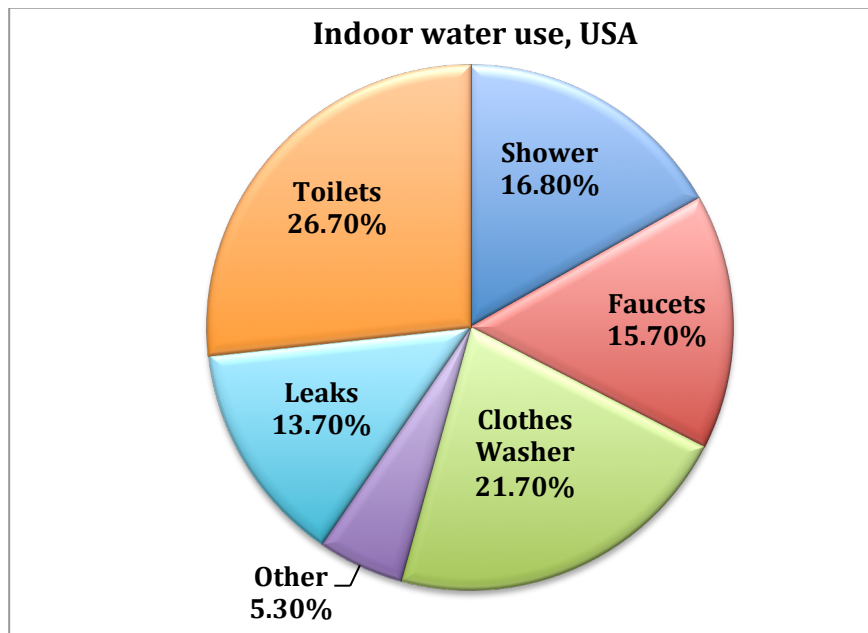


Saving water **OR** potty talk



- I'm making some changes.
- I no longer leave the faucet water running while I brush my teeth.
- I limit my time in the shower.
- I've fixed my two dripping faucets.

Now I'm going to try to reduce the water use of my toilet.

The house where I live was built in 1957. I have two bathrooms that have never been upgraded with more modern fixtures. I bet that I could save a ton of water, and maybe money, by replacing my toilets. Yesterday I saw the image that is below. Please help me figure out what I could save.



Well, I know what mpg stands for: Miles per Gallon.

And mph = miles per hour.

ASAP means as soon as possible.

And LOL can mean a couple of things ... usually its laugh out loud but it can mean lots of love.

1. But what is GPF? Take some guesses.

Present EPA guidelines require that the maximum flush amount for new toilets should be 1.6 gallons per flush. There are now two more, even better, water use toilets on the market. Most manufacturers now make 1.28 gpf models. You can also buy a pressure-assisted toilet that uses only 1 gallon per flush.

To make all of our comparisons fair, let's assume that there are 4 people who live in your house and they flush the toilet 5 times per day each.

2. Approximately how many flushes will your toilets receive in one year?

Let's also assume that water in your town costs about \$4.00 for each 1,000 gallons used.

3. Help me figure out what could be saved by filling in some of the calculations that I will need.

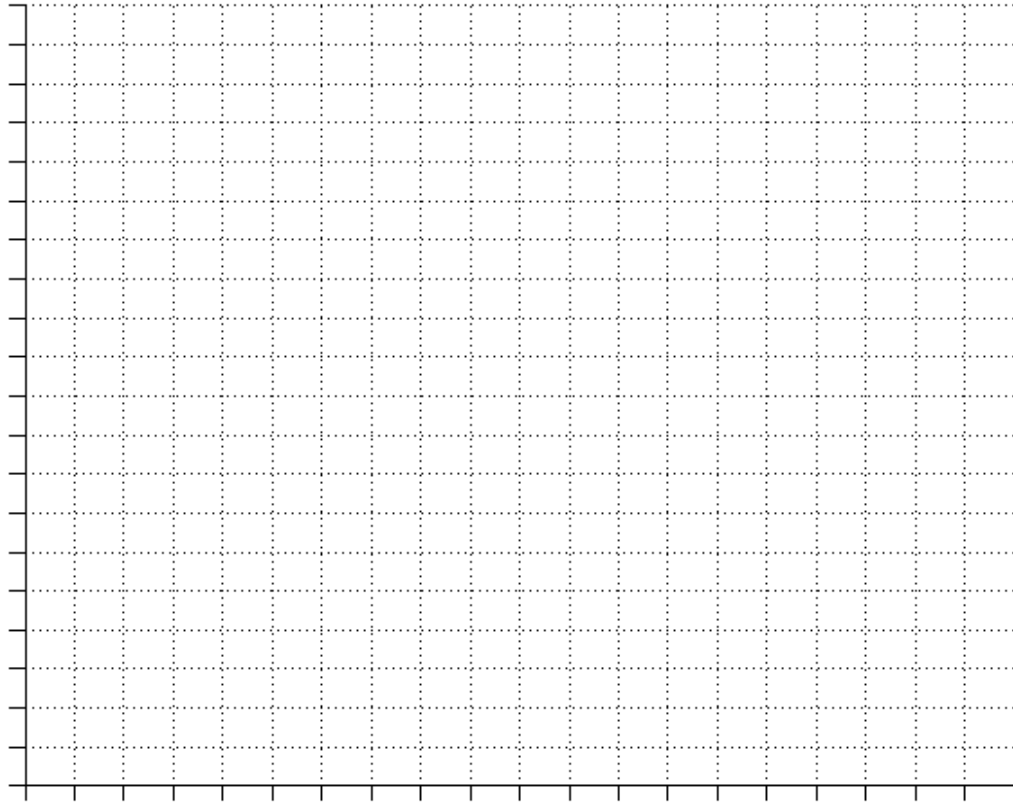
	Amount of water used in a year	Cost of water used in a year	Cost of fixture and installation	Yearly water use	Upfront, first year, fixture cost	Yearly water cost
Keep old inefficient fixtures with water need of 5 GPF.			\$0.00			
Install a new 1.28 GPF toilet			\$200 for fixture \$150 for installation			
Install a new 1.0 GPF pressure assisted toilet			\$350 for fixture \$150 for installation			

If I do replace one or both toilets they will last for years and years ... I hope.

4. Create tables that show how much I will spend over the long run with each type of toilet. Consider the upfront purchase, installation and monthly water costs for each toilet type.

Old Toilet - 5 GPF		1.28 GPF		1.0 GPF	
Years	Cost	Years	Cost	Years	Cost
n		n		n	

5. Graph the cost of each toilet over time. Consider the upfront purchase, installation and monthly water costs for each toilet type.



6. Estimate how many years of using each kind of toilet will be necessary to save as much as the fixtures cost.

7. Write equations and solve them to find out a more exact answer to question 6.

8. So what do you think that I should do? Replace both of my toilets? Replace one toilet? Don't replace either toilet? Please explain your thoughts.

9. Do some research in your home. What kind of toilets do you have? What opportunities do you have to save water and money at your own home by switching lower water use toilets? What other ways might your family reduce water use and thus save water and money?

Sources:

<http://www.motherearthnews.com/green-homes/home-design/best-options-for-high-efficiency-toilets.aspx>

http://www.homewyse.com/services/cost_to_install_toilet.html