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My Dishwasher - Full Loads

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1. Impact Design

Impact Statement - If I commit to only running full loads when using my dishwasher, then I will reduce my water footprint and save money.

Community Alignment	
Group	Goal/Action
<p>City of Kirkland's Water Division - Operates and maintains the city's water infrastructure from parts of the South Juanita and Totem Lake neighborhoods southward</p> <p>- Water purchased from Seattle Public Utilities through Cascade Water Alliance, an association of regional water districts and cities</p>	<p>In connection with Cascade Water Alliance, the City of Kirkland is committed to water conservation methods. This includes Cascade Water Alliance's adopted water-use efficiency goal to dedicate the necessary resources to achieve a cumulative, annual drinking water savings of 0.4 million gallons per day by December 31, 2022</p>

Procedure - Steps for implementation!

1. Track current home dishwasher behavior for two weeks. Mark each load as $\frac{1}{4}$ full, $\frac{1}{2}$ full, or full on a Google Spreadsheet.
2. Use dishwasher details to calculate how much water my family is using to run the dishwasher on average each week. See the "Data" section below to learn how to quantify this.
3. Communicate with family members and adjust personal behaviors to strive for 100% full dishwasher loads.
4. Collect new data in my Google Spreadsheet by recording each dishwasher as $\frac{1}{4}$ full, $\frac{1}{2}$ full, or full.
5. Calculate how many gallons of water are being used to run the dishwasher each week. Look for declining trends. Find my family's water bill and estimate the money saved from using less water.

2. Impact Data Tracking - Quantify your impact!

A half full dishwasher wastes [half](#) of the water your dishwasher requires per load.

After looking into my dishwasher model, I've discovered that it uses **3.5** gallons of water per load. According to the [EPA](#):

- Older Dishwasher Models: Uses up to 10 gallons per cycle
- Average Dishwasher: Uses 6 gallons per cycle
- ENERGY STAR Certified Dishwasher: Uses approximately 3.5 gallons per cycle
 - **My family has an ENERGY STAR Certified dishwasher!**

Initial Data:

Times per week my dishwasher is run....

¼ full: **0** ~ it's only partially full where ¼ of the water used is needed and ¾ of the water is wasted

½ full: **1** ~ it's only partially full where ½ of the water used is needed and ½ of the water is wasted

Full: **6** ~ no water wasted

Total Preventable Water Waste =

(**0** times per week my dishwasher is run ¼ full)(**3.5** gallons of water per load)(¾ of water wasted)

+ (**1** times per week my dishwasher is run ½ full) (**3.5** gallons of water per load)(½ of water wasted)

= (**0** x **3.5** x ¾) + (**1** x **3.5** x ½) = **1.75** preventable gallons of water waste each week

Total gallons of water used per week = (**7** loads of dishes)(**3.5** gallons of water per load) = **24.5** gallons of water per week

My family only needs to use **21** gallons of water per week (**24.5** gallons used - **3.5** unnecessary water waste).
We can reduce our total water used!

Data after Behavior Adjustments:

Times per week my dishwasher is run....

¼ full: **0** ~ it's only partially full where ¼ of the water used is needed and ¾ of the water is wasted

½ full: **0** ~ it's only partially full where ½ of the water used is needed and ½ of the water is wasted

Full: **6** ~ no water wasted

Total gallons of water used per week = (**6** loads of dishes)(**3.5** gallons of water per load) = **21** gallons of water per week

We decreased our total gallons of water use per week by **3.5** gallons!
(**3.5** gallons)(52 weeks in the year) = **182 gallons of water** saved per year.

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

Think of a few scales of stakeholders... Family, School, Community, and Aligned Groups

Stakeholder	Interests	Approach
Family — Parents	Preventing water waste	<u>Conversation:</u> Share my findings from research with my family through a conversation over dinner
School — Classmates	Sustainability	<u>Conservation:</u> Casual conversations with peers about what I've been doing at home, gauge interest for others to do the same.
Community — Rotary	Wellbeing of natural habitats	<u>Newsletter:</u> Share findings and process in newsletter and spoken reports at rotary meetings
Aligned Groups — Kirkland Water Resources Managers	Saving Money	<u>Written Report:</u> Share data and communication strategy through formal reports and meetings with city staff members. Emphasize shared goals.

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