopted by the California State Legislature and changes to the Plumbing and Green Building Codes target indoor water use efficiency to meet these goals.

The Ordinance is consistent with, or exceeds, the standards set forth by these new regulations and provides [agency] with a tool that can be used to comply with the new state regulations. Moreover, adoption and implementation of the Ordinance will assist [agency] to reduce per capita consumption and to keep purchases from SFPUC below the interim supply limitation through 2018. As described below, solely relying on the scope and timing of the new state regulations alone will not achieve the necessary water savings that BAWSCA member agencies must realize in the near-term to remain within current supply limitations.

California Plumbing Code: While the updates to the 2007 California Plumbing Code are broad in scope, the only changes taking effect in 2014 that will directly impact the water efficiency of indoor fixtures are the mandatory installation of high efficiency toilets (“HETs”) and urinals (“HEUs”) in all projects requiring a building permit after January 1, 2014.¹

The Ordinance will require installation of HETs and HEUs in advance of the Plumbing Code changes. However, waiting until 2014 for the Plumbing Code changes to be adopted represents a large opportunity cost in terms of lost water savings potential. Furthermore, because the Ordinance affects indoor fixtures and appliances that are not addressed by the Plumbing Code changes (e.g., high-efficiency showerheads, faucets, washing machines, and selected commercial fixtures), sole reliance on the Plumbing Code will not achieve the target water savings.

California Green Building Standards Code: The California Green Building Standards Code came into effect in August 2009, with the requirements for water savings becoming mandatory in

¹ Section 17921.3(b)(1)-(2) of the Health and Safety Code requires, “[o]n and after January 1, 2014, all water closets, other than institutional water closets, sold or installed in this state shall be high-efficiency water closets.” Section 17921(g)(2) defines “high-efficiency water closet” to mean a dual flush or single flush water closet with an effective flush volume that does not exceed 1.28 gallons per flush and defines a “high-efficiency urinal” as one that uses no more than 0.5 gallons per flush.

2011. The California Green Building Standards Code requires a 20% reduction in potable indoor water use in all new construction, but does not mandate how those savings must be achieved.²

Because the Green Building Standards Code does not provide concrete, prescriptive mechanisms for compliance with its 20% indoor water savings mandate, implementation of its requirements at the local level may be challenging. By comparison, the Ordinance provides prescriptive mechanisms by which project applicants can achieve the required 20% savings in indoor water use.

Senate Bill 407 (Padilla): Pursuant to SB 407, which was signed into law in October, 2009, any property that is remodeled on or after January 1, 2014 is required to replace all noncompliant plumbing fixtures with water-conserving plumbing fixtures.³ SB 407 also requires that all residential and commercial properties replace all noncompliant plumbing fixtures by 2017 and 2019, respectively.

By specifying the precise water-efficient fixtures that must be installed upon a remodel of a kitchen or bathroom, the Ordinance provides a tool for local agencies to comply with SB 407. Moreover, the Ordinance is designed to maximize water savings by addressing other indoor fixtures that are not addressed in SB 407. Waiting until at least 2014 for SB 407 to go into effect will result in several years of forgone water savings. Therefore, as with the Plumbing Code, mere reliance on SB 407 to affect indoor water use efficiency will not achieve the desired water savings.

Senate Bill 7 (Steinberg; 7th Extraordinary Session): Pursuant to SB 7, the state will have to reduce urban per capita water use by 20 percent no later than December 31, 2020, and by at least 10 percent no later than December 31, 2015. These water use reductions will be compared against a 10- to 15-year baseline period that ends between 2004 and 2010.

SB 7 does not require individual urban water suppliers to reduce per capita water usage by more than 20 percent. However, each supplier will have to reduce per capita daily water use by at least 5 percent, unless their baseline water use is less than 100 gallons per capita per day (gpcd). Urban water suppliers will have to meet their own, specified water use targets, which they can establish on an individual or regional basis, using one of four methods: (1) a 20% reduction in baseline per capita water use, (2) compliance with established performance

² The Green Building Standards Code does not expressly mandate the use of HETs and HEUs, or other high-efficiency fixtures to achieve the 20% water savings obligation. Rather, the Green Building Standards Code allows the building permit applicant to satisfy the water savings requirement by demonstrating either a 20% reduced flow rate on all plumbing fixtures, or a calculation demonstrating a 20% reduction in the “water use baseline” as provided in the code. Green Building Standards Code, § 603.2 (1)-(2).

³ This law defines “water-conserving plumbing fixture” as “any fixture that is in compliance with current building standards applicable to newly constructed real property of the same type.” In other words, SB 407 will require, at a minimum, the installation of HETs and HEUs in accordance with the requirements of the 2007 Plumbing Code.

standards (e.g., 55 gpcd for residential indoor water use), (3) a 5% reduction from the applicable state hydrologic region target set in the state's draft 20x2020 Water Conservation Plan⁴, or (4) a method that will be developed by DWR by December 31, 2010.

By requiring new development to have water efficient landscaping, the Ordinance will assist [agency] to comply with the water savings requirements of SB 7.

ECONOMIC IMPACT

For projects that would be affected by the Ordinance, the main economic impact would be the added costs for purchase of the water-efficient fixtures and appliances, which in some cases are more expensive than high-water using fixtures. In many cases, however, rebates and other conservation incentives may be available to those customers to help offset the cost of the efficient fixtures and appliances. Whether the actual cost savings to customers from the reduced water use through implementation of the Ordinance would equal to or greater than the additional incurred cost is not yet quantified.

FISCAL IMPACT

Additional staff time may be required to educate applicants on the new requirements and to review the Water Use Efficiency Checklist to ensure that requirements have been met. However, in order to meet its water reduction targets and comply with state regulations, [agency] has taken a leadership role to invest in and foster water conservation. Staff will continue to look for opportunities to partner with other entities both regionally and at the State level to make water conservation as cost effective as possible.

⁴ 20X2020 Water Conservation Plan, Draft, April 30, 2009.

BAWSCA Template Indoor Water Use Efficiency Ordinance Frequently Asked Questions (FAQs)

Why are the BAWSCA Member Agencies developing an Indoor Water Use Efficiency Ordinance (Ordinance) instead of waiting for the new Plumbing Code or other new state regulations to come into effect?

The SFPUC provides water to all of the BAWSCA member agencies. On October 31, 2008 the SFPUC unilaterally made the decision to limit the volume of water that the BAWSCA agencies can purchase from the San Francisco Regional Water System to 184 MGD until at least 2018. As a result, based on current projections, in absence of increased water conservation or the acquisition of other new supplies, water demands within the BAWSCA service area will exceed available supplies by 2015.

BAWSCA, in coordination with its member agencies, prepared a Water Conservation Implementation Plan (WCIP) in 2009 to identify additional water conservation measures that the member agencies could potentially implement to achieve the water savings necessary to maintain water demands within available supplies until at least 2018. Based on the WCIP development and analysis process, BAWSCA and its member agencies identified the adoption of an indoor water use efficiency ordinance as one of five new water conservation measures, which, if fully implemented throughout the BAWSCA service area, could help member agencies reduce future water demands and live within current supply limitations.

There are efforts at the State level to reduce water consumption throughout California. The Governor has called for a 20% reduction in per capita water use by 2020, and recent legislation adopted by the California State Legislature, and changes to the Plumbing and Green Building Codes, target indoor water use efficiency. The Ordinance is consistent with, or exceeds, the standards set forth by these new regulations and provides BAWSCA agencies with a tool that they can use to comply with the new regulations. In addition, as described below, by enacting the Ordinance in 2009/2010 the agencies will achieve much needed water savings sooner than would otherwise occur by simply relying on the scope and timing of the new regulations.

Plumbing Code: While the updates to the 2007 California Plumbing Code are broad in scope, the only changes taking effect in 2014 that will directly impact the water efficiency of indoor fixtures are the modifications to the required efficiency standards for toilets and urinals.

Although the Ordinance will require installation of High-Efficiency Toilets (HETs) and High-Efficiency Urinals (HEUs) in advance of the Plumbing Code changes, the consequences of waiting four more years for the Plumbing Code changes to be adopted represents a large opportunity cost in terms of lost water savings potential. Furthermore, because the Ordinance addresses other indoor fixtures and appliances that are not addressed by the Plumbing Code changes (i.e., high-efficiency showerheads, faucets, washing machines, and selected commercial fixtures and appliances such as food steamers, ice machines, and cooling towers), sole reliance on the Plumbing Code will not achieve the necessary water savings that BAWSCA agencies must achieve to remain within current supplies.

California Green Building Standards Code: The California Green Building Standards Code came into effect in August 2009, with the requirements for water savings becoming mandatory in 2011. The California Green Building Standards Code requires a 20% reduction in potable indoor water use in all

BAWSCA Template Indoor Water Use Efficiency Ordinance Frequently Asked Questions (FAQs)

new construction. However, the Green Building Standards Code does not expressly mandate the use of HETs and HEUs, or other high-efficiency fixtures to achieve the 20% water savings obligation.

Because the Green Building Standards Code does not provide concrete, prescriptive mechanisms for compliance with the 20% indoor water savings mandate, implementation of its requirements at the local level may be challenging. By comparison, the Ordinance provides prescriptive mechanisms by which project applicants can achieve the required 20% savings in indoor water use. Therefore, a benefit of adopting the Ordinance in 2010 is that, because it is also designed to achieve a 20% indoor water savings, it provides agencies with a tool that can be used to evaluate an applicant's compliance with the Green Building Standards Code. Moreover, the lessons learned during the first year of implementing the requirements of the Ordinance may provide valuable insights that a local agency could incorporate into the adoption of the Green Building Standards Code, rendering that process more efficient and straightforward.

SB 407 (Padilla): On October 11, 2009, the Governor signed into law SB 407, a law requiring the retrofit of plumbing fixtures upon remodel after 2014, or in the absence of a remodel, by a specified date (i.e., residential properties must replace all noncompliant plumbing fixtures by 2017 and commercial properties must do the same by 2019).

By specifying the precise water-efficient fixtures that must be installed upon a remodel, the Ordinance provides a simple tool for local agencies to comply with the requirements of SB 407. Moreover, the Ordinance is designed to maximize water savings by addressing other indoor fixtures and appliances that are not addressed in SB 407. However, waiting until 2014 for SB 407 to go into effect will result in four years of forgone water savings. Therefore, as with the Plumbing Code, mere reliance on SB 407 will not achieve the desired water savings.

Senate Bill 7 (Steinberg; 7th Extraordinary Session): Pursuant to SB 7, the state will have to reduce urban per capita water use by 20 percent no later than December 31, 2020, and by at least 10 percent no later than December 31, 2015. These water use reductions will be compared against a 10- to 15-year baseline period that ends between 2004 and 2010.

SB 7 does not require individual urban water suppliers to reduce per capita water usage by more than 20 percent. However, each supplier will have to reduce per capita daily water use by at least 5 percent, unless their baseline water use is less than 100 gallons per capita per day (gpcd). Urban water suppliers will have to meet their own, specified water use targets, which they can establish on an individual or regional basis, using one of four methods: (1) a 20% reduction in baseline per capita water use, (2) compliance with established performance standards (e.g., 55 gpcd for residential indoor water use), (3) a 5% reduction from the applicable state hydrologic region target set in the state's draft 20x2020 Water Conservation Plan, or (4) a method that will be developed by DWR by December 31, 2010.

By requiring new development to have water efficient landscaping, the Ordinance will assist [agency] to comply with the water savings requirements of SB 7.

How much water will the Ordinance save?

The Ordinance has been designed to achieve a 20% savings on indoor water use at applicable projects. Actual water savings will likely vary.

BAWSCA Template Indoor Water Use Efficiency Ordinance Frequently Asked Questions (FAQs)

Does the Ordinance apply to remodels?

The Ordinance applies to all new development, including redeveloped properties, and those remodels that impact kitchens or bathrooms. In addition, if the size or cost of the remodel exceeds a specific size or cost threshold that is established by an individual agency, the full requirements ordinance would apply.

How will the water savings associated with the Ordinance be measured and tracked?

Because there are many factors that impact water use on a year-to-year basis (e.g., the weather) specific water savings associated with adoption of the Ordinance will be difficult to track on a near-term basis. What will be possible to track in the near-term, however, is the number of permits and approved water service application that are issued by a given agency that were deemed by that agency to comply with the Ordinance requirements. On a longer-term basis, and depending on the sophistication of the metering and billing system and the level of coordination between the agency and the water purveyor, it may be possible for BAWSCA to work with the local agency to quantitatively measure the water savings associated with the implementation and enforcement of the Ordinance. BAWSCA will continue to work with the member agencies on this issue.

Is an agency allowed to modify the BAWSCA Template Ordinance?

Each agency has full latitude to modify the BAWSCA Template Ordinance to suit the particulars of its local jurisdiction. However, the ordinance that an agency adopts must, by state law, be compliant with the water savings requirements of the California Green Building Standards Code, which will become mandatory in 2011.

How will the ordinance that my agency adopts be enforced?

Each agency will decide what level of resources will be assigned to enforcement of that agency's ordinance. The first, and most critical, enforcement step will be when an agency either grants or denies a permit or an application for new or expanded water service based on whether or not the applicant has complied with the terms of the Ordinance.

Memorandum

TO: Nicole Sandkulla
Anona Dutton
Bay Area Water Supply and
Conservation Agency

FILE NO.: 007843.000010

FROM: Yolanda C. Manzone

CC: Allison Schutte

DATE: December 3, 2009

RE: **Implementation and Timing of the BAWSCA Indoor Water Use
Efficiency Ordinance Relative to the California Plumbing Code and
Related Regulations**

I. Issue Presented

At the September 30, 2009 meeting of the Water Use Efficiency Ordinance Work Group, the following issue was raised:

How will the timing and implementation of the BAWSCA Template Indoor Water Use Efficiency Ordinance (“Ordinance”) relate to the implementation of the requirements for water conserving fixtures under the California Plumbing Code (“Plumbing Code”), the California Green Building Standards Code, SB 407 (Padilla), and SBX 7 (Steinberg)?

The analysis of this issue that BAWSCA requested from Hanson Bridgett is provided below.

II. Short Answer

The California Green Building Standards Code does not mandate the use of specific high-efficiency fixtures. Rather, it simply specifies a 20% reduction in potable indoor water use by 2011. Pursuant to the 2007 Plumbing Code and SB 407, the mandatory use of high efficiency fixtures will not take effect until 2014. Therefore, implementation of the Ordinance in 2010 will expedite the use of high efficiency water conserving fixtures and result in much needed water savings for BAWSCA members. Additionally, the Ordinance will assist agencies in achieving compliance with the regulations listed above.

III. Discussion

Current supply and demand projections for the BAWSCA agencies indicate that, in absence of water conservation, water demands will exceed supplies in 2015. Implementation of BAWSCA’s Ordinance has been identified as one mechanism by which BAWSCA agencies can reduce future water demands and live within current supplies.

A. The California Plumbing Code

While the updates to the 2007 California Plumbing Code are broad in scope, the only changes taking effect in 2014 that will directly impact the water efficiency of indoor fixtures are the modifications to the required efficiency standards for toilets and urinals.

Pursuant to the 2007 Plumbing Code, the mandatory installation of high efficiency toilets (“HETs”) and urinals (“HEUs”) in all projects requiring a building permit will take effect on January 1, 2014. Section 17921.3(b)(1)-(2) of the Health and Safety Code requires, “[o]n and after January 1, 2014, all water closets, other than institutional water closets, sold or installed in this state shall be high-efficiency water closets.”¹ Section 17921(g)(2) defines “high-efficiency water closet” to mean a dual flush or single flush water closet with an effective flush volume that does not exceed 1.28 gallons and defines a “high-efficiency urinal” as one that uses no more than 0.5 gallons per flush.²

Although the BAWSCA Ordinance will require installation of HETs and HEUs in advance of the Plumbing Code changes, the consequences of waiting four more years for the Plumbing Code changes to be adopted represents a large opportunity cost in terms of lost water savings potential. Furthermore, because the Ordinance addresses other indoor fixtures that are not addressed by the Plumbing Code changes (i.e., high-efficiency showerheads, faucets, washing machines, and selected commercial fixtures such as food steamers, ice machines, and cooling towers), sole reliance on the Plumbing Code will not achieve the necessary water savings that BAWSCA agencies must achieve to remain within current supplies.

B. The California Green Building Standards Code

The California Green Building Standards Code, which forms part 11 of the California Building Standards Code, came into effect in August 2009, with the requirements for water savings becoming mandatory in 2011.

Specifically, the California Green Building Standards Code requires a 20% reduction in potable indoor water use in all new construction. However, the Green Building Standards Code does not expressly mandate the use of HETs and HEUs, or other high-efficiency fixtures to achieve the 20% water savings obligation. Rather, the Green Building Standards Code allows the building permit applicant to satisfy the requirement by demonstrating either a 20% reduced flow rate on all plumbing fixtures (not just toilets and urinals) or a calculation demonstrating a 20% reduction in the “water use baseline” as provided in the code. *Green Building Standards Code, § 603.2 (1)-(2)*.³

Because the Green Building Standards Code does not provide concrete, prescriptive mechanisms for compliance with the 20% indoor water savings mandate,

¹ This section of the Health and Safety Code is the codified section of the 2007 Plumbing Code relating to fixtures.

² As a corollary to the January 1, 2014 mandatory installation of HETs and HEUs, the manufacturers of plumbing fixtures are required to phase in HETs and HEUs. Manufacturers in California are required to sell at least 67% HETs and HEUs by 2011; 75% in 2012; 85% in 2013; and finally 100% by 2014. *Health & Safety Code, §17921.3 (b)(3)*. This requirement will ensure an ample supply of HETs and HEUs in the state to comply with both the Plumbing Code requirements as well as the Ordinance.

³ The California Building Standards Commission (“CBSC”) is currently amending the Green Building Standards Code for the 2010 edition of the Code. The CBSC released its proposed amendments on October 1, 2009 for public comment. The requirement for a 20% water savings in indoor water usage has not been altered, but certain revisions to the calculation tables have been proposed.

implementation of its requirements at the local level may be challenging. By comparison, the BAWSCA Ordinance provides prescriptive mechanisms by which project applicants can achieve the required 20% savings in indoor water use. Therefore, a benefit of adopting the BAWSCA Ordinance in 2010 is that, because it is also designed to achieve a 20% indoor water savings, it provides agencies with a tool they can use to evaluate a permit applicant's compliance with the Green Building Standards Code. Moreover, the lessons learned during the first year of implementing the requirements of the BAWSCA Ordinance may provide valuable insights that a local agency could incorporate into the adoption of the Green Building Standards Code, rendering that process more efficient and straightforward.

C. SB 407 (Padilla) Retrofit Upon Remodel Law

On October 11, 2009, the Governor signed into law SB 407, a law requiring the retrofit of plumbing fixtures upon remodel, or in the absence of a remodel, by a specified date. According to this new law, any property (residential and commercial) engaging in a remodel on or after January 1, 2014 is required to replace all noncompliant plumbing fixtures with water-conserving plumbing fixtures.⁴ This law defines "water-conserving plumbing fixture" as "any fixture that is in compliance with current building standards applicable to newly constructed real property of the same type."⁵ In other words, SB 407 will require, at a minimum, the installation of HETs and HEUs in accordance with the requirements of the 2007 Plumbing Code.

SB 407 also provides a "date certain" upon which all residential and commercial properties must replace all noncompliant plumbing fixtures, regardless of remodel or sale of the property. Residential properties must replace all noncompliant plumbing fixtures by 2017 and commercial properties must do the same by 2019.

Lastly, SB 407 specifically empowers local agencies to enact ordinances to promote compliance with this law and to enact local policies that will result in an even greater amount of water savings.

By specifying the precise water-efficient fixtures that must be installed upon a remodel, BAWSCA's Ordinance provides a simple tool for local agencies to comply with the requirements of SB 407. Moreover, the BAWSCA Ordinance is designed to maximize water savings by addressing other indoor fixtures that are not addressed in SB 407. However, waiting until 2014 for SB 407 to go into effect will result in four years of forgone water savings. Therefore, as with the Plumbing Code, mere reliance on SB 407 will not achieve the desired water savings.

D. SBX 7 (Steinberg) 20 By 2020 Law

On November 10, 2009, the Governor signed the extraordinary Senate Session Bill Number 7 ("SBX 7") into law. The heart of this bill is a mandate for the state to achieve a 20% reduction in urban per capita water use by December 31, 2020, and by at least 10% on or before December 31, 2015. These water use reductions will be compared against a ten to fifteen year baseline period that ends between 2004 and 2010.

⁴ SB 407 also requires any property that is sold in the state on or after January 1, 2014 must replace noncompliant plumbing fixtures with water-conserving plumbing fixtures prior to sale of the property, or disclose noncompliance with the law to the prospective buyer.

⁵ California Civil Code Section 1101.3(e)

Memorandum To:
Nicole Sandkulla; Anona Dutton
December 3, 2009
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SBX 7 does not require individual urban water suppliers to reduce per capita water usage by more than 20 percent. However, each supplier will have to reduce per capita daily water use by at least 5 percent, unless their water use is less than 100 gallons per capita per day ("gpcd"). Urban water suppliers will have to meet their own, specified water use targets, which they can establish on an individual or regional basis, using one of four methods: (1) a 20% reduction in baseline per capita water use, (2) compliance with established performance standards (e.g., 55 gpcd for residential indoor water use), (3) a 5% reduction from the applicable state hydrologic region target set in the state's draft 20 by 2020 Draft Water Conservation Plan⁶, or (4) a method that will be developed by the Department of Water Resources ("DWR") by December 31, 2010.

Noncompliance with the water conservation mandate of SBX 7 may lead to ineligibility for state water grants or loans. Accordingly, adoption of the BAWSCA Ordinance in 2010 will assist agencies and retail water suppliers in complying with the water savings requirements of SBX 7.

IV. **Conclusion**

Agency adoption and implementation of the BAWSCA Ordinance in 2010 will not conflict with implementation of the 2007 Plumbing Code or the other related water-conserving regulations discussed above. Instead, implementation of the BAWSCA Ordinance will assist member agencies in achieving early compliance with these new laws as well as achieving necessary water savings in their service areas.

⁶ 20X2020 Draft Water Conservation Plan, April 30, 2009.