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Introduction

Climate change is increasing the variability in the California water supply. Areas of Mendocino County have been experiencing acute water stress during the dry seasons. Yorkville is a small town with a population of 317. The town does not have a water municipality that distributes water to the population. The Yorkville Market is used for a gathering place for the town, as well as a great stopping point from Mendocino city to Highway 101 in Cloverdale, CA. The market runs out of water in late summer and is out of water until the first significant rain. They acquire their water from the local intermittent creeks that run behind the market. The water is stored into holding storage tanks; one holds 3,500 gallons and the other holds 10,000 gallons of water.

In order to establish efficient water conservation and usage for the Yorkville Market in Mendocino County, CA, new measures are being undertaken to monitor volumetric water quantities both in usage and waste for this business.

Current Work

Current Water Storage:



2,500 Gallons



10,000 Gallons

- Checking appliances that take water, confirming low flow devices.
- Data was taken of toilet usage by hand.

Future Work



- Meter was decided to be placed in pump house.
- Positive displacement meter
 - high accuracy on high range of flows
- Buoy
 - Detects individualized water usage in the building
- Decision of what brand of meter to purchase to be installed.
- Compile a running average of usage per month.

Discussion



- Metering can be done without meters, which can be a tedious process. With only having an average of one full month, an assumption can be made with 7,600 gallons of water is used solely for toilet flushing a year.
- Getting accurate readings of water consumption from a meter, we can create a game-plan if conserving water is the answer, or simply there is not enough water storage for this small market.

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