



PLUMBING CODES AND WATER-CONSERVING FIXTURES

Buildings no longer need to be designed
for 1930's fixtures water demand





High efficiency water conserving plumbing fixtures are a reality, modern building designs should reflect this

In creating the Water Demand Calculator (WDC) IAPMO demonstrates clearly that our focus is on the future. The tools contained within the *UPC* provide numerous options for the designer, builder and owner to provide current flow and pressure with modern products. The ability to wash hands or shower requires the residential or commercial building to have piping adequate to the long-term system performance without being excessively overbuilt.

The most effective plumbing code uses scientific data and practical application to determine the options that consistently deliver potable water to the plumbing fixtures.

KEY CONCEPTS

- Free to download and use <https://www.iapmo.org/media/24330/waterdemandcalculator.xlsm>
- Use of the WDC is estimated to provide between a 15 to 65 percent reduction in water demand estimates, depending on the size of the residential structure, when compared to current pipe sizing methods.
- Assist plumbing system designers and to encourage proper use and promote uniform application of the new approaches for estimating peak indoor demands.
- Once the WDC determines peak demand, currently applied and well-established procedures that appear in Appendix A of the *UPC* and other model plumbing codes are followed to determine pipe sizing.
- Easy-to-use, statistically based method for estimating peak water supply demand for single- and multifamily residential dwellings, resulting in more accurately sized systems consistent with the lower flow rates and consumption values from water-efficient plumbing fixtures and appliances.
- The IAPMO methodology for code development engages plumbers, builders, inspectors, building officials, manufacturers, and engineers, backed by research and science, to protect public health and safety and conserve natural resources at the lowest possible costs to the public.



Friday, February 8, 2019 11:35 AM Select Units

PROJECT NAME: XXX-XXX GPM LPM LPS

FIXTURE GROUPS	(A) FIXTURE	(B) ENTER NUMBER OF FIXTURES	(C) PROBABILITY OF USE (%)	(D) ENTER FIXTURE FLOW RATE (GPM)	(E) MAXIMUM RECOMMENDED FIXTURE FLOW RATE (GPM)
Bathroom Fixtures	1 Bidet (No Shower)	0	1.0	5.5	5.5
	2 Bidet	0	1.0	2.0	2.0
	3 Combination Bath/Shower	0	5.5	5.5	5.5
	4 Faucet, Lavatory	0	2.0	1.5	1.5
	5 Shower, per head (No Bathmat)	0	4.5	2.0	3.0
Kitchen Fixtures	6 Water, Canteen, 1.28 GPM Gravity Tank	0	3.0	3.0	3.0
	7 Dishwasher	0	0.5	1.3	1.3
	8 Faucet, Kitchen Sink	0	2.0	2.2	2.2
Laundry Room Fixtures	9 Clothes Washer	0	5.5	3.5	3.5
	10 Faucet, Laundry	0	2.0	2.0	2.0
Bar/Prep Fixtures	11 Faucet, Bar Sink	0	2.0	1.5	1.5
	12 Fixture 1	0	0.0	0.0	6.0
	13 Fixture 2	0	0.0	0.0	6.0
Other Fixtures	14 Fixture 3	0	0.0	0.0	6.0
	15 Fixture 4	0	0.0	0.0	6.0

Total Number of Fixtures: 0

99th PERCENTILE DEMAND FLOW = GPM RESET RUN WATER DEMAND

CLICK BUTTON

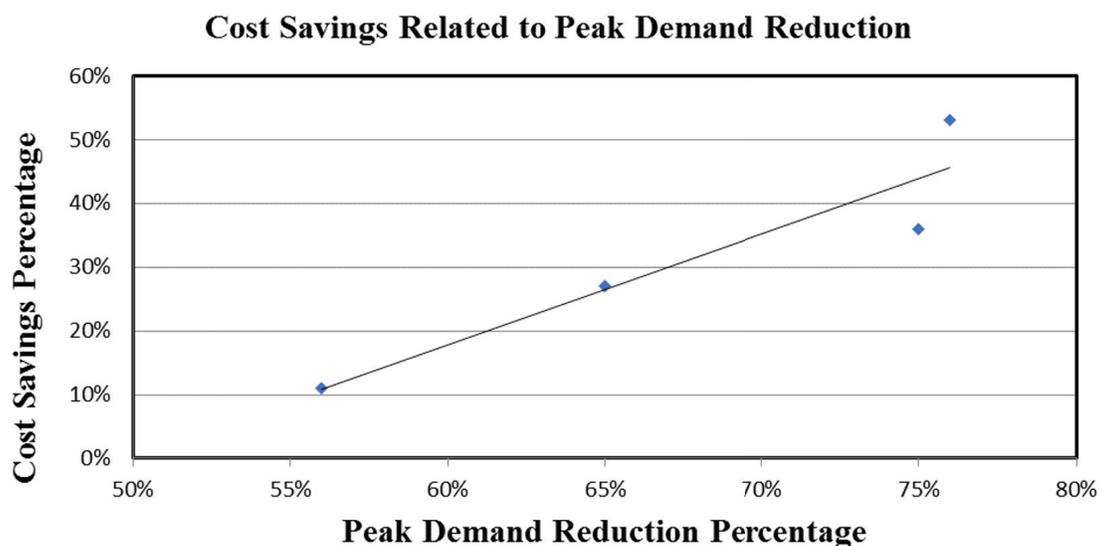
COST SAVING RELATED TO PEAK DEMAND REDUCTION

When comparing the UPC with the International Plumbing Code, it's obvious that IAPMO invests in developing tools for the modern plumbing realities. The need to conserve water is required globally and with current plumbing technologies the built environment does not need to be locked into old system design.

At IAPMO, we measure success in lives and water saved. We are advised by science and continuously update our codes as new scientific advances becomes available. Our pledge of professionalism is written in the codes that serve generations across the life of a structure.

To learn more about the Uniform Plumbing Code and other IAPMO codes for your community, please visit bit.ly/IAPMO_Technical_Resources.

The chart suggests that at least a 50% reduction in peak flow is needed to see a significant cost savings. A building with as few as 13 fixtures will benefit a cost savings when using the water demand calculator.



SAFE PLUMBING BELONGS TO EVERYONE

IAPMO HOTLINE FOR MORE INFORMATION: 800-201-0335

