

Energy Down the Drain

What If

- ❖ *You could lower your water bill*
- ❖ *You could save scarce water during this exceptionally dry year*
- ❖ *You could lower your PG&E bill*
- ❖ *You could lower America's dependence on foreign oil*
- ❖ *You could lower your personal CO2 footprint*

You can do all of this simply, cheaply, quickly, and easily



INTERESTED?

It's not snake oil

It's good old fashioned physics and new fashioned design

Just replace your old:

- ❖ **Toilets (~27% of indoor water usage)**
- ❖ **Showerheads (~22% of indoor water usage)**
- ❖ **Clothes Washer (~17% of indoor water usage)**
- ❖ **Dishwasher (~10% of indoor water usage)**

A study by the Natural Resources Defense Council and the Pacific Institute shows that for each unit of water you use inside your home you are also using the equivalent of 16 kilowatt hours (KWH) of energy (natural gas use is converted to KWH equivalent). For the average Los Trancos County Water District home, 16 KWH per unit of water translates to about 144 KWH of energy usage per month.

Of the 144 KWH, about 56% or 81KWH per month is used directly in your home for heating or cooling the water you use. The balance goes toward procuring, transporting, and treating the water.

LOOK AT THE NUMBERS!

Reducing the demand for water and the energy component inherent in water usage are repeatedly cited as among the most important contributors to saving our planet.

- ❖ An Ultra Low Flush Toilet (ULFT@1.6 gallons per flush or gpf) uses 55% LESS water than an older 3.5 gallon per flush model. (And the new 1.6's work better than any of the old 3.5's and the older 1.6's) For information on performance tests of currently available ULF toilets see: http://www.cuwcc.org/toilet_fixtures/UNAR_qualified_toilet_models_07-04-05.pdf
- ❖ A High Efficiency Toilet (HET@1.28 gallons per flush or less) uses 63% LESS water than an old 3.5 and 20% LESS than even the 1.6 gpf units. For information on performance tests of currently available HET toilets see: http://www.cuwcc.org/toilet_fixtures/UNAR_HET_350_07-04-05.pdf
- ❖ The new breed of 1.5 gallon per minute (gpm) shower heads use 40% less water than the 2.5 gpm models that are standard in most homes. These new products appear to have solved the problems of uncomfortable stinging sprays and slow rinsing of shampoo from your hair. A number of upscale hotels in Las Vegas and elsewhere are using these shower heads now.
- ❖ The newest of the Class III clothes washers use ~4.5 gallons per cubic foot of wash load (known as water factor) compared to the typical machines of just 7 – 10 years ago that use more than 20 gallons per cubic foot of load. That's a 75% reduction!!!
- ❖ The newest dishwashers use just 3 -5 gallons of water per load versus more than 15 gallons about 10 years ago. Plus you'll save additional water and energy because you REALLY DO NOT NEED TO PRERINSE THE DISHES.

Shower heads, clothes washers, and dish washers are mostly used with hot water. These constitute ~50% of the water you use inside your home but they make up almost 100% of the 81 KWH per month you are going to use to heat water.

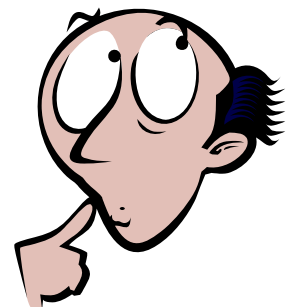
The Los Trancos County Water District has rebate programs* that will help you defray the cost of saving water, energy, and therefore, money.

- ❖ \$200 to replace a 3.5 gpf toilet with either a 1.28 gpf HET toilet or a 1.6 gpf ULFT toilet or to replace a 1.6 gpf ULFT toilet with a 1.28 gpf HET toilet.
- ❖ \$25 to replace a shower head that uses 2.5 gpm or more with a 1.5 gpm model.
- ❖ \$200 to replace an older clothes washer with a Class III model.
- ❖ The Los Trancos County Water District does not currently offer a rebate for dishwasher replacement but will consider this in the near future as a part of the rebate plan.

These rebates are in addition to those offered by Cal Water and PG&E!

OK, I'm convinced! What do I do next?

**Rebates available for appliances purchased and installed on or after January 1, 2007*



First, consider how much you could save?

Annualized savings of water and power for different Water Use Efficiency Improvements in your home and available rebates as of 5/3/2007

Type of improvement >>>		Toilet 3.5 to 1.6	Shower Head 2.5 to 1.5	Clothes Washer WF15 to WF4.5	Dish Washer 15gal/load to 5gal/load	Total yearly saving	For additional reference These numbers are not included in total savings	
Savings v							Toilet 1.6 to 1.28	Toilet 3.5 to 1.28
Water Saved	Units	16.0	9.5	12.8	7.13	45.4	5.8	18.4
	\$	\$42.88	\$25.47	\$34.30	\$19.11	\$121.76	\$15.49	\$49.24
Energy Saved in home	KWH	NA	175	235	131	531	NA	NA
	\$ (KWH convert ed to BTU for cost calc)	NA	\$20.97	\$28.16	\$15.70	\$64.83	NA	NA
Overall Energy saved - KWH/yr		256	152	205	114	727 (= about 1000 pounds of CO2)	93	294
Total \$ saved/year		\$42.88	\$55.66	\$62.46	\$34.81	\$186.59	\$15.49	\$49.24
Water Dist Rebate		\$200 each	\$25 each	\$200	tbd	\$425	\$200	\$200
PG&E Rebate		0	0	\$75	\$50	\$125	0	0
CWS Rebate		\$60	0	\$150	0	\$210	\$60	\$60
Total Rebate		\$260	\$25	\$425	\$50	\$760	\$260	\$260

Notes: Calculations are based on Los Trancos County Water District typical indoor usage of 9 units per month. Since natural gas is used almost universally in California for water heating, for the purposes of this table, the energy savings were converted back into BTU and priced based upon the mid-range price per Therm from PG&E. (FYI the cost for electricity would be about 50% higher.)

Then check to see what rebates are currently available and what machines qualify for rebates.

See <http://www.calwater.com/CurrentRebates.html> for current available rebates from Cal Water.

See <http://www.pge.com/res/rebates/> for current available rebates from PG&E

Then, with this information in hand, go shopping for the products you need, and installer services if required (you still qualify if you do your own installation).

Obtain a copy of the Los Trancos County Water District rebate application form on line at <http://www.vistaverdeca.org/> or from any member of the Board. Fill it out and mail it to the District at 162 Los Trancos Circle. Note that PG&E and Cal Water require separate rebate applications.

Notes:

*Virtually all toilets sold in the United States now use 1.6 gallons per flush or less. For information on testing protocols for toilets see: http://www.cuwcc.org/toilet_fixtures/UNAR_Specification_v1.2_07-01-30.pdf

*If the appliance store cannot tell you about the amount of water used by the appliance and if it qualifies for tier 3 rebates, ask the management to find out or go elsewhere.

*The only shower head tested so far by the Los Trancos County Water District is available from Sustainable Solutions Inc. Model SM150 List price ~ \$125 – street price ~ \$50.00.

For Data go to: http://www.sustainablesolutions.com/products/pricing/SSITapware_US2006.pdf

For a list of dealers go to: <http://www.sustainablesolutions.com/distributors2.php?id=us4>

*Energy numbers and proportional usages for this analysis were derived from: <http://www.nrdc.org/water/conservation/edrain/edrain.pdf>

*For a host of other useful info see: http://www.cuwcc.org/products_tech.lasso