

WATER CONSERVATION IN CITY PARKS AND MEDIANS

The City of Moorpark has been faced with stringent water-use requirements and increasing water rates. In 2009, the Department of Water Resources (DWR) initiated its 20x2020 statewide Water Conservation Plan in response to the State of California Assembly Bill 32 (AB32), which mandates a 20% reduction in irrigation water use by the year 2020. Per City Council directive in 2010 and a mandate by the Metropolitan Water District of Southern California (MWD), the City of Moorpark has been required to reduce water use by 15% citywide. In addition, water rates continue to rise and according to MWD, water rates will increase 6% annually over the next ten years. In response, it is likely that the Ventura County Water District (VCWD) will transfer these rate increases directly to its end users. In February, 2010 the VCWD Board increased water rates by 16%, a 12% rate increase and tier allocation adjustment was approved by the Board in April, 2011 and another 8% increase is proposed for 2012. It is clear that accelerated water conservation measures are necessary to curtail the direct fiscal impact on the City's operating budget, to comply with current State regulations and to protect this resource.

Currently, the City manages approximately 162 acres of parks, 155 acres of Landscape and Lighting Assessment District areas (landscaped parkways, median islands and slopes) and 12 acres of miscellaneous City and Redevelopment Agency properties. In fiscal year 2009/2010 the City used approximately 156,521 Hundred Cubic Feet (HCF) of water, or 117,077,708 gallons, resulting in a direct cost of \$452,664. Even though the City reduced water consumption by approximately 16.5% as compared to the prior fiscal year, the impact on the operating budget was \$26,411 more in direct water costs due to water rate increases. Approximately 90% of the City's water use is through landscape irrigation. Due to anticipated future water rate increases and in an effort to comply with the 20% state mandated water use reduction by the year 2020, staff has determined that new water saving irrigation techniques and products will be essential.

In July, 2010, staff initiated a 120-day pilot program with three major irrigation system manufacturers: Calsense, the Rain Bird Corporation (Maxicom) and HydroPoint Data Systems, Inc. (WeatherTRAK). The purpose of the pilot program was to determine which irrigation water management system would manage the City's water the most efficiently. Staff determined that the HydroPoint Data Systems, Inc. water management system and WeatherTRAK field controllers performed the best during the pilot program. With City Council approval, staff replaced forty-four (44) existing irrigation controllers at the following City parks and Landscape Maintenance Districts: two (2) controllers at Mammoth Highlands Park, two (2) controllers at Peach Hill Park, four (4) controllers at LMD Zone 2 (Steeple Hill, Tract 2865), two (2) controllers at LMD Zone 5 (Pheasant Run, Tract No.s 3019 & 3525), six (6) controllers at LMD Zone 10 (Mountain Meadows, PC-3), six (6) controllers at LMD Zone 12 (Carlsberg Specific Plan), seven (7) controllers at LMD Zone 15 (Toll Brothers, Tract 4928), and fifteen (15) controllers at LMD Zone 22 (Pardee Homes, Tract 5045). This work was completed in November, 2011, at a total cost of \$362,584. Staff anticipates that the City will recover this initial investment in approximately eight (8) years based on a 15% reduction in irrigation water use.

To date, staff has not had reasonable time to determine the water savings potential of the recently installed irrigation system, as the system has only been fully programmed and operational since November, 2011. In addition, the current winter season has been uncharacteristically mild, with minimal rainfall. This dramatic decrease in seasonal rainfall will most likely hinder the water savings potential of the recently installed irrigation system, as compared to the last several years that experienced high annual rainfall totals. However, staff anticipates a 15% reduction in irrigation water use averaged over a five-year cycle. This annual reduction in irrigation water use is equivalent to approximately 23,168 HCF, or 17,561,656 gallons of water.

Phase II of the project is proposed for FY 2012/13 and includes installing a total of seventeen (17) controllers at the following City parks: Glenwood Park, Tierra Rejada Park, Country Wood Park, Campus Park, Poindexter Park, Mountain Meadows Park, Miller Park, Campus Canyon Park, and College View Park

BARK MULCHING PROGRAM

In July, 2011, staff initiated a bi-annual bark mulching program for both the City parks and Landscape Maintenance Districts. Bark mulch provides many important benefits to shrub and tree planting areas and the cost savings associated with the installation of bark mulch are comparatively equal to the direct costs incurred by the City. A summary of these benefits are:

- ✓ Water Savings: Bark mulch reduces loss of water from the soil by evaporation. It reduces the soil temperature and increases water retention. Bark mulch also minimizes soil compaction, improves water absorption and reduces irrigation runoff.
- ✓ Maintenance: Bark mulch prevents the germination of seeds and weeds and reduces the need for cultivation and the use of chemical herbicides. Mulch improves the structure of the soil by adding vital nutrients and beneficial mycorrhizal fungus back into the soil as the mulch decomposes, reducing the need for chemical fertilization and improving plant health.
- ✓ Appearance: Bark mulch provides a rich brown color that contrasts with the plants, enhancing the look of the planter. Mulch also keeps plants clean by reducing the splash of soil onto leaves during rainstorms or irrigation.