



ORDER NOW!

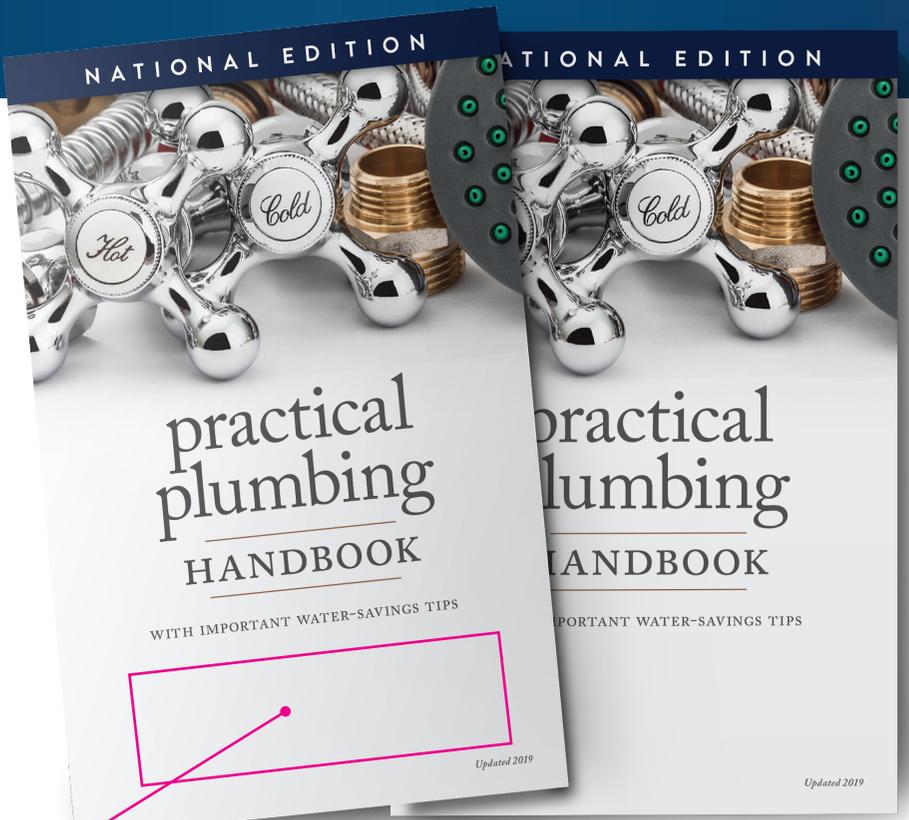
This best-selling publication is now available in a national edition.

A great customer handout! Only available in hard copy form.

Order your copies today by emailing Liam McCarthy at the Alliance for Water Efficiency: liam@a4we.org

- 1-100 copies \$2.70 apiece
- 101-500 copies \$2.50 apiece
- 501 and above \$2.25 apiece

Open space on cover for customized utility sticker - Plenty of space for up to a 4"x1.25" standard label



Box does not print - shown to indicate available customizing space

Example pages

SECTION 1

The ABC's of Plumbing

Funny, It Didn't Look Broken

WATER METERS - HOW TO DETERMINE IF YOU HAVE A LEAK

The Two Common Meter Types

Your water meter keeps track of how much water your household uses. The meter is usually located on your property near the street inside a concrete box marked "WATER METER." It may be a bit dark inside the meter box, so bring a flashlight along! In some homes the water meter is located in the basement. Note that some water providers have been replacing older analog meters with digital models and most newly-constructed homes are equipped with digital meters.

Meters measure water in cubic feet, gallons, cubic meters, or other units. One cubic foot is equal to 7.48 gallons. For example, if your meter says you used 41 cubic feet in a day, you would multiply 41 by 7.48 to find that 306 gallons were used. In the U.S., units may be measured as 100 cubic feet or 1,000 gallons. In Canada, the measure is in cubic meters. Digital meters will often alternate between the unit read and the flow rate in gallons or liters per minute.

You can check for leaks on individually-metered residences by using your meter. Simply turn off all

water uses on the property. If the flow indicator (triangle or star) is turning, you've got a leak. If not, note the location of the pointer and the last two numbers on the far right windows. Do not run water for 30 minutes. If the pointer has moved and for the numbers have rolled higher, there is a leak. Turn off your home's main shut-off valve. If the pointer is still moving, then the leak is somewhere in the supply line from the meter to the shut-off valve. If the pointer stops rotating, then the leak is inside the house.

It is important to note that very small leaks might not be detectable at the meter, depending upon the type and age of meter. Even if there is no movement, you still need to check individual fixtures, fittings and appliances for possible leaks.

Digital meters will indicate leaks in various ways depending upon what type of meter model you have. The easiest way to detect a leak is by observing the flow indicator valve after all water to the property has been shut off. If the flow indicator displays positive flow, you have a leak. Some digital meters might also indicate leaks by displaying a leak indicator icon, the term "reverse" ("forward" indicates normal operation), or a left-pointing arrow. Read on to determine the possible cause.

Single Family Water Use

1%	Toilets
4%	Dishwashing
8%	Other (incl. Leaks)
10%	Faucets
10%	Showers
8%	Laundry
12%	Tubets
50%	Outdoor Irrigation

The ABC's of Plumbing 5

Consider these 15 STEPS before you purchase a toilet

Developed by Matt Rating, www.matt-rating.com

Before you ever leave the house to shop for a toilet, get out your tape measure and gather the information you need!

Rough-in
Know the rough-in dimension of your toilet installation. The distance from the flange bolts that anchor your bowl to the floor, usually covered by small plastic caps to the wall behind your toilet is known as the rough-in. In most North American homes that dimension is either 10, 12, or 14 inches, the most common in today's homes being 12 inches.

Bowl Height
The distance from the floor to the top rim of the bowl (not including the toilet seat). In North America, that distance has traditionally been about 14 inches to 15 inches. However, the trend for many families today is to install bowls with a height of 16 to 18 inches. Manufacturers use terms such as "Comfort Height," "Chair Height," "Easy Height," "Right Height," "Highboy," "Smart Height," "ADA Height," or some other similar description. The added height makes getting on and off the bowl easier, especially for the aged or infirm, but many younger persons have also discovered the benefits. Decide whether or not you want a taller bowl.

Appearance. Decide on one-

Flush Handle Location
Manufacturers place flush handles at various locations on the tank: right side, right front, left side, left front, and at the top-center of the tank lid. You should determine if the handle's location is important.

Water Shut-off Valve and Hose
Check the condition of your existing shut-off valve (called the "angle stop") that supplies water to the toilet and the supply hose connecting that valve with your toilet tank. If you need to replace the supply hose, consider one encased in stainless steel mesh for long-term durability. If the shut-off valve needs replacing, it may be necessary to call your plumber.

Replaces Of Preventative Maintenance 31

SECTION 2

Repairs & Preventative Maintenance

INDOORS

Leaks

Leaks Waste Water. Cost Money

Leaks: through an opening, pressure 60 lbs.

Leak size	1/4"	3/16"	1/8"	1/16"	1/32"
Gallons per month	400,000	225,000	100,000	25,000	6,300

Leaks: drips

Leak size	1/4"	3/16"	1/8"	1/16"	1/32"
Gallons per month	400,000	225,000	100,000	25,000	6,300

Leaks: smooth streams

Replaces Of Preventative Maintenance 13

SECTION 3

Resources

GUIDES/BOOKS

Compliant Techniques for DIY
Creative Homeowner, January 2017
https://www.amazon.com/Ultimate-Step-Step-Data/dp/1581078804/ref=sr_1_1?pf_rd_r=1

Black and Decker: The Complete Guide to Plumbing, Updated 7th Edition
C/D Spang Press, January 2019
https://www.amazon.com/Black-Decker-Complete-Guide-Plumbing/dp/1591866367/ref=sr_1_1

Sunset You Can Build: Plumbing
Sunset Publishing Corporation, January 2010
https://www.amazon.com/Sunset-You-Can-Build-Plumbing/dp/0376014687/ref=sr_1_1

Sunset Western GI
Sunset Publishing
https://www.amazon.com/dp/0376031010/ref=sr_1_1

Water conservation is not something that should be considered only during a drought. Conservation and water efficiency should be a way of life.

TOP TEN WAYS TO SAVE WATER AT HOME

Check your home's water meter to see if you have a leak.	page 4
Fix leaky faucets.	page 11
Install a "high efficiency" rather than "low flow" dishwasher if you have a pre-1994 model.	page 22
Turn up your toilet!	page 23
Replace pre-1994 water guzzling toilets with new high efficiency models.	page 29
Fix leaky water supply tubing.	page 43
Buy a high efficiency washing machine.	page 46
Run your washing machine and dishwasher only when they are full.	page 47
Check your sprinkler system frequently and adjust sprinklers so they water only your lawn, and not the sidewalk or street.	page 53
Adjust your irrigation system controller (sprinkler timer) to apply just the right amount of water to your landscape or install a "smart" irrigation controller. Remember to set your controller to water less in the wetter months (or turn off the irrigation altogether).	page 53
Water during early morning hours when temperatures are cooler to minimize evaporation.	page 55

Replaces Of Preventative Maintenance 19

Compression or Washer Type Faucet

Kitchen Ball-Valve Unilever Faucet, Delta and Peerless are common brands

Shower Ball-Valve Unilever Faucet, Same parts as kitchen ball valve faucet

Replaces Of Preventative Maintenance 19

DAILY WATER USE: CONSERVING VS. NON-CONSERVING

The table compares reasonable estimates of efficient vs. non-efficient water use for residential applications.

Category	Water used per activity (gallons)	Days per week	Days per month	Efficient use (gallons)	Non-efficient use (gallons)
High efficiency toilet	1.2	1	7	8.4	16.8
High efficiency shower	2.5	1	7	17.5	35.0
High efficiency dishwasher	3.0	1	7	21.0	42.0
High efficiency washing machine	3.5	1	7	24.5	49.0
High efficiency water heater	4.0	1	7	28.0	56.0
High efficiency shower	4.5	1	7	31.5	63.0
High efficiency toilet	5.0	1	7	35.0	70.0
High efficiency shower	5.5	1	7	38.5	77.0
High efficiency water heater	6.0	1	7	42.0	84.0
High efficiency shower	6.5	1	7	45.5	91.0
High efficiency toilet	7.0	1	7	49.0	98.0
High efficiency shower	7.5	1	7	52.5	105.0
High efficiency water heater	8.0	1	7	56.0	112.0
High efficiency shower	8.5	1	7	59.5	119.0
High efficiency toilet	9.0	1	7	63.0	126.0
High efficiency shower	9.5	1	7	66.5	133.0
High efficiency water heater	10.0	1	7	70.0	140.0
High efficiency shower	10.5	1	7	73.5	147.0
High efficiency toilet	11.0	1	7	77.0	154.0
High efficiency shower	11.5	1	7	80.5	161.0
High efficiency water heater	12.0	1	7	84.0	168.0
High efficiency shower	12.5	1	7	87.5	175.0
High efficiency toilet	13.0	1	7	91.0	182.0
High efficiency shower	13.5	1	7	94.5	189.0
High efficiency water heater	14.0	1	7	98.0	196.0
High efficiency shower	14.5	1	7	101.5	203.0
High efficiency toilet	15.0	1	7	105.0	210.0
High efficiency shower	15.5	1	7	108.5	217.0
High efficiency water heater	16.0	1	7	112.0	224.0
High efficiency shower	16.5	1	7	115.5	231.0
High efficiency toilet	17.0	1	7	119.0	238.0
High efficiency shower	17.5	1	7	122.5	245.0
High efficiency water heater	18.0	1	7	126.0	252.0
High efficiency shower	18.5	1	7	129.5	259.0
High efficiency toilet	19.0	1	7	133.0	266.0
High efficiency shower	19.5	1	7	136.5	273.0
High efficiency water heater	20.0	1	7	140.0	280.0
High efficiency shower	20.5	1	7	143.5	287.0
High efficiency toilet	21.0	1	7	147.0	294.0
High efficiency shower	21.5	1	7	150.5	301.0
High efficiency water heater	22.0	1	7	154.0	308.0
High efficiency shower	22.5	1	7	157.5	315.0
High efficiency toilet	23.0	1	7	161.0	322.0
High efficiency shower	23.5	1	7	164.5	329.0
High efficiency water heater	24.0	1	7	168.0	336.0
High efficiency shower	24.5	1	7	171.5	343.0
High efficiency toilet	25.0	1	7	175.0	350.0
High efficiency shower	25.5	1	7	178.5	357.0
High efficiency water heater	26.0	1	7	182.0	364.0
High efficiency shower	26.5	1	7	185.5	371.0
High efficiency toilet	27.0	1	7	189.0	378.0
High efficiency shower	27.5	1	7	192.5	385.0
High efficiency water heater	28.0	1	7	196.0	392.0
High efficiency shower	28.5	1	7	199.5	399.0
High efficiency toilet	29.0	1	7	203.0	406.0
High efficiency shower	29.5	1	7	206.5	413.0
High efficiency water heater	30.0	1	7	210.0	420.0
High efficiency shower	30.5	1	7	213.5	427.0
High efficiency toilet	31.0	1	7	217.0	434.0
High efficiency shower	31.5	1	7	220.5	441.0
High efficiency water heater	32.0	1	7	224.0	448.0
High efficiency shower	32.5	1	7	227.5	455.0
High efficiency toilet	33.0	1	7	231.0	462.0
High efficiency shower	33.5	1	7	234.5	469.0
High efficiency water heater	34.0	1	7	238.0	476.0
High efficiency shower	34.5	1	7	241.5	483.0
High efficiency toilet	35.0	1	7	245.0	490.0
High efficiency shower	35.5	1	7	248.5	497.0
High efficiency water heater	36.0	1	7	252.0	504.0
High efficiency shower	36.5	1	7	255.5	511.0
High efficiency toilet	37.0	1	7	259.0	518.0
High efficiency shower	37.5	1	7	262.5	525.0
High efficiency water heater	38.0	1	7	266.0	532.0
High efficiency shower	38.5	1	7	269.5	539.0
High efficiency toilet	39.0	1	7	273.0	546.0
High efficiency shower	39.5	1	7	276.5	553.0
High efficiency water heater	40.0	1	7	280.0	560.0
High efficiency shower	40.5	1	7	283.5	567.0
High efficiency toilet	41.0	1	7	287.0	574.0
High efficiency shower	41.5	1	7	290.5	581.0
High efficiency water heater	42.0	1	7	294.0	588.0
High efficiency shower	42.5	1	7	297.5	595.0
High efficiency toilet	43.0	1	7	301.0	602.0
High efficiency shower	43.5	1	7	304.5	609.0
High efficiency water heater	44.0	1	7	308.0	616.0
High efficiency shower	44.5	1	7	311.5	623.0
High efficiency toilet	45.0	1	7	315.0	630.0
High efficiency shower	45.5	1	7	318.5	637.0
High efficiency water heater	46.0	1	7	322.0	644.0
High efficiency shower	46.5	1	7	325.5	651.0
High efficiency toilet	47.0	1	7	329.0	658.0
High efficiency shower	47.5	1	7	332.5	665.0
High efficiency water heater	48.0	1	7	336.0	672.0
High efficiency shower	48.5	1	7	339.5	679.0
High efficiency toilet	49.0	1	7	343.0	686.0
High efficiency shower	49.5	1	7	346.5	693.0
High efficiency water heater	50.0	1	7	350.0	700.0
High efficiency shower	50.5	1	7	353.5	707.0
High efficiency toilet	51.0	1	7	357.0	714.0
High efficiency shower	51.5	1	7	360.5	721.0
High efficiency water heater	52.0	1	7	364.0	728.0
High efficiency shower	52.5	1	7	367.5	735.0
High efficiency toilet	53.0	1	7	371.0	742.0
High efficiency shower	53.5	1	7	374.5	749.0
High efficiency water heater	54.0	1	7	378.0	756.0
High efficiency shower	54.5	1	7	381.5	763.0
High efficiency toilet	55.0	1	7	385.0	770.0
High efficiency shower	55.5	1	7	388.5	777.0
High efficiency water heater	56.0	1	7	392.0	784.0
High efficiency shower	56.5	1	7	395.5	791.0
High efficiency toilet	57.0	1	7	399.0	798.0
High efficiency shower	57.5	1	7	402.5	805.0
High efficiency water heater	58.0	1	7	406.0	812.0
High efficiency shower	58.5	1	7	409.5	819.0
High efficiency toilet	59.0	1	7	413.0	826.0
High efficiency shower	59.5	1	7	416.5	833.0
High efficiency water heater	60.0	1	7	420.0	840.0
High efficiency shower	60.5	1	7	423.5	847.0
High efficiency toilet	61.0	1	7	427.0	854.0
High efficiency shower	61.5	1	7	430.5	861.0
High efficiency water heater	62.0	1	7	434.0	868.0
High efficiency shower	62.5	1	7	437.5	875.0
High efficiency toilet	63.0	1	7	441.0	882.0
High efficiency shower	63.5	1	7	444.5	889.0
High efficiency water heater	64.0	1	7	448.0	896.0
High efficiency shower	64.5	1	7	451.5	903.0
High efficiency toilet	65.0	1	7	455.0	910.0
High efficiency shower	65.5	1	7	458.5	917.0
High efficiency water heater	66.0	1	7	462.0	924.0
High efficiency shower	66.5	1	7	465.5	931.0
High efficiency toilet	67.0	1	7	469.0	938.0
High efficiency shower	67.5	1	7	472.5	945.0
High efficiency water heater	68.0	1	7	476.0	952.0
High efficiency shower	68.5	1	7	479.5	959.0
High efficiency toilet	69.0	1	7	483.0	966.0
High efficiency shower	69.5	1	7	486.5	973.0
High efficiency water heater	70.0	1	7	490.0	980.0
High efficiency shower	70.5	1	7	493.5	987.0
High efficiency toilet	71.0	1	7	497.0	994.0
High efficiency shower	71.5	1	7	500.5	1001.0
High efficiency water heater	72.0	1	7	504.0	1008.0
High efficiency shower	72.5	1	7	507.5	1015.0
High efficiency toilet	73.0	1	7	511.0	1022.0
High efficiency shower	73.5	1	7	514.5	1029.0
High efficiency water heater	74.0	1	7	518.0	1036.0
High efficiency shower	74.5	1	7	521.5	1043.0
High efficiency toilet	75.0	1	7	525.0	1050.0
High efficiency shower	75.5	1	7	528.5	1057.0
High efficiency water heater	76.0	1	7	532.0	1064.0
High efficiency shower	76.5	1	7	535.5	1071.0
High efficiency toilet	77.0	1	7	539.0	1078.0
High efficiency shower	77.5	1	7	542.5	1085.0
High efficiency water heater	78.0	1	7	546.0	1092.0
High efficiency shower	78.5	1	7	549.5	1099.0
High efficiency toilet	79.0	1	7	553.0	1106.0
High efficiency shower	79.5	1	7	556.5	1113.0
High efficiency water heater	80.0	1	7	560.0	1120.0
High efficiency shower	80.5	1	7	563.5	1127.0
High efficiency toilet	81.0	1	7	567.0	1134.0
High efficiency shower					