



Agenda Item # _____

Staff Report

City of Manhattan Beach

TO: Honorable Mayor Cohen and Members of the City Council

THROUGH: Geoff Dolan, City Manager

FROM: Jim Arndt, Public Works Director
Raul Saenz, Utilities Manager
Sona Kalapura, Environmental Programs Manager

DATE: March 17, 2009

SUBJECT: Water Conservation Recommendations: Environmental Task Force - Water and Storm Water Sub-Committee (WSWS)

RECOMMENDATION:

Staff recommends that Council review and comment on the elements of the Water Conservation Program, direct Staff to prepare a draft Water Conservation Ordinance for consideration, and provide direction regarding enforcement and possible penalties resulting from non-compliance. Based on Council direction, Staff will prepare a draft Ordinance for City Council review that could be effective prior to July 1, 2009.

FISCAL IMPLICATION:

There are no fiscal implications associated with the recommended action, however there may be costs associated with public education and enforcement activities for the Ordinance.

BACKGROUND:

Environmental Task Force

In June, 2008 City Council decided to form a resident-based Environmental Task Force (ETF) to study environmental issues of priority to the community. Staff solicited applications and on September 2, 2008 Council reviewed these applications and selected 14 residents to serve on the ETF. Council then appointed two representatives to the ETF, Mayor Portia Cohen, and Mayor Pro Tempore Mitch Ward. The remaining positions were appointed by the MB Unified School District, including Amy Howorth School Board Member, and two student representatives.

The 19-member ETF had its first meeting on October 15, 2008, and divided into four subcommittees to tackle priority environmental issues identified by City Council: the Development of a Climate Action Plan; Water Conservation and Storm Water Management Issues; Waste Reduction and Recycling; and Sustainable ("Green") Design. Since this first meeting the ETF subcommittees have made significant progress on the goals and tasks identified so far.

Each group has made status report presentations to the entire ETF, and has begun presenting their recommendations on environmental solutions to the City's challenges for ETF approval. Once the ETF has approved a set of recommendations, they will be presented to City Council for review and approval. Council can then provide Staff with direction on how to carry out the recommendations.

Water and Storm Water Subcommittee

The Water and Storm Water Subcommittee (WSWS) is comprised of five members with varying backgrounds and expertise in water management. City Staff provide support to the subcommittee as well.

The WSWS was directed to focus its initial efforts on developing the essential elements of a Water Conservation Ordinance. This issue was given priority due to the drought situation that California is dealing with. Once the WSWS completes its work on water conservation issues, it will begin to explore storm water management concerns for the City.

The WSWS's recommendations on water conservation will substantially revise the City's existing Water Conservation Ordinance. City staff have worked with the subcommittee members to provide input on what measures will work best for the City of Manhattan Beach and keeping in mind City protocols and operations. The recommendations were vetted by unanimous vote of the ETF, and are being presented for Council consideration and approval.

Water Conservation Ordinance

If the City Council approves the recommendations on water conservation measures, staff will prepare an Ordinance detailing these recommendations that would amend the current Water Conservation Ordinance. In addition to water conservation goals established in the Ordinance, both enforcement and penalties associated with non-compliance will be codified within the Ordinance. The draft Ordinance would be presented to City Council for their review and approval.

DISCUSSION:

The WSWS felt that to help explain why the City is updating its Water Conservation Ordinance, there should be an identified citywide goal of reducing potable water use. The adopted goal recommended by the WSWS is a 20% reduction of potable water use by the year 2020. The goal is not tied to any announced or potential water shortage, but rather an on-going goal of reduced use in any "average" year. It is, however, consistent with the Governor's call to reduce water use by 20% by the year 2020. The City's current base use (2004-2006) is 6524 acre-feet/year (approximately 2.2 billion gal/year). The WSWS recommends that this target reduction goal be included in the Ordinance for the City Council's review.

To reach the 20% reduction goal, the WSWS felt there are several necessary steps, including: creation of an updated Water Conservation Ordinance; Comprehensive Public Education and Outreach Campaign; and an Aggressive Tiered Rate Water Structure.

Water Conservation Ordinance

The WSWS reviewed other City Ordinances and many ideas are included in the revised Ordinance presented for Council consideration. Ideas were discussed as being applicable to the unique Manhattan Beach environment and their ability to be implemented. A major shift from the existing Ordinance was to include and identify behavior changes necessary to decrease everyday water use, irrespective of a declared water shortage, as well as water restrictions necessary during declared shortages.

The recommended Water Conservation Ordinance is broken down into two areas. PERMANENT MEASURES are those elements that are in effect permanently and will help the City achieve its goal of a 20% reduction regardless of whether or not there is a declared water shortage. DROUGHT RESTRICTIONS are practices that are mandated as MWD declares phased water shortages (likely this summer). Each stage requires an additional 5% reduction...ie, Stage 1 - 5% reduction, Stage 2 - 10 % reduction, and match the various stages as declared by MWD.

Permanent Measures include:

Immediate:

- P1: Prohibit the excess use, loss or escape of water through breaks, leaks or other malfunctions.
- P2: No open running hoses
- P3: Must use positive pressure opening nozzle on all hoses.
- P4: Water features/fountain must have recirculation system.
- P5: No sprinklers or fountain operation when winds will cause water drifting or wasting.
- P6: Prohibit water washing of hardscapes. High pressure low flow brooms are exempt.
- P7: No irrigating landscaping with potable water between the hours of 9:00am and 6:00pm. Non-potable water exempt.
- P8: All new car wash systems must install water recirculation systems.
- P9: Restaurants will not serve drinking water unless expressly requested by the customer.
- P10: Install water conserving pre-rinse nozzles at all commercial/food preparation establishments.
- P11: Hotels and motels must provide customers the option of choosing not to have towels laundered daily. The hotel or motel shall prominently display notice of this option in each bathroom and sleeping room using clear and easily understood language.
- P12: Water from irrigation shall not spray or flow to any impermeable private or public surface.
- P13: It is prohibited to water or irrigate lawns, turf, or other landscape areas beyond saturation causing significant runoff.
- P14: Turn off sprinklers during rainy periods.

Within five years:

- P15: All existing car wash systems shall have installed water recirculation systems.
- P16: All non-residential establishments to replace all public toilets and urinals to best available technology (BAT).
- P17: Hotel guest rooms toilets to be replaced to low flow (BAT) at time of installation.
- P18: Use water efficient dishwashers/washing machines in commercial establishments.

P19: All laundries at commercial properties shall install water efficient appliances.

Drought Restrictions:

Stage 1 Shortage (5% Reduction):

- D1: Irrigating landscape with potable water for no more than fifteen (15) minutes per watering day per station.
- D2: Only watering landscape 3 times/week – Monday, Wednesday, and Friday nights, after 6pm.

Stage 2 Shortage (10% Reduction):

- D3: No landscape watering unless timed sprinkler system is installed or with hand held device.
- D4: Only watering landscape 2 times/week – Monday, Wednesday, and Saturday nights. Recycled water okay.

Stage 3 Shortage (15% Reduction):

- D5: Prohibit washing a vehicle other than at commercial car washes or by mobile high pressure/low volume commercial services.
- D6: Only watering landscape 1 time/week – Wednesday nights. Recycled water okay.

Stage 4 Shortage (20% Reduction):

- D7: Turn off or disconnect home reverse osmosis water treatment units and water softeners which discharge water.
- D8: Eliminate potable watering on nonpublic playing fields. Recycled water okay.
- D9: Only drip irrigation or watering with hand held hose allowed.

Stage 5 or Above Shortage (20% - 50% Reduction):

- D10: No filling of residential swimming pools and spas with potable water.
- D11: Outside irrigation with watering can only – from water reclaimed from indoor use.
- D12: Any additional water conservation measures deemed necessary by the Public Works Department to preserve public health and safety.

Comprehensive Public Education and Outreach Campaign

The WSWS strongly supports an aggressive public education and outreach campaign and believes that such a campaign, combined with the conservation ethic of Manhattan Beach residents, provides the City an excellent chance to meet or exceed the stated goal of water reduction.

Excellent education and outreach programs currently exist within West Basin Municipal Water District (WBMWD), the City's wholesale water provider, and which is a member agency of the Metropolitan Water District (MWD). The City's cost of water includes the support of these educational outreach programs. To avoid duplication of WBMWD education efforts and contain City costs associated with outreach, a major portion of the City's work will be in making residents aware of WBMWD programs, through utility bill "stuffers", City website messages, mailers, and a modified utility bill that would illustrate actual water consumption of users.

Information and outreach concerning the City's Water Conservation Ordinance elements will not be provided by WBMWD, and will require the City to educate residents of the Ordinance contents. Enforcement and penalties adopted within the Ordinance will be new and require special educational emphasis.

Effective Conservation Ordinances' require not only an aggressive education program, but also some type of enforcement and penalty system that increase the chances that the Ordinance will gain acceptance and compliance. In those Ordinances reviewed by the WSWS, enforcement varied from administrative (complaint based and letter writing) to CSO-type monitoring with aggressive penalties for non-compliance. Intensity of both enforcement and penalties have a direct impact on both staffing resources and the likely success of meeting the intent of the Ordinance.

Aggressive Tiered Rate Water Structure

The WSWS believes strongly that any success in reducing water consumption includes an aggressive water rate structure that inverts the unit cost of water upward as more water is consumed. Although rate setting is clearly outside the purview of the WSWS, rate policies and charges are a key component, along with education and a strong Water Conservation Ordinance, to effect the change necessary to meet the recommended goal of a 20% water reduction.

Penalties and Enforcement

The success of water conservation ordinances are enhanced with enforcement of the Ordinance elements and penalties for non-compliance. Surveyed California cities take widely varied approaches to enforcement and penalties.

Escondido has an adopted use Ordinance that sets forth prohibited uses and establishes fines to be levied for violations (\$100-\$500). Violators are identified by call-ins, however they have no active code enforcement officers to follow up and no other practical enforcement activities at present.

Long Beach relies mostly on public outreach and education, combined with written notification of violators as reported primarily by citizens. They have a landscape auditor, in addition to part time interns who review problems and send out notices to users that are in violation of their Ordinance. They have sent out between 2000-2500 notices per year (may be multiple notices to same user). Although their Ordinance allows for penalty charges up to and including installation of a flow restricting device, they have issued less than five penalties since the inception of their program.

On the other end of the spectrum, Santa Monica employs four persons who continuously monitor the City for violators (including at night). Violators are subject to fines, beginning at \$20 and may increase. Violators receiving fines are the result of unauthorized use being observed by the Conservation Coordinator or Water Resource Specialists who may issue a citation. Santa Monica has issued 6,000 citations over the past two years.

Enforcement varies widely and the aggressiveness is directly tied to staffing resources dedicated to enforcement. Long Beach has chosen to put resources primarily in public outreach and achieved success through an early start to public education.

SUMMARY:


The ETF-WSWS has established a recommended goal of reducing potable water use by 20% by 2020. To accomplish that, the WSWS believes it necessary to implement a strong public outreach and education program, implement a tiered water rate system, and adopt a revised Conservation Ordinance. WSWS seeks input from Council on the recommended measures and direction for Staff to prepare a (a draft or updated) Ordinance for Council adoption.

Staff seeks direction from Council in types of penalties to be contained in the Ordinance and level of enforcement and public education that they believe necessary to successfully reduce City water use.


Attachments: (1) March 17 Council Presentation Powerpoint
(2) Matrix of Permanent Measures and Drought Restrictions contained in Ordinance

Water Conservation Strategy for the City of Manhattan Beach

**Water and Stormwater
Subcommittee
City of Manhattan Beach, California
March 17, 2009**



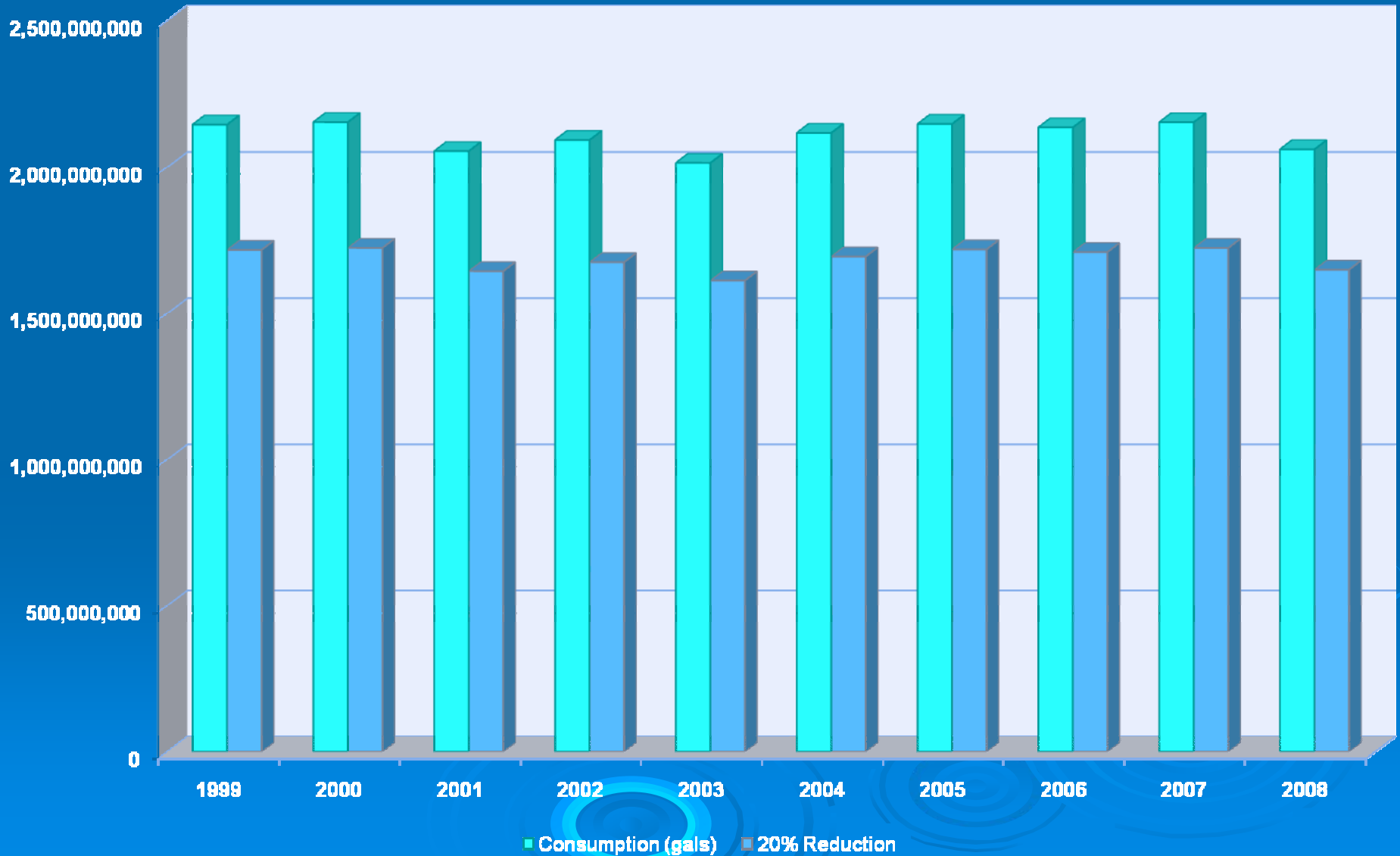
Agenda

- City Goal
 - How to Get There
 - Conservation Ordinance
 - Next Steps
- 

Goal

- 20% Reduction in Baseline Potable Water Consumption by 2020

10-Years of City Water Consumption



Goal

- 10-Year Average Annual Water Consumption is 2,109,041,149 Gallons Per Year
- Average Daily Water Consumption is Approximately 170 Gallons Per Person Per Day
- 20% Reduction Requires An Annual Savings of 421,808,230 Gallons
- That's 12,460 Gallons Per Person Per Year in the City!
- Or...34 Gallons Per Day Per Person!!!

How to Get There?

- **Establish Water Conservation Ordinance**
 - Permanent Measures
 - Drought Restrictions
- **Comprehensive Public Education and Outreach**
- **Aggressive Tiered Rate Water Structure**
 - Use More Pay More

Overall Ordinance Content - Development Approach

- 1991 Existing Manhattan Beach Ordinance: Out of Date, Does Not Reflect Current State-Wide Water Shortage
- Reviewed Other City and County Water Conservation Measures and Ordinances
- Selected Best Water Conservation Practices And Format From Other Municipalities and Adapted to Manhattan Beach

Ordinances Reviewed

- City of Santa Monica
- City of Long Beach
- City of Escondido
- San Diego Drought Management Plan
- San Diego Water Management Plan
- West Basin Municipal Water District
- Metropolitan Water District Model Ordinance
- Redwood City Water Management Plan

Ordinance Composed of Two Types of Conservation Elements

➤ First - Permanent Measures

- Water Conservation Practices That Affect Everyone, Everyday to Permanently Reduce Water Consumption in Manhattan Beach

➤ These Measures Will Contribute to City's Ability to Achieve the 20% Reduction by 2020

Ordinance Composed of Two Types of Conservation Elements

- **Second - Drought Restrictions**
 - Water Conservation Practices That Are Mandated as MWD Declares Upcoming Water Shortages in Stages for all of Southern California
- **Matches MWD's Drought Stages for Mandated Reductions of 5% to 50%**

Permanent Measures

➤ Immediately:

P1. Prohibit the excess use, loss or escape of water through breaks, leaks or other malfunctions.

P2. No open running hoses.

P3. Must use positive pressure opening nozzle on all hoses.

P4. Water features/fountains must have recirculation system.

P5. No sprinklers or fountain operation when winds will cause water drifting or wasting.



Permanent Measures

➤ Immediately (con't):

P6. Prohibit water washing of hardscapes.
High pressure low flow brooms are exempt.

P7. No Irrigating landscape with potable water between the hours of 9:00 a.m. and 6:00 p.m. Recycled water exempt.



Permanent Measures

➤ **Immediately (con't):**

P8. All new car wash systems must install water recirculating systems.

P9. Restaurants will not serve drinking water unless expressly requested by the customer.

P10. Install water conserving pre-rinse nozzles at all commercial/food preparation establishments.

Permanent Measures

➤ **Immediately (con't):**

P11. Hotels and motels must provide customers the option of choosing not to have towels and linens laundered daily. The hotel or motel shall prominently display notice of this option in each bathroom and sleeping room using clear and easily understood language.

Permanent Behaviors – Landscaping

➤ Immediate:

P12. Water from irrigation shall not spray or flow to any impermeable private or public surface.

P13. It is prohibited to water or irrigate lawns, turf, or other landscape areas beyond saturation causing significant runoff.

P14. Turn off sprinklers during rainy periods.



Permanent Measures

➤ **Implemented within 5-years:**

P15. All existing car wash systems shall have installed and operational water recirculation systems.

P16. All non-residential establishments to replace all public toilets and urinals to best available technology.

P17. Hotel guest room toilets to be replaced to low flow best available technology at time of installation.

P18. Use water efficient dishwashers/washing machines in commercial establishments.

P19. All laundries at commercial properties shall install water efficient appliances.

Drought Restrictions

- Water Conservation Practices That Are Mandated as MWD Declares Phased Water Shortages - Very Likely by This Summer
- Follow MWD's Stages (Currently 10 stages)
 - Currently each stage requires an additional 5% reduction
 - ✓ Stage 1 – 5% Reduction
 - ✓ Stage 2 – 10% Reduction
 - ✓ Stage 3 – 15% Reduction
 - ✓ Etc.

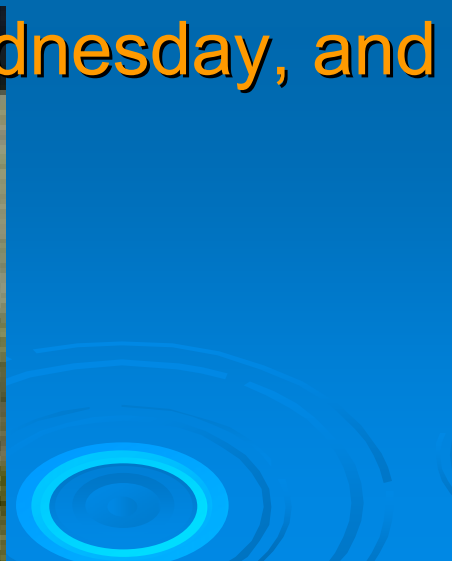
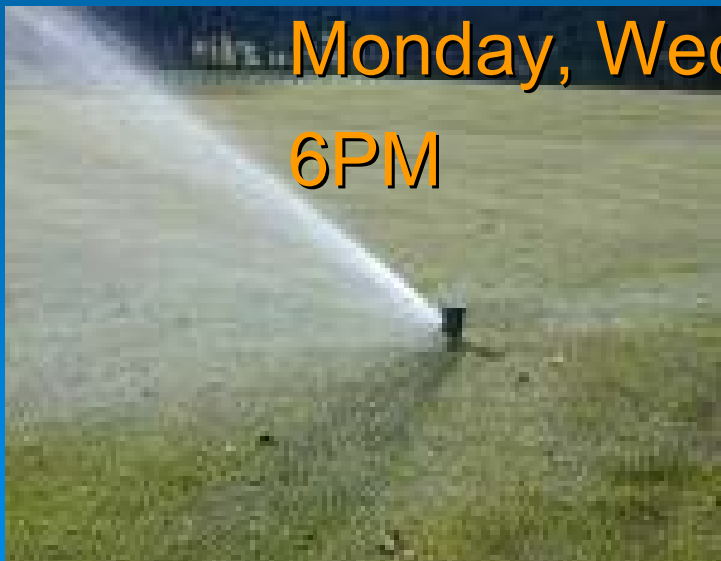
Drought Restrictions

➤ When MWD Calls a Stage 1 Shortage:

D1. Irrigating landscape with potable water for no more than fifteen (15) minutes per watering day per station.

D2. Only watering landscape 3 times/week -

Monday, Wednesday, and Friday nights, after 6PM



Drought Restrictions

➤ When MWD Calls a **Stage 2 Shortage:**

D3. No landscape watering unless timed sprinkler system is installed or with hand held device.

D4. Only watering landscape 2 times/week – Wednesday and Saturday nights. Recycled water exempt.



Drought Restrictions

➤ When MWD Calls a Stage 3 Shortage:

D5. Prohibit washing a vehicle other than at commercial car washes or by mobile high pressure/low volume commercial services.

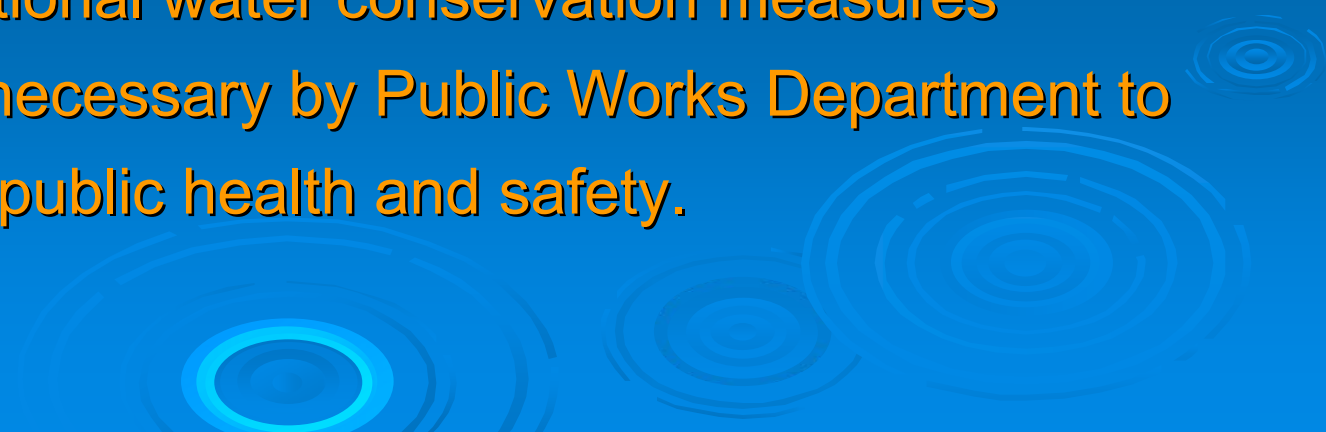
D6. Only watering landscape 1 time/week – Wednesday nights. Recycled water exempt.



Drought Restrictions

- When MWD Calls a Stage 4 Shortage:
 - D7. Turn off or disconnect home reverse osmosis water treatment units and water softeners which discharge water.
 - D8. Eliminate potable watering of nonpublic playing fields. Recycled water okay.
 - D9. Only drip irrigation or watering with hand held hose allowed.

Drought Restrictions

- When MWD Calls Stage 5 or Above Shortage:
 - D10. No filling residential swimming pools and spas with potable water.
 - D11. Outside irrigation with watering can only – with water reclaimed from indoor use.
 - D12. Any additional water conservation measures deemed necessary by Public Works Department to preserve public health and safety.
- 

Comprehensive Public Education and Outreach

- Capitalize on Residents' Conservation Ethic.
- Implement Comprehensive Education Program.
- Utilize and Publicize Existing WBMWD Programs.
- Advertise in Local Media Outlets.
- Employ City Mechanisms Such as Bill Stuffers, City Website, and Other City Media

Aggressive Tiered Rate Structure

- Major Component of a Successful Water Conservation Effort.
- Unit Costs For Water Increase As More Water is Used.
- Rate Consultant To Assist City in Establishing Rate Structure, WSWS to Review.

Water Conservation Measures Matrix

Measure (all measures found in one or more Ordinances in Cities throughout California)		Drought Stages				
		During Phase 1 Shortage	During Phase 2 Shortage	During Phase 3 Shortage	During Phase 4 Shortage	During Phase 5 and Above Shortage
Drought Restrictions						
D1	Irrigating landscape with potable water for no more than fifteen (15) minutes per watering day per station. Recycled water exempt.	X-->	X-->	X-->	X-->	X-->
D2	Only watering landscape 3 times/week. Monday, Wednesday, and Friday nights. Recycled water exempt.	X-->	X-->	X-->	X-->	X-->
D3	No landscape watering unless timed sprinkler system is installed or with hand held device.		X-->	X-->	X-->	X-->
D4	Only watering landscape 2 times/week. - Wednesday and Saturday nights. Recycled water exempt.		X-->	X-->	X-->	X-->
D5	Prohibit washing a vehicle other than at commercial car washes or by mobile high pressure/low volume commercial services.			X-->	X-->	X-->
D6	Only watering landscape 1 time/week - Wednesday nights. Recycled water exempt.			X-->	X-->	X-->
D7	Turn off or disconnect home reverse osmosis water treatment units and water softeners which discharge water.				X-->	X-->
D8	Eliminate potable watering of non-public playing fields. Recycled water exempt.				X-->	X-->
D9	Only drip irrigation or watering with hand held hose allowed. Recycled water exempt.				X-->	X-->
D10	No filling residential swimming pools and spas with potable water.					X-->
D11	Outside irrigation with watering can only - from water reclaimed from indoor use. Recycled water exempt.					X-->
D12	Any water conservation measures deemed necessary by the Water Department to preserve public health and safety.					X-->

Water Conservation Measures Matrix

Measure (all measures found in one or more Ordinances in Cities throughout California)		Permanent Behaviors	
		Immediate Measures	Phased In Measures Over Maximum 5 Years
Permanent Measures			
P1	Prohibit the excess use, loss or escape of water through breaks, leaks or other malfunctions in the water user's plumbing or distribution system for any period of time after such escape of water should have reasonably been discovered and corrected.	X	
P2	No open running hoses.	X	
P3	Must use positive pressure opening nozzle on all hoses.		
P4	Water features/fountains must have recirculation system.	X	
P5	No sprinklers or fountain operation when winds will cause water drifting or wasting.	X	
P6	Prohibit water washing of hardscapes. High pressure low flow brooms are exempt.	X	
P7	No Irrigating landscape with potable water between the hours of 9:00 a.m. and 6:00 p.m. Recycled water exempt.	X	
P8	All new car wash systems must install water recirculating systems.	X	
P9	Restaurants, or other public places where food is served or offered for sale, will not serve drinking water unless expressly requested by the customer.	X	
P10	Install water conserving pre-rinse nozzles at all commercial/food preparation establishments.	X	
P11	Hotels and motels must provide customers the option of choosing not to have towels and linens laundered daily. The hotel or motel shall prominently display notice of this option in each bathroom and sleeping room using clear and easily understood language.	X	
P12	Water from irrigation shall not spray or flow to any impermeable private or public surface including but not limited to walkways, driveways, sidewalks, alleys, streets, or storm drains.	X	
P13	It is prohibited to water or irrigate lawns, turf, or other landscape areas beyond saturation causing significant runoff.	X	
P14	Turn off sprinklers during rainy periods.	X	
P15	All existing car wash systems shall have installed and operational water recirculation systems.		X
P16	All non-residential establishments to replace all public toilets and urinals to best available technology (low flow, waterless, etc.) at time of installation.		X
P17	Hotel guest room toilets to be replaced within 5 years to low flow best available technology at time of installation.		X
P18	Use water efficient dishwashers/washing machines in commercial establishments.		X
P19	All laundries at commercial properties shall install water efficient appliances.		X