

Ordinance No. 140, Amending the Rebate Program

October 12, 2009 PAC/TAC
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Purpose

- The Rebate Program contributes to water savings throughout the MPWMD.
- Nearly 200 AFA has been saved as a result of the Rebate Program since 2007.
- Funding for this program is made available through rates and is approved and supported by the California Public Utilities Commission (CPUC).

Purpose

- The CPUC sees a need to increase water conservation efforts on the Monterey Peninsula and has approved funding for an aggressive 3-year conservation program designed to save 400-800 AFA.
- Reductions in available Carmel Valley and Seaside Groundwater Basin supplies necessitate further conservation.

Ordinance No. 140 Summary

- Adds, amends and deletes definitions in Rule 11 to facilitate the Rebate Program and Conservation Program;
- Deletes Rebate for Ultra-Low Flush Toilet (1.6 gpf);
- Adds Rebates for Lawn removal and replacement, sythetic turf, high efficiency urinals, pint urinals, rotating sprinkler nozzles, water brooms, high efficiency commercial clothes washers, cooling tower conductivity controllers, air-cooled ice machines, X-ray film processor recirculation systems.
- Increases amount of Rebate for High Efficiency Toilets (1.28 gpf), high efficiency clothes washers and Zero Water Consumption Urinals.

Proposed Rebates and Water Savings Assumptions

High Efficiency Toilets (1.3 gpf average flush) replace Ultra-Low Flush Toilets (1.6 gpf) for rebates.

- High-Efficiency Toilets (HET) flush at 20 percent below a ULFT. ULFT flushes with 1.6 gallons per flush, and HET uses 1.28 gallons per flush or less. The average water savings for HETs is estimated to be 19,000 gallons per year when replacing an average, non-efficient toilet, and 4,000 gallons per year when replacing a ULFT. This equals an estimated saving of 38 gallons per day (gpd) when replacing a non-ULFT and 7 gpd when replacing an existing ULFT. (Source: MWD)

Proposed Rebates and Water Savings Assumptions

Lawn Removal and Replacement with Low Water Use or Permeable Surfaces

- Turf generally uses 2.2 acre-feet per acre or about 16 ½ gallons per square-foot annually.
- Low Water Use Plants use about a third of the water used by lawn grasses.
- Permeable surfaces allow rainwater to percolate into the ground, replenishing groundwater and reducing stormwater runoff.
- Stormwater runoff can carry harmful pollutants to the ocean.

Proposed Rebates and Water Savings Assumptions

Synthetic Turf

- Synthetic Turf must be permeable to meet the District's definition.
- Synthetic turf requires no irrigation, whereas a lawn uses water
- Synthetic turf provides a safe play surface alternative for parks and schools and for personal outdoor areas

Proposed Rebates and Water Savings Assumptions

High Efficiency Urinals (0.5 gallons per flush)

- Use ½ the water of conventional urinals
- Some "trough" urinals use

Proposed Rebates and Water Savings Assumptions

Pint Urinals

- Use 0.125 gallons per flush compared to 1.0 or higher

Proposed Rebates and Water Savings Assumptions

Rotating Sprinkler Nozzles

- Rotating sprinkler nozzles use up to 20% less water than a standard sprinkler head
- Rotating nozzles apply streams of water more slowly and evenly than conventional spray heads, saving water and reducing the amount of run-off.
- Water directed from these nozzles is less likely to mist, resists misdirection resulting from strong winds, and significantly reduces run-off onto streets and sidewalks with a more directed flow.
- Using pop-up sprinkler spray heads with rotating nozzles can save up to 6,600 gallons of water per nozzle over a 5-year period.

Proposed Rebates and Water Savings Assumptions

Water Brooms

- When you use a hose and nozzle to clean sidewalks, you are using anywhere from 8 to 18 gallons of water per minute. With a pressurized Waterbroom, you will clean more efficiently and use as little as 2.8 gallons of water per minute.
- Occasionally needed for health and safety reasons at visitor serving facilities.
- Waterbroom uses a combination of air and water pressure.
- Saves up to 75 percent, while eliminating urban runoff into storm drains.

Proposed Rebates and Water Savings Assumptions

High Efficiency Commercial Clothes Washers

- Use less than half the water of a standard washer
- Reduces energy consumption by approximately 50%
- Fast spinning removes more water from laundry, reducing amount of dry time (saves energy)
- Most commercial machines are used for more wash cycles per week than residential machines, consuming more water and energy than a typical household machine.

Proposed Rebates and Water Savings Assumptions

Cooling Tower Conductivity Controllers

- Reduces amount of make-up water needed
- Annual water savings with a new Cooling Tower Conductivity Controller can be as much as 800,000 gallons (2.5AFA).
- By accurately transmitting information to the valves that control the amount of blow down (water drained from the cooling tower reservoir) and subsequent makeup water, a conductivity controller, automatically monitors and controls the efficiency of the system.

Proposed Rebates and Water Savings Assumptions

Air-cooled ice machines

- More water is used to cool a water-cooled ice machine than is used to make ice
- Cooling water goes down the drain
- Commercial ice-makers typically use 15 to 25 gallons of water to produce 100 pounds of ice flakes or cubes, depending on the quality of the ice
 - Older water-cooled ice machines use as much as 90 gallons to produce the same quantity of ice
- Assuming a water-cooled machine using 150 gallons per 100 pounds of ice and produces 400 pounds per day, the water use for a year, in cooling water alone, would be 219,000 gallons.

Proposed Rebates and Water Savings Assumptions

X-ray film processor recirculation systems

- The amount of water required to operate a non-digital x-ray film processor can be reduced by 98%
- The average processor uses 788,400 gallons of water per year
- With a re-circulation system, water use can be reduced to 13,530 gallons per year
- Digital systems require no water, but are very expensive

tion. Restrictions will be removed if Rebate is repaid.

Recommendation

PAC/TAC should adopt a Board recommendation on the proposed expansions to the Rebate Program

For More Information

Staff reports and presentation materials can be found on the District's website at:

www.mpwmd.dst.ca.us

PowerPoint presentations will be posted on the website the day after the meeting.
