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## Money Down the Drain

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### 1. Impact Design

**Impact Statement** - By taking shorter showers, I can reduce my water footprint by nearly 25 gallons a week, which will save my family money and serve as an example to others.

Community Alignment	
Group	Goal/Action
<u>City of Auburn</u> <u>2021-2025 Water Use Efficiency Program</u>	The City has exceeded its Water Use Efficiency (WUE) Program goal of five percent water use reduction from 2014 through 2020; the actual reduction was nine percent. However, significant portions of the water use savings may be attributed to the factors other than the WUE Program, such as the economy.
<u>Department of Ecology,</u> <u>State of Washington</u>	<p>This program offers solutions about ways to save water when taking showers.</p> <ul style="list-style-type: none"> <li>• Replace showerheads that have a flow rate greater than 2.5 gallons per minute – the current National Energy Policy Act standard.</li> <li>• Take shorter showers. Reducing a 10-minute shower to 5 minutes saves 12.5 gallons of water if the showerhead has a flow rate of 2.5 gallons per minute and even more if the showerhead has a higher flow rate.</li> <li>• Install a thermostatic shut-off valve, either integrated into a showerhead, or as an add-on positioned between the showerhead and shower arm. The valve automatically reduces the showerhead's flow to a trickle once water temperature reaches approximately 95° F (35° C), reducing water waste during the user's warmup routine (known as 'behavioral waste').</li> </ul>

#### Procedure - Steps for implementation!

1. Track shower duration for two weeks and find the average of that data.
2. Calculate how many gallons per minute are put out by the showerhead.
3. Aim to reduce shower time by 1-2 minutes, equal to approximately 5-10 gallons used. Create a playlist of songs for showering and use them to track the time or find a morning podcast to track time with.
4. Practice new shower habits and record data on gallons used and the duration of showers for two weeks.
5. Look at my family's water bill and calculate the money being saved from my shorter showers.
6. Encourage my family to do the same and make a fun competition out of it.

## 2. Impact Data Tracking - Quantify your impact!

After looking into my shower head model, I've discovered that it uses 2 gal/minute and is WaterSense certified. According to the [EPA](#):

- Average showerhead: Uses 2.5 gallons per minute
- [WaterSense](#) labeled showerheads: Uses no more than 2 gallons per minute

### Initial Data:

Shower duration per week....

8 minutes: **1** ~ it uses 16 gallons

9 minutes: **1** ~ it uses 18 gallons

10 minutes: **2** ~ it uses 20 gallons

Total Preventable Water Waste =

- (1 time per week my shower is 10 minutes )(20 gallons) - (reduce by 2 minutes) (4 gallons)
- + (2 times per week my shower is 9 minutes )(18 gallons) - (reduce by 2 minutes) (4 gallons)
- + (4 times per week my shower is 8 minutes )(16 gallons) - (reduce by 2 minutes) (4 gallons)

= (1 x 16) + (1 x 18) + (2 x 20) = 74 gallons of water each week

= (4 showers x 4 gallons) = 16 gallons per week saved

Total gallons of water used per week = (4 showers a week)(2 minutes reduced) = 58 gallons of water per week

Reducing my shower by only 2 minutes will save me 3.5 gallons every time for a total of 16 gallons saved each week. We can reduce our total water used by taking shorter showers!

### Data after Behavior Adjustments:

Duration of shower per week

6 minutes: **1** ~ it uses 12 gallons

7 minutes: **1** ~ it uses 14 gallons

8 minutes: **2** ~ it uses 16 gallons

Total gallons of water used per week = (1 x 12) + (1 x 14) + (2 x 16) = 58 gallons of water per week

I decreased my total gallons of water use per week by 16 gallons!

(16 gallons)(52 weeks in the year) = 832 gallons of water saved per year.

**Extra Considerations:** If my entire family reduced their showers by 2 minutes, saving 16 gallons each week, which is 832 gallons saved per year. In total, we could save (832 gallons x 7 people) = **5,824 gallons every year.**

### 3. Impact Storytelling - Share your data with who needs to know! See more [tips](#)

Think on 4 scales of stakeholders... Family, School, Community, and Aligned Groups

Stakeholder	Interests	Approach
Family — Parents	Saving money	<b>Family Shower Challenge:</b> Start a conversation about what else we can do to conserve water or consider reducing the frequency or duration of our showers. Challenge each other to make shower playlists to further show the importance of short showers.
School — Peers	Sustainability	<b>Video:</b> Create a video sharing the amount of money that goes down my drain because of the duration of my showers.
Community — Neighbors	Sustainability, saving money	<b>Conversations and Video:</b> Explain to neighbors the benefits of having a WaterSense Certified showerhead and show the video of how shorter showers lead to less money going down the drain.
Aligned Groups — Representatives	Saving water and money wide scale	<b>Conversations:</b> Seek out city representatives through school and have conversations about the impact of a WaterSense Certified showerhead. Talk about why they should be implemented in all communities around

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#### Storyboarding:

##### Video 1:

- Begin by talking about how much water an average shower uses. (8 mins, 2.5g/m, =20g)
- Talk about my showerhead (8 mins, 2g/m, =16g)
- Talk about how lowering the time of a shower by two minutes can make a large difference (6 mins, 2g/m, =12)
- Show data and how much water that can be saved a year.

##### Video 2:

- Show my family and convince them to try making a shower playlist to minimize shower times and water
- Talk about money that is needed for each time period.
- Talk about the money saving aspect that comes from this change and other ways to minimize water and money waste habits.

##### Video 3:

- If you want to save even more money you can use a WaterSense Certified showerhead.
- All WaterSense Certified showerheads use less than 2 gallons per minute.
- Discuss numbers again.
- "Knowing all of this, what will you do to minimize your family's money and water going down the drain?"