

## YOUR HOME WATER SUPPLY

### WHAT DOES IT COST? (IN HOUSTON, TEXAS, AUGUST 2023)

#### (HOT WEATHER WILL INCREASE WATER CONSUMPTION...BUT HOW MUCH?)

Recently (August 2023, daily temperatures above 100 degrees) a Houston resident was alarmed about their monthly water bill being over \$2000! While the size of the home was not cited, the reported source seems to indicate a 'typical' bungalow sized home and not a huge mansion sitting on many acres of land. (A typical residential sized swimming pool takes about 20,000 gallons of water).

Assuming most of the cost was due to water consumption (since most utility water bill costs include not only water consumption, but also charges for sewer, garbage collection and drainage), for Houston, Texas such a large bill would indicate:

- Since Houston water costs about 1 cent per gallon, a \$2,000 water bill is equivalent to about 200,000 gallons of water used. That is huge even if there was a leak! 200,000 gallons could fill 10 residential sized swimming pools!!!
- This amount of water (200,000 gallons) used for a typical residential home lot, say 100 feet by 150 feet (15,000 square feet or about  $\frac{1}{4}$  of an acre), is equivalent to a water hose being fully turned on and flowing (5 gallons per minute), 24 hours per day for 30 days. The 200,000 gallons of water is equivalent to about 27,000 cubic feet of water being poured on the lot.
  - In that monthly period and assuming the entire lot is flooded in water, the height of the water poured on the lot would be almost 2 feet high!!!

Some things to check on if you are charged a huge water bill...

- Check the water meter and confirm the volume of water used; Is the meter broken...especially those that send an electronic signal to the utility company.
- Are there any leaks (a big leak will surely show some wet or very damp spots all the time)
- Is the meter broken?
- Did you have a large water consumption (filling a swimming pool)?; Over watering your grass?
- When challenging a huge bill with the water company, explain how much water is reported to be used and why you think you did not do this; Convert the bill cost into gallons of water used using the cost per gallon of water (Houston its 1 cent per gallon or \$1.00 for 100 gallons)

Water facts...

- Water pressure supplied to a home is generally between 50 and 80 psi (pounds per square inch).
  - Water pressure is needed to:
    - Deliver (push) water to a home (as well as deliver to the top floors of apartments or office buildings)
    - High enough to keep contaminants from leaking into the water pipes
    - Be available at fire hydrants for use in putting out fires
- The EPA reports the average American home uses about 320 gallons of water per day, 30% of which is used for watering lawns and gardens. In a month (30) days, 9,600 gallons of water is typically used. A 200,000 gallon water use in one month for a residential home is outrageously high... more than 20 times expected averages! And must be challenged...

- Typical water flow through a home water hose when the water valve is fully open is about 1 gallon per 12 seconds flow or about 5 gallons per minute
  - Test yours by fully opening the outdoor water valve and timing how long it takes for the water hose to fill up a 5 gallon bucket (should be about a minute)
- There are 7.48 gallons in 1 cubic foot of water
- There are 8.34 pounds per gallon of water
- There are 128 ounces in 1 gallon of water
- There are 43,560 square feet in one acre
- For Houston, Texas, the water utility bill includes costs associated with:
  - Sewer charge
  - Water consumption
  - Drainage charge
  - Garbage and recycle collection
- For Houston, Texas typical cost of drinkable (potable) water for residential consumption is about 1 cent per gallon (0.007 cents per fluid ounce) or 100 gallons of water costs about \$1.00.
  - What do you pay for drinking water purchased from a store (filtered, distilled, exotic source, sparkling, flavoured, special mineral content, special pH)?
  - Purchased drinking water can vary between \$1.00 to over \$30 per gallon (or 1 cent to over 24 cents per fluid ounce – or 100 to 3000 times more expensive than water supplied by the water company. (And when it rains...its free...).
  - A 7 pound bag of ice (equivalent to about a gallon of water) costs generally over \$2.00 or equivalent to paying \$2.00 or 200 cents per gallon of water (ice) or 200 times more expensive than the cost of water purchased from the utility water company.
  - So now you know why there are so many companies selling bottled water and ice...its liquid gold...

**Water Prices**  
cents per gallon  
(Houston, Texas August 2023)

	cents per gallon	dollar per gallon
Houston Water Utility (From Residential Faucet)	1	\$ 0.01
Bottled Water...low price	100	\$ 1.00
Bottled water...high price	3000	\$ 30.00
Ice	200	\$ 2.00

