

PASADENA
Water&Power

2016 Educational Scholarship Ian Taylor – First Place Recipient

The reuse of water or greywater around the single family residential homes in Pasadena is a major necessity in our current state of drought. I believe my invention the “The P-trap Diverter” could be the device to lead to higher rates of water efficiency in our city. It looks like a regular P-trap found under sinks in homes, however it contains a diverter device that allows water to flow to a reusable source. The connection of the P-trap Diverter unit would fit into the same place and space as a regular P-trap. Its shape would be similar to standard P-traps and would contain a flex tube for easy installation. The P-trap Diverter would have an open and close divert water or “change water flow” switch device built into the trap. For easy use, the valve device is connected to a readable dial lever located on the outside of the P-trap Diverter. The valve and dial system would allow the homeowner to choose a course of water flow path from its original “flow path” to a “water flow path” that leads to the outside yard or garden. The diverted water stream would travel through a short patch pipe through a nearby exterior wall to the outside of the house. From there, the reusable waste water would be available to water landscape through applicable watering systems. These systems include soakers, drip, aqueduct, and hose systems. Water from the P-trap Diverter could water bushes, trees, shrubs, and even lawns and vegetable gardens.

The installation of the pipe connection from the P-trap Diverter to the outside would not be more complicated than the installation and connection of a dryer hose vent to a hole made to the exterior of the house. A flexible waste water hose could be used instead of pipe for greater ease of installation. The P-trap diverter will come with a set of instructions that educates the homeowner as to what grade of grey water usage is appropriate for different exterior watering jobs. The booklet would also include ground cover recommendations and a numeric system to rate the type of greywater usage. For example, “dish rinsing water” is a “10” suitable for succulent plants.

The manufacturing for my device will be similar to the present day P-trap with a plastic mold variation. The Pasadena Water and Power department could distribute this device to residents in order to first introduce the mechanism to Pasadena homeowners prior to deciding whether or not to sell the item to the public. After using “market comparison analysis” the unit should sell for about seven dollars. When considering the distribution of the device and its information, the Pasadena City Ambassadors would work to help the Water and Power Department bring this efficient method of water conservation to the people of Pasadena. Once the patrons of our city see the simplicity involved in conserving water with a single switch of a lever, there is sure to be a newfound drive in discovering new reusable resources to follow.

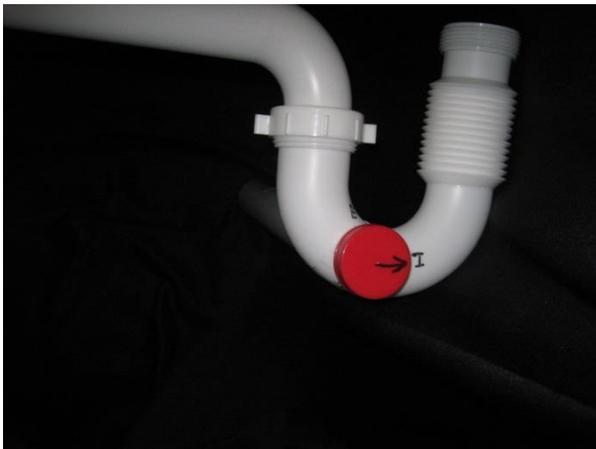
Photos of Mechanisms



Exterior proto type of diverted water path on exterior



Valve type for P-trap diverter



Proto-type of the P-trap Diverter
I made from purchased parts at the Hardware Store



Side view of the 2 flow water flow paths from trap