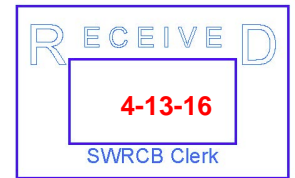


## SENEFF MANUFACTURING, INC.

April 7, 2016



State Water Resources Control Board  
1001 I Street  
Sacramento, CA 95812-0100

Re: Drought and Water Conservation:

Recently, I've read an article, in regards to the revised Drought Relief Bill introduced by California Senator Dianne Feinstein. Over the past few years, I've observed the extreme shortages of water, from the ongoing drought conditions occurring on the West Coast. Practically every week, I view an article related to the efforts being undertaken to address this problem. I've seen the limits being placed on households, and the fines charged for non-compliance. I've also read, about the various programs being implemented to replace the old, high water, consumption toilets.

I have developed a new toilet that will save trillions of gallons of water per year. I've communicated to Senator Feinstein about this new toilet, and the improvement this will have across the US. I'm sending this to California because it's the most populated state and stands to gain the most from this invention.

The new design was developed to address four major toilet issues.

1. The unsanitary dilemma, presented by nasty urine splash around the toilet bowl and the surrounding floor and wall area from the male user.
2. Wasted water when flushing.
3. Overflow damage from a clogged drain.
4. Tank flapper valve seal, slowly leaking and wasting water. Until now there was no way to monitor this problem.

I've pulled numbers from the US Government's Census Report, and put together a chart showing the potential water savings. To determine the savings, I used information from the American Water Works Association, to acquire the average flushes per day, per person. If fully implemented, the US would save 613,000,000,000 gallons of water per year in flushes, and between 4,380,000,000,000 and 15,549,000,000,000 in leaking flapper valves. Add these together and the savings are enormous.

According to the American Water Works Association, toilets account for 45% of all indoor water use in a typical residence. It's estimated that 20% of all toilets leak, with an average of 200 gallons per day. Worst case scenario, a flapper valve gets stuck in the open position. This could run upwards of over 4,000 gallons per day. Since flapper valves gradually deteriorate, water can leak over a long

period, before ever being detected. Using the EPA's Water Sense Chart below, my new flapper leak sensor, will save between 12,000,000,000 and 42,600,000,000 of wasted water per day, or in other words, between 4,380,000,000,000 and 15,549,000,000,000 / gallons saved per year. (See calculations below). With California's population being 12.1% of the total US population, that extrapolates out to a savings between 529,980,000,000 and 1,881,429,000,000 gallons per year in flapper valve leaks only.

As shown, there is more water wasted from leaking flapper valves, than all of the flushes in the US combined. I've included below, some information to show the enormous water savings. Please review this information, and contact me to discuss any questions you might have. I believe this is a major step in water conservation, and toilet design. This new design will save California and the US, a tremendous amount of water.

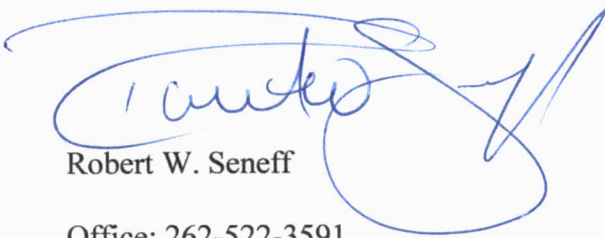
As California searches for ways to conserve water, I believe this would be a simple solution in saving California, more water than can be saved in any other way. As cities across California, set up funding to replace the old high water use toilets, keep in mind, there is currently no toilet on the market that can save as much water as this new design. I look forward to work with California, bringing the most efficient toilet in water conservation to your cities.

I hope I've clearly described the benefits, this new design offers in water conservation. There is no other toilet like this in the market. The patent has been applied for, and I am currently working to partner with US manufactures.

As I ensue, the needed companies to manufacture this new design, any positive response would greatly help, as I work my way through the corporate maze of the manufactures needed to bring this to market.

If needed, additional detailed drawings are available to better understand how it works.

Sincerely,



Robert W. Seneff

Office: 262-522-3591

Cell: 262-506-4066

# WATER WASTED FROM LEAKING TOILET FLAPPER VALVES

**Nationwide: 300,000,000 toilets in the US**

1. Example of water waste using EPA estimates of 200 gallons per day:

Toilets in the US	300,000,000
Estimated 20% leak	60,000,000
200 gallons per day average	12,000,000,000/day
<b>Gallons per year wasted</b>	<b>4,380,000,000,000/year</b>

2. Example using EPA Water Sense Chart below:

Toilets in the US	300,000,000
Estimated 20% leak	60,000,000
710 gallons per day average	42,600,000,000/day
<b>Gallons per year wasted</b>	<b>15,549,000,000,000/year</b>

**Using EPA estimated numbers, leaking flapper valves across the US, waste more water, than all the US flushes combined.**

US population 2013	316,128,839
Average 5 flushes / day	1,580,644,195 flushes / day
3 gallons per flush average	4,741,932,585 gallons flushed / day

Gallons leaking per example #1 above	12,000,000,000 gallons / day
Water being flushed per day	4,741,932,585 gallons / day
<b>7,258,067,415 more gallons leaking per day than being flushed</b>	

Gallons leaking per example #2 above	42,600,000,000 gallons / day
Water being flushed per day	4,741,932,585 gallons / day
<b>37,858,067,415 more gallons leaking per day than being flushed</b>	

## 2.3 Leak Detection and Repair

EPA  
WaterSense

### Overview

Identifying and repairing leaks and other water use anomalies within a facility's water distribution system or from particular processes or equipment can keep a facility from wasting significant quantities of water. As described in Table 2-2, water leaks can add up over time.<sup>12,13</sup>

Table 2-2. Potential Losses From Water Leaks

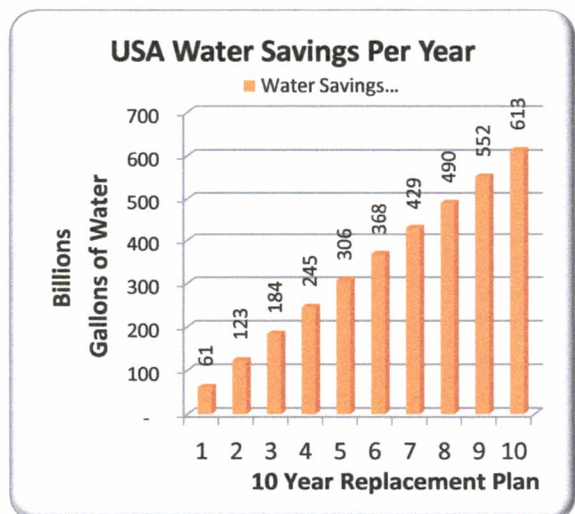
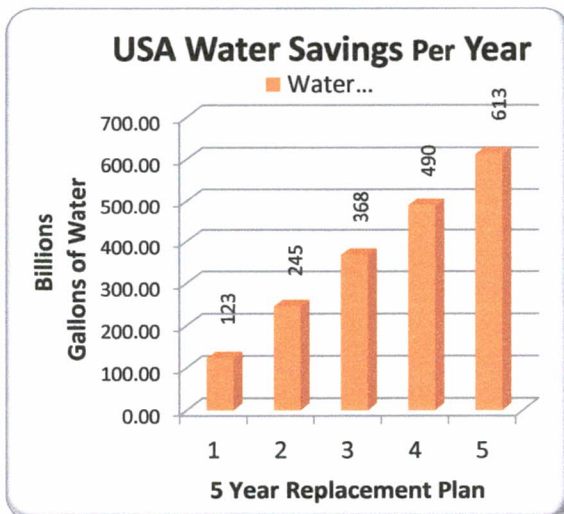
Malfunction	Leaking Flow Rate (gallons per minute)	Water Loss	Estimated Cost of Water Loss
Leaking Toilet	0.5 gpm	21,600 gallons per month	\$2,100 per year

# NEW URINAL TOILET WATER SAVINGS BENEFIT

Toilet Consumption	Average Flushes Per Day	Estimated Gallons Used Per Person Per Year
7 GPF	5*	12,775
5 GPF	5*	9,125
3.5 GPF	5*	6,388
1.6 GPF	5*	2,920
1.28 GPF	5*	2,336

\* American Water Works Association

People Quick Facts	California	USA
Population, 2013 estimate	38,332,521	316,128,839
Population, 2010 (April 1) estimates base	37,253,959	308,747,716
Population, percent change, April 1, 2010 to July 1, 2013	2.9%	2.4%
Population, 2010	37,253,956	308,745,538
Persons under 5 years, percent, 2013	6.5%	6.3%
Persons under 18 years, percent, 2013	23.9%	23.3%
Persons 65 years and over, percent, 2013	12.5%	14.1%
Female persons, percent, 2013	50.3%	50.8%
Living in same house 1 year & over, percent, 2008-2012	84.2%	84.8%
Foreign born persons, percent, 2008-2012	27.1%	12.9%
Housing units, 2013	13,790,495	132,802,859
Homeownership rate, 2008-2012	56.0%	65.5%
Housing units in multi-unit structures, percent, 2008-2012	30.9%	25.9%
Median value of owner-occupied housing units, 2008-2012	\$383,900	\$181,400
Households, 2008-2012	12,466,331	115,226,802
Persons per household, 2008-2012	2.93	2.61



SPECIFIC DESIGNS WILL BE DETERMINED BY THE TOILET MANUFACTURING COMPANIES



**BUILT IN URINAL ONLY USES 12 OUNCES OF WATER PER FLUSH**



The add on leak valve can be added to any standard toilet in homes and business.

The wireless alert system would be used in hotels and high rise apartment/condominium buildings to alert management and facility maintenance of existing overflows and leaks.