DOCKETED

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WAITING FOR HOT WATER COSTLY TO CALIFORNIA

Adobe PDF file illustrates amount of water, time and resources a family of four waiting 60 seconds before for hot water at sinks and showers.

Additional submitted attachment is included below.

Waiting for

We've all done it.

Most wait multiple times a day.

What's the big deal…

It's only water, right?

WRONG

Waiting for HOT WATER wastes

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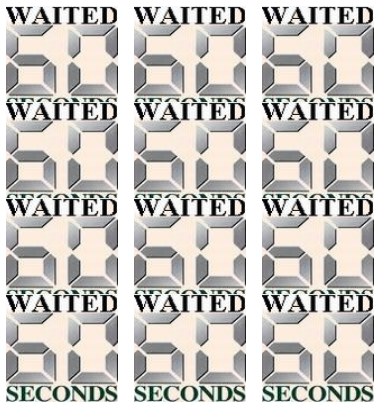
How much is wasted

WAITING FOR HOT WATER?

Let's find out…

EACH PERSON USING HOT WATER
3 TIMES EACH DAY

MORNING **EVENING** **BEFORE BED**



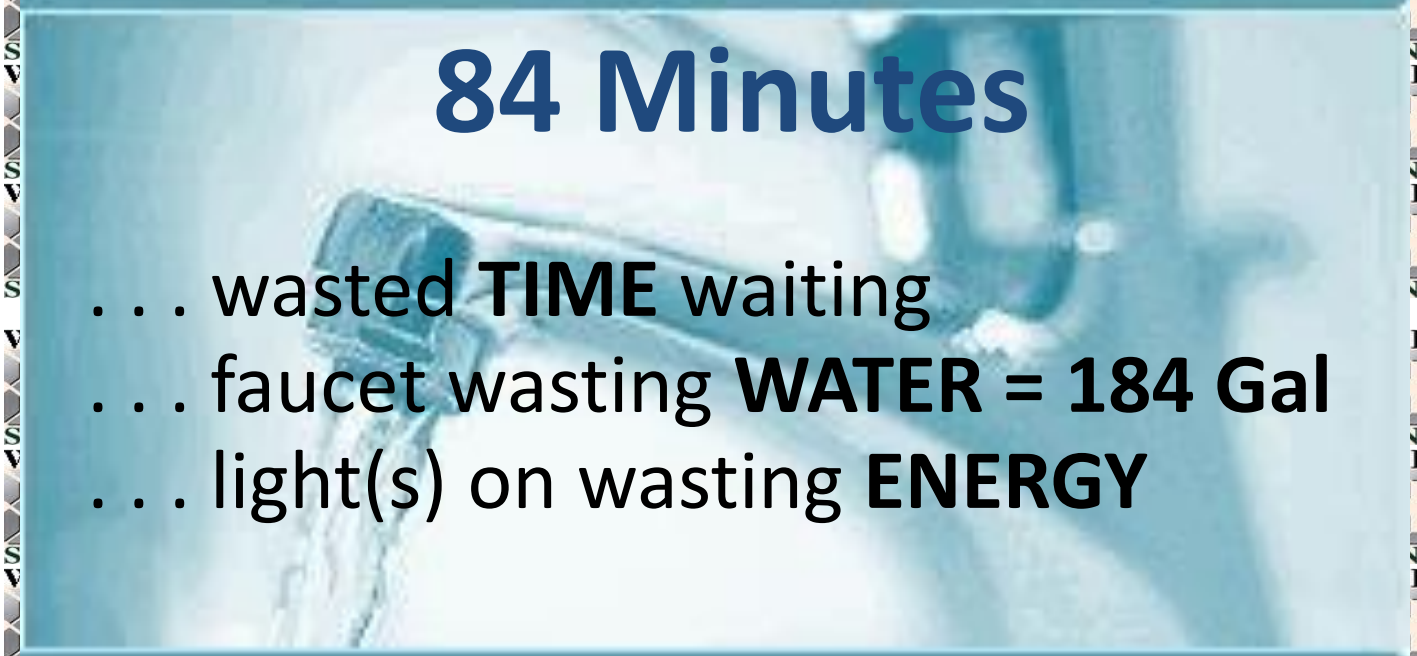
12 TOTAL USES PER DAY

Calculation (1 min x 3 uses per day) x 4 people = 12

12 MINUTES PER DAY **TIMES 7 DAYS** **= 84 MINUTES EACH WEEK**

WEEKLY WASTE

84 Minutes



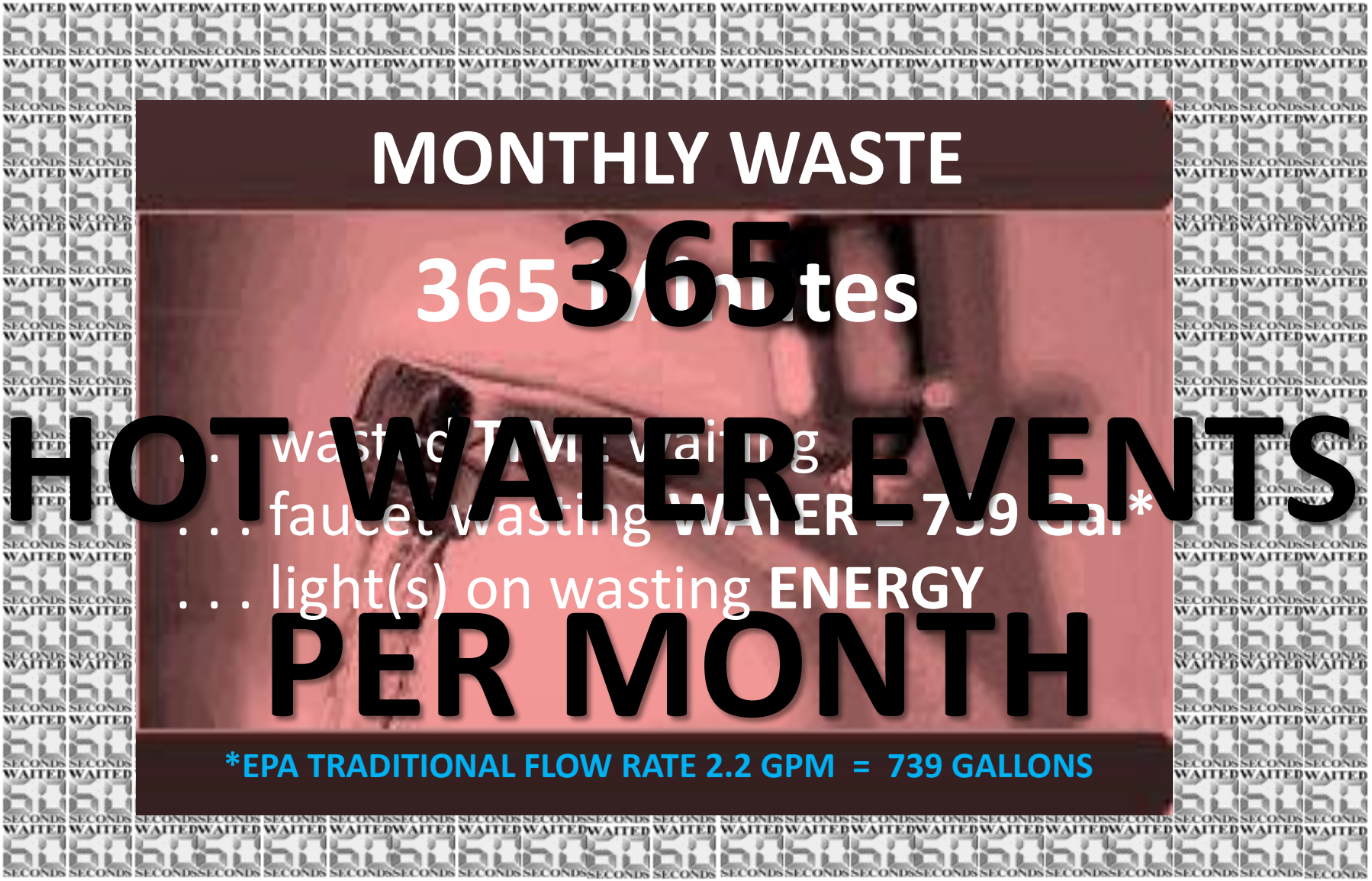
. . . wasted **TIME** waiting

. . . faucet wasting **WATER = 184 Gal**

. . . light(s) on wasting **ENERGY**

***EPA TRADITIONAL FLOW RATE 2.2 GPM = 739 GALLONS**

SUNDAY



*http://www.epa.gov/WaterSense/pubs/faq_bs.html

Calculation (12 minutes per day x 365 days) / 12 months = 365 MINUTES (6 hours)

4,380 MINUTES (73 HOURS) PER YEAR WASTED WAITING FOR HOT WATER

IMAGINE LEAVING A TAP RUNNING 73 HOURS

YEARLY WAIT /WASTE

3 DAYS

WAITING WITH FAUCET OPEN

73 Hrs @60 sec 9,636 Gal

*EPA FLOW RATE 2.2 GPM x 4,380 MINUTES = 9,636 GALLONS WASTED

9,636 GALLONS OF WATER WASTED PER YEAR WAITING FOR HOT WATER

SOLENOID-BASED RECIRCULATORS SAVE TIME & WATER

2,190 MINUTES or 36.5 HOURS A YEAR if waiting 30 seconds for hot water

Calculation (12 minutes per day x 365 days) = 4380 MINUTES / 60 = (73 hours)

BIG PICTURE

TOTAL TIME WASTED with WATER RUNNING WAITING FOR HOT WATER

and lights "on"

Accumulated Annual Totals

1 household = **3 DAYS** of time spent waiting, **9,636** Gallons wasted
1,000 homes = **8 YEARS** of time spent waiting, **9,636,000** Gallons wasted
10k homes = **8.2 DECADES** of time spent waiting, **96,360,000** Gallons wasted
100k homes = **6.2 CENTURIES** of time spent waiting, **963,600,000** Gallons wasted
1,000k homes = **8.2 MILLENNIUMS** of time spent waiting, **9.6 Billion** Gallons wasted

For homes waiting 30 seconds divide totals by 2

For 2 occupants per home waiting 30 seconds divide totals by 4

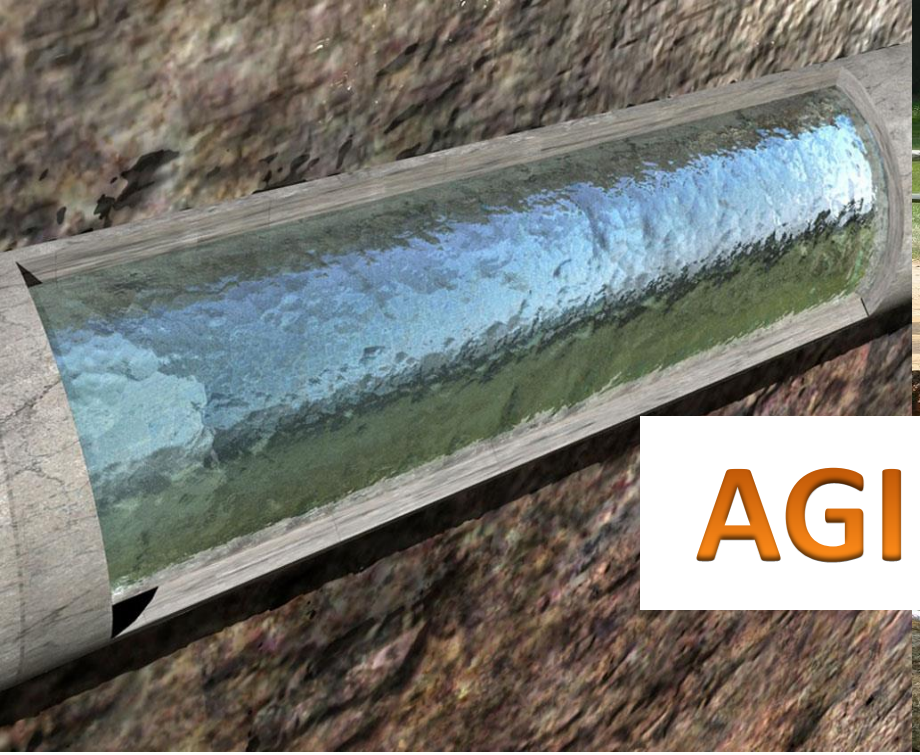
BIG PROBLEM

WASTE WATER TREATMENT PLANTS DON'T LIKE CLEAN WATER

Concerned with what would happen at waste water treatment plants if people suddenly stopped wasting clean water down the drain Temtrol deltaT made some calls. A 20 year veteran of a waste water treatment plant stated that if just 20% of the "clean" water which enters waste water treatment plants ceased, **a plants life span would be extended 7 years** because it wouldn't have to work so hard to remove the clean water each time. With clean water entering waste water treatment plants its a lot more difficult to obtain "*activated sludge*" which is the point at which the bacteria begins eating away at the waste.

What impact would 5 million "efficient" systems have on infrastructure?

It could save **48 Billion Gallons** of water from being run through the system needlessly each year.



AGING PROBLEM

AGING WATER INFRASTRUCTURE COULD COST ALL OF US MORE IN THE END

"Clean water is fundamental to our economy and our health. We depend on water infrastructure, but our drinking water and wastewater systems are aging," said Andrew Herrmann, P.E., ASCE president. "Some of our water systems are 100 years old and in desperate need of replacement. When those systems fail, they disrupt businesses and families and cost all of us more in the end. The need is clearly there."

In order to meet the needs of our growing population for clean, available water, the annual investment must increase to $91 billion. An additional $9.4 billion per year between now and 2020 would avoid $21 billion per year in costs to households and businesses.

How many homes would benefit from $1 billion in 'efficient' units? Answer: Over 5 million

Ref: http://yubanet.com/usa/New-Report-Finds-Aging-Water-Infrastructure-Burdens-U-S-Economy.php