



TOM TINDALL  
Director

County of Los Angeles  
**INTERNAL SERVICES DEPARTMENT**

1100 North Eastern Avenue  
Los Angeles, California 90063

Telephone: (323) 267-2101  
FAX: (323) 264-7135

*"To enrich lives through effective and caring service"*

September 8, 2010

To: Each Supervisor

From: Tom Tindall *Tom Tindall*  
Director

Subject: **WATER CONSERVING RESTROOM FIXTURES  
(AGENDA OF JULY 13, 2010, ITEM 5)**

On July 13, 2010, your Board directed the Internal Services Department (ISD) to work with County departments to assess the existing number of urinals and toilets in County-owned facilities that can be retrofitted with waterless urinals or low-flow toilets, excluding lockup and detention areas within Sheriff and Probation facilities, and the jail portions of hospitals.

In recent years both waterless urinals and low-flow valves for toilets have become available to meet all local building codes. A conventional urinal uses from 1 to 2 gallons per flush, which is entirely saved with a waterless urinal. Conventional toilets use 7, 5 or 3.5 gallons per flush. Toilets fitted with low-flow valves use 1.6 gallons per flush, saving from 5.4 to 1.9 gallons per flush.

Per your Board's request, ISD assessed the number of conventional urinal and toilet fixtures in County facilities that would benefit from retrofit to waterless or low-flow consumption. We estimated the cost of retrofitting at \$500 per urinal and \$330 per low-flow toilet. The table below displays our estimates of retrofit costs and annual water saved if all fixtures are retrofitted. The annual water savings figures are based on a combination of actual usage and industry usage standards for government offices and public buildings. Annual water-cost savings are based on a cost of \$4.50 per 100 cubic feet (750 gallons) of water. This is an average of the County's current cost for water.

<u>Fixtures</u>	<u>Cost to Retrofit</u>	<u>Annual water savings</u>	<u>Annual cost savings</u>
<b>2,600 urinals</b>	\$1.3 million	68 million gallons	\$ 408,000 *
<b>13,400 toilets</b>	\$4.4 million	473 million gallons	\$2,838,000
<b>Totals</b>	<b>\$5.7 million</b>	<b>541 million gallons</b>	<b>\$3,246,000</b>

\* The annual cost savings associated with urinals does not include the cost of replacing waterless urinal cartridges. Cartridges cost approximately \$40 each and are replaced after approximately 7,000 uses. If the cost of cartridges is factored in, the annual cost savings associated with retrofitting to waterless urinals is reduced from \$480,000 to \$215,000.

If a project were undertaken to retrofit all County's fixtures, it is estimated that it will take approximately three years to complete. The cost of retrofitting would be partially reduced by utilities rebate programs. The County has utility accounts with over 200 water supplying agencies, of which 26 have rebate programs. ISD and the Department of Parks and Recreation have used the rebate programs in the past.

Should your Board direct County departments to implement a water-saving fixture retrofit project, ISD will work with water supplying agencies to fully utilize available rebate programs. Also, ISD will coordinate with the Chief Executive Office to prioritize the project within the County's facilities deferred maintenance program.

TT:JJ:TB:jgb

c: William T Fujioka  
Ellen Sandt  
Jan Takata