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The Pipeline

Volume I

Everything your house wants you to know about its plumbing.

From the Desk of ...

By Anthony Gemma

Nobody calls just to chat anymore. Most of your calls to us are related to problems. Usually it's because you've noticed water where it shouldn't be. Sometimes you call to tell us there's no water where it should be. Either way you have a problem – sometimes you have an emergency. And, although we're glad to hear from you any time, how the kids are doing and where you vacationed, for service calls, it helps us to know as much as possible about your problem before we leave the shop.

Anthony Gemma
Wizard of Plumbing

If the toilet is leaking, tell us as much as you know about where it's leaking and when it started. "There's a leak in my bathroom," doesn't help us advise you what to do until we get there. Don't be shy if you've tried to fix the problem before calling us. We're used to that. Go ahead and tell us if you have done anything to try to solve the problem yourself. Giving us as much information as you can will help us make sure we have the right tools and parts on the truck and will probably help speed the repair and lower your plumbing bill.

So give us a call. We love hearing from you. ■

A Short Lesson in the Law of Gravity Or, How the 1.6 gal. Toilet Works

A lot of you have asked if the newer, 1.6 gal. toilets work as well as the old 5 gal. models. The question usually comes up during bathroom remodeling jobs or new construction. The answer is yes – if they're used for what they were intended. Gone are the days when you could flush just about anything. That's right, no more cigars, diapers, feminine hygiene products or bath toys.

The new 1.6 gal. and the old 5 gal. toilets actually operate the same way. They both employ gravity to work. A tank holds the water above the bowl and a lever opens a flush valve that allows water to rush into the bowl creating a vacuum that draws the waste out with it.

Not all 1.6 gal. toilets work the same way, however. There are three different systems. Some use a tank dam that fits around the flapper and permits only 1.6 gal. to flow into the bowl. Other models have an adjustable ballcock that cuts off the water supply after 1.6 gal. has been dispensed. The third type has a plastic bucket device inside the tank that restricts water flow to the top 50 to 75 percent of the tank reservoir, or, 1.6 gal. Most toilets have smaller tanks and a smaller diameter flushway than pre 1994 toilets.

The most common complaints we hear about the low volume toilets are sluggish or incomplete flushing, water spots or staining in the bowl and the need to double and sometimes triple flush. The bowl and trap are designed to receive a specific amount of water with each flush. Many plumbers don't know that when they receive a toilet from the factory it may need to be properly adjusted after installation. If your low flush toilets are showing any of the symptoms mentioned above, give us a call for a tune-up. Proper use of the 1.6 gal. toilet can save the average household from $50 to $100 per year in water and wastewater bills.

The 1.6 gal. toilet is the law. It was mandated by the National Energy Policy Act of 1992 and took effect for residential toilets in 1994 and commercial units in 1997. ■

Inside This Issue:

Don't Sweat the Small Stuff

Now that hot weather is on its way, it's time to talk about sweating. No, not what happens to you, personally on those hot summer days, but rather, sweating water pipes.

Normally water fixtures will warm up quickly after use and the room temperature prevents sweating. When sweating continues after use, the culprit is usually an improperly adjusted tank valve on the water closet or a leak. All it means is cold water is continuing to run through the pipe, and that can be easily fixed.

Seasonal pipe sweating is caused when condensation in the air causes beads of moisture to form on cold water pipes and fixtures. It's normal and can be remedied by wrapping pipes with insulation to prevent condensation. ■

The Great Toilet Paper Shortage

If you've never heard of the great toilet paper shortage, it's probably because it never really happened – well, maybe it kind of happened in a strange sort of way.

It was the 1970s. Shortages seemed to be everywhere – especially oil, natural gas and gasoline. President Jimmy Carter appealed to all Americans to turn down their thermostats. States invoked gasoline rationing plans.

During his Dec. 19, 1973 monologue, *NBC Tonight Show* host Johnny Carson said, "You know what's disappearing from supermarket shelves? Toilet paper. There's an acute shortage of toilet paper in the United States." To back this up, he quoted Wisconsin Senator Harold Froehlich who, earlier in the day, had claimed that the federal government was falling behind in getting bids to supply toilet paper and that, "the United States may face a serious shortage of toilet paper within a few months."

Nothing could have been further from the truth, but the following morning, many of the 20 million viewers headed out to stores to stock up on TP. By noon, many supermarkets had run out.

Carson spent the next several nights apologizing for the joke and assuring his audience that there was no shortage, but all consumers could see were those empty shelves, so the rush to stock up continued.

The panic was over three weeks later when people were either convinced the story was a hoax (or had purchased a lifetime supply). ■

Average Hot Water Consumption

Activity	Gal. Per Use
Shower	10 gal. or less
Bath	15–20 gal.
Shave	1–2 gal.
Hand/Face Wash	1–4 gal.
Dishwashing (hand)	2–4 gal.
Food Preparation	3–5 gal.
Clothes Washing	10–32 gal.

Dog Days in Death Valley

Death Valley tops the list for the highest recorded temperature in the United States – 134 degrees. It happened in 1913. Another dubious Death Valley record is 134 straight days of temperatures above 100 degrees in 1974.

In spite of the brutal environment, people really do live in Death Valley and they've discovered an inexpensive method of having hot and cold water during the summer months.

They turn off their hot water heaters and run cold water through the hot water pipes. The insulation keeps the cold water cool.

For hot water, they simply turn on the cold water faucet. The un-insulated pipes keep water warm during the day.

Pretty neat, huh? ■

A Drip Here, a Drop There ... It All Adds Up

By Chris Stewart

Chris Stewart
Service Technician

Wash a few dishes, start the day with a long bath or shower, water the lawn, wash the car – before you know it you've used a lot of water. It's estimated that the average family of four uses approximately 90,000 gallons of water a year. Did you know that you can save thousands of gallons by making some modest changes in the way you use water?

The first place to conserve is your household toilets – the biggest water users. Flushing accounts for approximately 38 percent of your daily water use. You can save as much as 25 percent by replacing an old model toilet with a new, low consumption unit. There are three types to consider, gravity tank, the Flushometer and pressurized tank toilets. All three are capable of saving water, but different water pressures are needed for them to operate effectively. If you are considering a pressurized tank or a Flushometer, have your plumber survey water pressures throughout your house first to see if they will work in your home.

Perform a water use audit to see if you can conserve more. Here are some common sense tips to keep in mind.

In the bathroom

- Turn off the tap while brushing your teeth – saves 4 to10 gal. a day.
- Don't use your toilet as a wastebasket – saves 1.6 to 7 gal. per flush.
- Take short showers. Five minutes will get you clean – saves 3 to 7 gal. per shower.
- Close the tub drain before turning on the water – saves 3 gal. per bath.
- Fill the tub only half way – saves 5 gal. or more and conserves energy.
- Dripping showerheads can waste 75 gal. per week or more.
- Trickling toilets can waste 50 gal. per day or more.

In the kitchen and laundry

- Don't let the water run when washing and rinsing dishes. Fill the sink and use this water– saves 8 to15 gal. per day and conserves energy.
- Run only full loads in the dishwasher – saves up to 15 gal. per load.
- Wash fruit and vegetables in the sink instead of running water and use a brush to remove the dirt – saves 2 to 4 gal. per time.
- Run the garbage disposal only when necessary – saves 2 to 7 gal. per minute.
- Run only full loads of laundry and pay close attention to the water level setting. Washing machines typically use 22 to 25 gallons per load – washing full loads only could save the equivalent of 1 to 2 loads per week.
- Leaky faucets are pretty obvious, but don't forget to check under sinks and behind the washing machine. You could be silently losing water and ruining floors and ceilings.

Other water-saving upgrades to consider include, high efficiency showerheads, faucet aerators and toilet tank drums but you don't need to spend a lot of money to save a lot of water. ■

Are Our Oceans Going to Pot?

The 1992 National Energy Policy Act mandated the 1.6 gal. toilet and created a pot full of old, inefficient commodes (please pardon the pun). Rather than see nearly 100,000 old commodes end up in the landfill, Sam Bren, Honolulu City, Hawaii has found an environmentally responsible way to recycle them. Bren has joined with a local environmental group to use parts of obsolete toilets as artificial reefs off the coast of Hawaii. ■

How to Stay in Hot Water Without Spending a Lot of Cool Cash

Most of the time you don't think about it – you turn on the hot water tap to shave, take a shower or rinse the evening dishes and it's, well … hot. But did you know that keeping your hot water hot costs you about 20 percent of your home energy bills?

It's easy to have hot water when you need it yet reduce your energy bills. All you have to do is follow some good advice.

- **Take showers not baths.** Baths use 15 to 25 gal. Showers use less than 10 gal. per five minute shower.
- **Lower the water heater thermostat.** 120 degrees is recommended, and many have found that 115 degrees is just as comfortable.
- **Insulate the water heater.** Be careful not to cover the thermostat.
- **Install a timer.** (For electric water heaters only.) Automatically turn your water heater off at night and back on in the morning.
- **Repair leaky faucets.** Nuff said. ■

Bringing Home Baby

Whether it's your first or your fifth, a baby will change your life. It can also have a big effect on the energy you use. Here are a few tips on how to keep baby comfy and safe and your energy bills down.

You can prevent most hot water-related burn accidents by simply turning down the setting on your hot water heater. We recommend 120 degrees.

Before Baby Comes Home:

- Run hot water from the tap nearest to your hot water heater.
- Check the temperature with a meat, candy or water thermometer,
- If the temperature is above 120 degrees, lower your hot water heater setting.
- Wait a day for the water to reach the new temperature and repeat the test.

Bath Time Basics

- Babies need a room temperature of 70 to 75 degrees to keep warm. You can pre-heat the room and minimize energy use by first taking a bath or shower, yourself.
- The safest way to fill baby's tub is to put cold water in first, then follow with hot, adjusting as you go.
- The ideal temperature of bath water is 90 to 100 degrees. The best way to check is the time-tested "elbow test." Dip your elbow in the water and if you can't tell whether it's warm or cold, it's just right.
- Use a small basin or tub to save water and energy.

Laundry Lessons

- If you wash diapers at home, wash them separately in hot water. You don't need to boil them as a second rinse cycle will do the job.
- Wash all other baby clothes in warm water. Hot water can compromise the flame retardant quality of fabrics.
- When drying heavy items such as diapers and towels, use the high spin cycle. It will extract more water and reduce drying time.
- Wash and dry several consecutive loads. A warm dryer shortens drying time.
- Don't add wet items to a partially dried load in your dryer. It increases drying time and energy use.

Oh, by the way, **congratulations on your new arrival!** ■

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