

Evolve ShowerStart

Report to Charlottetown Water & Sewer
by Peter Rukavina, Homeowner – September 15, 2018

In 2013 Charlottetown Water & Sewer offered free “low flow” shower heads to residents with shower heads rated more than 2.5 gallons per minute (gpm). Ours was *exactly* 2.5 gpm, so we weren’t eligible, but we took the opportunity to live up to the spirit of the program, and replaced our shower head with a 1.6 gpm model, a simple Waterpik head that I bought at Walmart for \$18.

As a result of the change, if we take a 5 minute shower, the savings of 0.9 gallons per minute translates into 4.5 gallons of water saved; over the course of a year that’s 1642 gallons (6,215 litres or 6.215 m3), saved.

That’s a *lot* of water. About 5% of our yearly household water consumption.

We didn’t suffer from the decreased flow; the Waterpik unit does a good job at maximizing power even with less water. The only negative side-effect of the switch was that, because there’s less water running through the shower head, *it takes the cold water all that much longer to flush out of the system* when we start up the shower in the morning. It’s not that there’s any *more* cold water to be flushed out, but the increased time means that we’re far more inclined to start up the shower and then *go and do something else*.

Like shave, for example. Or empty the washer. Or fold up the towels. Or feed the dog.

And that “something else” often *takes longer than the cold water takes to flush out*, meaning that the water is needlessly running, hot, while we’re distracted otherwise.

The Evolve ShowerStart TSV is a product that seeks to mitigate this problem, and in July of 2018 Charlottetown Water & Sewer provided our household with a trial unit to evaluate its operation and possibilities in our real world residential situation.

This report summarizes our experiences over the last 67 days using the device in our shower every day.

Installation

The Evolve ShowerStart TSV is an easy device to install, and does not require a plumber or any plumbing expertise or tools: you just unscrew the existing shower head, screw on the ShowerStart, and then screw the shower head back into the ShowerStart.

Operation

The ShowerStart works like this:

1. You turn on the water as you normally would, and the cold water flushes out.
2. As soon as 95°F water starts to flow, the water slows to a trickle.
3. When you are ready to shower, you simply pull on the pull-cord attached to the ShowerStart, and the hot water starts to flow normally.

Time to Trickle

In our testing, the “time to trickle” varied between 0:41 and 1:48; the variation in time appeared to mostly relate to the time of day (and thus whether the cold water had been flushed previously, earlier in the day). The *average* “time to trickle,” measured over a week, was 1:12, or, at 1.6 gpm, a flush of 1.92 gallons (7.27 litres).

Time for “Something Else”

In my personal situation, the “something else” I occupy myself with during the cold water flush is shaving, and the time for this, measured over 7 days, averaged 2:30.

Water Saved

The water saved (assuming the trickle equals zero consumption, which it is close to) is the difference between the start of the “trickle” time and the time I pull the cord and enter the shower, a time during which, before the installation of the ShowerStart, hot water would have been running freely, wasted.

The average “time to trickle” was 1:12, meaning the water saved was previously running from 1:12 to 2:30, or 1:18. This is a water saving, at 1.6 gpm, of 2.08 gallons, or 7.87 litres.

There are three members of our household and we each shower daily at different times of the day; the “time to trickle” is less during later showers, but not dramatically so; we also have different habits for what we do while waiting for the cold water to flush. Assuming that each shower is as outlined above, **daily water savings would be combined 23.61 litres.**

Reviewing our Charlottetown Water & Sewer bill for the period 2018-05-01 to 2018-08-03, which includes 21 days where we were using the ShowerStart and 72 days previous to this, our average daily consumption was indeed lower than the previous year: 294 litres per day in 2018 vs. 329 litres per day in 2017.

We have access to even more granular data, however: because we have an in-home water meter reader, we have daily data on consumption going back several years; here is our daily average consumption for June, July, August and September over four years, in litres per day.

Average Daily Water Consumption in Litres, 100 Prince Street

	June	July	August	September
2015	323	338	296	300
2016	316	296	283	325
2017	293	396	374	393
2018	266	316	267	268

Our consumption for August and September 2018 (highlighted), where we have been using the ShowerStart every day, has been lower than previous years. This decrease is partly due to the use of the ShowerStart, but also likely due to other water conservation measures (more attention to the issue, use of rain barrel, etc.)

Conclusion

Using the Evolve ShowerStart TSV has not significantly impacted our use of our shower negatively: using it requires no more additional effort than pulling the “pull cord” when ready to shower. As such the device easily integrated into our daily routine, and provided the added benefit of not feeling rushed to enter the shower as soon as the water was hot.

Our early analysis suggests that we could save up to 23 litres per day of water by using the device, which is about 6% of our previous average daily consumption.

We will continue to use the device.