



A New Way Forward: Sink Twice

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"You can do anything you set your mind to do," I told her. The look on her face told me she didn't believe me. My four-year old son did, but he is still convinced that our family is safe from bears when camping because "dad is a lawyer." My five-year old daughter responded, "If you can do anything you set your mind to, then why can't YOU save the world?" They both looked straight at me waiting for an answer.

My children had just called me out - plain and simple. It was time to put words into action.

I had been worrying for weeks about the severe drought in the Western United States. My kids knew this was my hot button - I was turning off the water until they were finished brushing their teeth, and the garden I started with them earlier in the year was deep-fried in the sun because I stopped watering it. Drought was constantly on my mind.

I sat and thought about my children and the future. Strangely, my mind kept wandering to the bathroom because I knew most indoor water is used there. Toilet flushing is the largest indoor use of water in single-family homes, followed by faucets. I kept thinking about the fact that we use drinking water to flush the toilet and to wash our hands, and we let the soapy water flow down the drain into the abyss of the water system. Then, we never think about that water cycle again. This didn't make sense to me.

After dinner, I went into the bathroom to study our dual flush toilet. I took the top of the tank off and examined each part. I read about toilet mechanics for hours.

By morning, I had created what would become the first Sink Twice sink. To my wife's horror, she discovered a pizza box wrapped in duck tape with a disposable pie pan on top of her toilet tank. The pie pan had a hole that allowed water to flow through it into the tank, and there was a hole to accommodate the dual flush button. I figured out how to jam a piece of tygon tubing through a PVC pipe to mimic a "faucet." My contraption successfully diverted drinking water from the valve inside the toilet tank to the makeshift faucet so that my family could wash our hands with clean water, and then the soapy water drained into the toilet tank to flush the toilet. We were using the same water twice.

A couple of weeks later, the cardboard pizza box started to give in and I eventually replaced it with the normal toilet tank lid. To my surprise, my son made it clear he wanted his "easy to reach hand washing contraption" back and he wanted to keep saving water. Although, he suggested I make it stronger this time. My children had adapted to this contraption and were excited about not only washing their hands, but saving water.

Sink Twice has come a long way since the pizza box. Sink Twice is strong and durable, made of ABS plastic compressed at 800 tons of pressure. It fits nearly all American toilets, whether single or dual flush. It has a "fill-cycle diversion" technology, which improves the efficiency of most toilets. Finally, as a third water-saving feature it has built-in leak detection that allows the user to "see" a leak immediately instead of discovering the running toilet after gallons of water is wasted. Sink Twice takes about two minutes to install, but the water savings are immediate.



In 2016, based on sales of approximately 1,000 units, Sink Twice likely helped people save over 4 million gallons of treated water. Each Sink Twice is generally able to save about 1 gallon per trip to the bathroom (plus or minus depending on the toilet and how much water is normally attributed to hand washing). A person typically uses a toilet 4-5 times per day, and we assumed an average household has 3 people in it. Based on these numbers, we calculated our current savings rate based on the following (calculation does not include water savings from toilet leak detection):

1000 Sink Twice units sold with 1 gallon savings x 4 uses per day x 3 people per household x 365 days per year = 4.38 million gallons of water saved annually in the last year



Sink Twice's main "competitors" are habitual behaviors and perceptions about repurposing water. Habit can be the enemy of innovation in so many ways. As we talk with people across the state and nation and they begin to understand how their indoor plumbing works, where their water comes from, where their water flows to out of their house, and the importance of water conservation in the west, we see that people can change their perceptions and adapt their behavior because it makes sense. Understanding is essential. And the result is a rise in people willing to be innovative to save water.

Sink Twice is a product inspired by the next generation of Coloradans, manufactured by Coloradans locally, and designed to address challenges all Coloradans face. How do we as citizens do our part to make a difference in water in Colorado? One way is we can Sink Twice.

About the author: Culver Van Der Jagt is a Colorado native and a local family law attorney. He was the winner of the Better Business Bureau's regional Torch Award for Marketplace Trust in 2014. He is most proud to be a husband and father of two. His educational background includes a degree in Chinese (minor in Russian) from CU, a Masters of International Business Administration from Switzerland, a French International Relations Doctorate, a JD, and two Masters of Laws (Taxation and Banking).