

Have you ever thought about what happens after you flush? Yes, its not a topic appropriate for the dinner table and some may consider the subject taboo altogether, but for those intrigued by how things work, you may find the process fascinating. If you can get past the “ick” factor and want to know how Star processes its wastewater, read on.

It takes an average of five hours for wastewater to get from your home to Star Sewer & Water’s Wastewater Treatment plant off of Tempe Lane. Once there, it takes another five hours to be processed and discharged back into the Lawrence Kennedy canal and ultimately the Boise River. Only ten hours from flush to river! Pretty amazing, right?

Wait, we are discharging wastewater into the Boise River? No, the water that comes out of the treatment plant goes through a rigorous system of filtration and treatment so that by the time it reaches the canal and river, it meets the Department of Environmental Quality’s (DEQ) drinking water standards and is actually cleaner than the water flowing downstream in the Boise River.

Once you flush, the wastewater enters the sewer system. There are approximately 100 miles of sewer lines in Star and four operating lift stations located throughout the city. Lift stations help keep the sewer lines flowing towards the treatment facility. Sewage enters the lift station and begins to fill a wet well. It takes approximately 15-30 minutes for the wet well to fill. Once full, the lift station pump and pumps the contents of the well through the sewer line.

When the wastewater reaches the treatment plant, it runs through the headworks where non-biological objects like baby wipes, kid’s toys, metal objects are filtered out. Star’s original headworks facility could process up to 1.8 million gallons per day. We currently process about 1.1 million gallons. Last month Star completed construction on a new headworks plant. The new facility will be able to process up to 17.5 million gallons of wastewater per day. After the non-biological objects have been filtered out, the wastewater is placed in a large outdoor basin. This wastewater is loaded with the naturally occurring gut bacteria that is found in everyone’s digestive system. The bacteria are first starved of oxygen, then the wastewater is moved to a second basin where they are fed and aerated to make them hungry and reproduce. They quickly begin to break down the organic matter and the remaining liquid is filtered through ultra-fine membranes that capture anything larger than one micron in size. The resulting wastewater is now clear and treated with a minimal amount of chlorine and UV light to eliminate any remaining contaminates.

This effluent is released into the Lawrence Kennedy canal where it is use for irrigation and eventually runs into the Boise River. The water being discharged is thoroughly tested hourly, daily, weekly, and monthly. Any anomalies must be reported to the DEQ within 24 hours. The Star Water Treatment Plant is managed by Ed Duncan. He holds the Class IV Wastewater Treatment Classification and personally attests to the validity of the water testing. Falsifying water tests or reports comes with stiff penalties and jail time, so you can be sure the water being put back into the ecosystem is meeting DEQ’s rigorous standards.