



# WATER DEMAND CALCULATOR™

This valuable tool can help address issues regarding drought prevention and mitigation, drinking water quality and decarbonization, while helping improve housing affordability.



Plumbing systems in new homes are routinely oversized because the most commonly used pipe sizing method is almost 90 years old - developed well before today's innovative low-flow fixtures and appliances came on the scene.

IAPMO developed the Water Demand Calculator™ to accurately predict peak water demand in residential buildings so that water pipes are properly sized. This tool significantly reduces water aging in buildings, allows consumers to receive hot water faster, generates significant construction cost savings, reduces the carbon footprint of the structure, and subsequently saves consumers on both their water and water heating related energy utility bills for the entire life of the plumbing system.



## COST OF USING OUTDATED PIPE SIZING

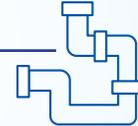
It costs home builders and homeowners



up to **\$4,500** for new **single-family** home meter connections



up to **\$250** per year in water and sewer charges



up to **\$2,500** more in piping costs per home



## SAVINGS FROM USING PROPER PIPE SIZING

Using the **Water Demand Calculator™** will save builders and homeowners thousands of dollars.



### Single-family home

The total average savings for a typical single-family home can exceed \$2,000 and can be as high as \$5,000, depending on location.

### 45-Unit multi-family building

The potential savings are even higher and can exceed \$100,000 on a 45-unit multi-family building, especially where utility meter connection fees are high due to water scarcity.

### 200-Unit high rise apartment

Could see about \$250,000 in water plumbing system construction savings, while the owner could save over \$10,000 per year in water and sewer charges.

# WE HAVE A TANGIBLE SOLUTION TO HELP CONSERVE WATER IN THE BUILT ENVIRONMENT

New residential and multi-family buildings using old pipe sizing methods will result in more water use, extra energy, higher costs, and added risks to public health. The Water Demand Calculator™ fixes all these problems!

Outdated pipe sizing can result in poorer water quality and increase the risk of water-related diseases. To fully utilize the health and environmental benefits from low-flow fixtures, plumbing systems should be sized appropriately.

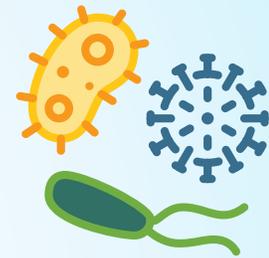
## PROBLEMS WITH OUTDATED PIPE SIZING



More expensive for homebuilders and consumers



Oversized pipes increase the wait time for hot water to arrive at your faucet or shower



Stagnant water increases the risk of bacterial growth which can lead to diseases like Legionnaire's Disease (Legionella Pneumophila)

## BENEFITS OF PROPER PIPE SIZING



Improved water conservation and energy use



Improved water quality and public health



Improved housing affordability with reduced cost of building materials and meter fees



[uniformcodes.org/water-demand-calculator](https://uniformcodes.org/water-demand-calculator)