

an indoor

Water Audit



Everyone can save water

Saving water could save you hundreds of dollars per year. Water audits – the process used to determine how much water you use – can help identify ways to save water.

Equipment used in the home has been modified over the past 20 or so years to use less water as we have become more conscious of the amount of water we consume and more aware of the need to save it.

how far have we come?

- Before 1980, taking a **shower** would mean using between 5 and 8 gallons per minute. Present day low-flow shower heads use about 2.5 gallons per minute.
- Before 1950, **toilets** required about 7 gallons per flush. This has been reduced to today's more water efficient ones, which use about 1.6 gallons per flush.
- Before 1980, between 3 to 7 gallons of water per minute could flow from **faucets** when they were turned on. Now, low-flow or low-volume faucets use about 2.5 gallons per minute.
- Before 1980, **washing clothes** required about 56 gallons per load. Today, clothes washers use about 27 gallons.
- In 1980, **dishwashers** used about 14 gallons per load. Present day ones use about 7 gallons.



how much can we save?

Before beginning the water audit, first determine whether to use the lowest figures provided for each of the activities or the highest figures listed.

If you do not have fairly new household equipment or low-flow showerheads, faucets or toilets, you should use the higher usage rates suggested rather than the lower ones. You also can consult your owner's manuals for usage rates. If you do not know the flow-rates of faucets or showerheads, turn each on to the flow typically used. Hold a gallon bucket under it and record how many gallons you obtain in one minute. If you can fill a gallon bucket in 15 seconds, you would use 4 gallons per minute.

Your water audit

1. Showers (low-flow showerheads use 2.5 gallons; otherwise use 5 gallons)

A. Amount Used: $\frac{\text{Number per Day}}{\text{Minutes Each}} \times \text{Total Time} = \text{Total Gallons}$ X (2.5 or 5) = _____

Try reducing shower time and recalculate.

B. Amount Used: $\frac{\text{Number per Day}}{\text{Minutes Each}} \times \text{Total Time} = \text{Total Gallons}$ X (2.5 or 5) = _____

C. Amount Saved: $\frac{\text{Total Gallons (A)}}{\text{Total Gallons (B)}} = \text{Gallons Saved}$



2. Baths (standard sized full tubs require about 36 gallons; half-tubs about 18)

A. Amount Used: $\frac{\text{Number of Baths per Day}}{\text{Tub Full = 36 Gallons}} = \text{Total Gallons}$

Reduce water in tub by half for each bath taken and recalculate.

B. Amount Used: $\frac{\text{Number of Baths per Day}}{\text{Tub Half Full = 18 Gallons}} = \text{Total Gallons}$

C. Amount Saved: $\frac{\text{Water Used (A)}}{\text{Water Used (B)}} = \text{Gallons Saved}$

3. Toilets (newer tanks use 1.6; otherwise use 5.5 gallons)

A. Amount Used: $\frac{\text{Flushes per Person per Day}}{\text{Number of Persons}} \times (1.6 \text{ or } 5.5) = \text{Total Gallons}$

Reduce number of flushes as much as possible and recalculate.

B. Amount Used: $\frac{\text{Flushes per Person}}{\text{Number of Persons}} \times (1.6 \text{ or } 5.5) = \text{Total Gallons}$

C. Amount Saved: $\frac{\text{Water Used (A)}}{\text{Water Used (B)}} = \text{Gallons Saved}$

4. Brushing Teeth (low-flow faucets use 2.5 gallons per minute; otherwise use 3)

A. Amount Used: $\frac{\text{Number per Day}}{\text{Minutes Each}} \times \text{Total Time} = \text{Total Gallons}$ X (2.5 or 3) = _____

Reduce water flow minutes as much as possible and recalculate.

B. Amount Used: $\frac{\text{Number per Day}}{\text{Minutes Each}} \times \text{Total Time} = \text{Total Gallons}$ X (2.5 or 3) = _____

C. Amount Saved: $\frac{\text{Total Gallons (A)}}{\text{Total Gallons (B)}} = \text{Gallons Saved}$



5. Dishwashers (newer ones use about 7 gallons per load, otherwise use 14)

A. Amount Used: _____ X (7 or 14 per load) = _____
Number of Loads per Day Total Gallons

Combine partial loads into full loads and recalculate.

B. Amount Used: _____ X (7 or 14 per load) = _____
Number of Full Loads per Day Total Gallons

C. Amount Saved: _____ minus _____ = _____
Water Used (A) Water Used (B) **Gallons Saved**

6. Clothes Washers (current ones use about 27 gallons per load; otherwise use 51)

A. Amount Used: _____ X (27 or 51 per load) = _____
Number of Loads per Day Total Gallons

Wash only full loads and recalculate.

B. Amount Used: _____ X (27 or 51 per load) = _____
Number of Full Loads per Day Total Gallons

C. Amount Saved: _____ minus _____ = _____
Water Used (A) Water Used (B) **Gallons Saved**



7. Other Activities in the Home

Now, identify other activities in your home that require water and list them below. You might consider operating garbage disposals, washing hands, washing dishes by hand or washing the car.



1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Calculate the amount of water you and your family use and can save using similar methods as in previous examples.

how much water and how much money have you saved?

A. Total amount of water saved: _____
Add together "Gallons Saved" in Section C, activities No. 1 through No. 6.

B. Calculate what you saved in additional activities (No. 7): _____

C. Add (A) and (B) for a total gallons saved per day: _____

D. Multiply total gallons saved (C) by 365 days = _____
Gallons Saved per Year

E. Calculate the cost of each gallon (Check your water bill. This could indicate a cost per gallon or a cost per 100 gallons, etc.): _____ **(\$ Saved per Year)**

If you do not have the most efficient equipment, calculate how much water you would save per year if newer versions were installed. This will give you an idea of how long it would take to recover your costs.

Remember that leaking toilets and dripping faucets also result in water loss. These leaks can be caused by deteriorating valves, seals or other broken or worn parts. Some toilet leaks are silent while others can be detected by the sound of running water. Leak dye detection tablets can be used to uncover silent leaks in toilets. Leaking faucets also can result in significant water loss.



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