Saving Water Around the House

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During the past several years in the Western United States, we have been in a drought, and I have wondered what I can do to help save water in my daily activities. The objective of this project is to find a convenient way to not waste while you wait for it to heat up for use. I created a prototype mechanism for the sink faucet that allowed me to divert cold water, to a holding tank where it could easily be used at a later time for things such as watering plants, cooking, or pre-filling the washing machine when starting a batch of laundry. On average, I ended up saving .56 gallons of water per use. I designed my second prototype to be used in the bathroom. I wanted to make the re-use of the saved water automatic. In order to do this, I diverted the cold water coming from the shower head to a holding tank above the toilet tank. When the toilet is flushed, a float valve connected to the holding tank opens and releases the saved water into the toilet tank. Once the toilet tank becomes full, the float valve is closed. This project showed that conserving water during everyday use is possible, and gallons conserved will add up quickly. Saving water in any way possible will only become more important in the future as water becomes more precious.

Awards Won: