



Water Conservation

Group Studies

Ithzel, Madi, Alexandra, Yobana, Leslie, Naudalyn, Katerina

Challenge

Climate Change: Heat waves & Droughts



Jeopardized health, livelihood and future.

Vineyards & Fresh Produce



Fresh Vegetation- droughts danger to food source.

What to Expect

Fountaingrove



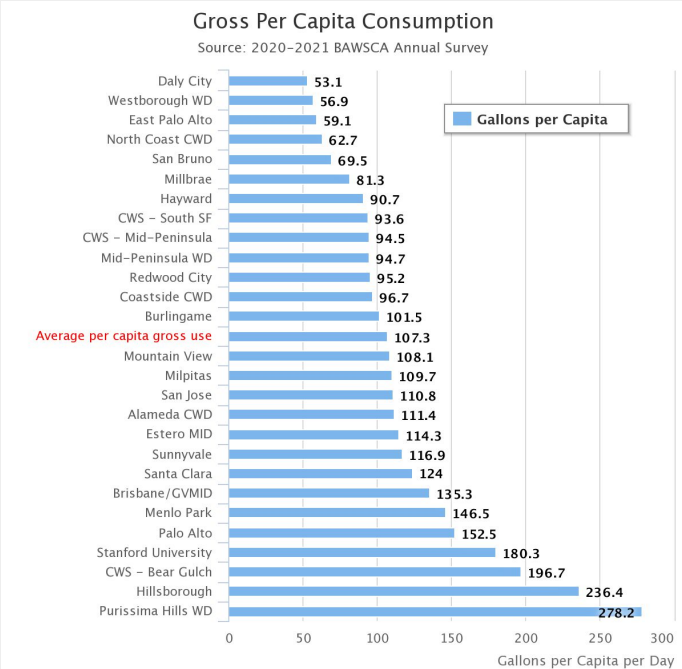
- Current news
- Solutions stable water source
- Community Opinions

Need change, suffer harsh consequences.

Change starts with us.

Existing Conditions

- Fountaingrove is one of the most expensive neighborhoods in Santa Rosa
- Expensive neighborhoods are known to be less water conservative.



Existing Conditions Fountaingrove watering system needs \$43M replacement after Sonoma County Wildfires

- Fountaingrove contaminated with benzene.
- Benzene: chemical compound found in gasoline and plastics, cancer causing
- Found its way into water mains, contaminating fresh water
- A result of destruction from October Wildfires, plastic storm drains melted and were sucked into water mains.

This was a huge problem that pushed our water conservation even further into present day.

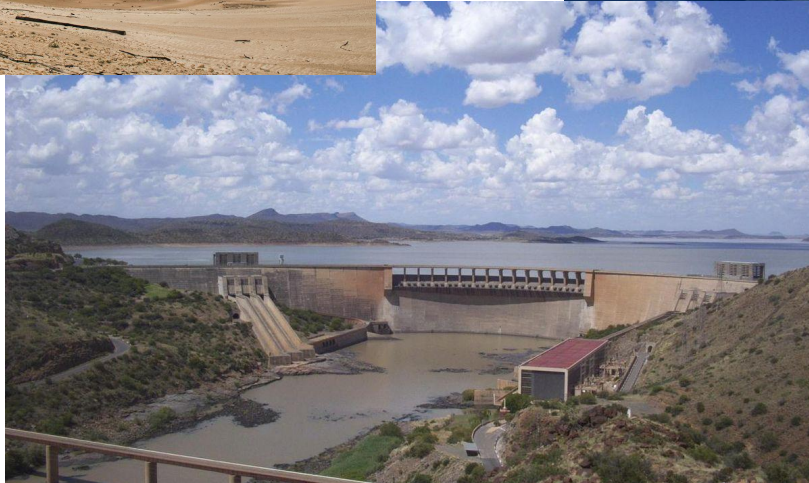


Case Studies

In response to current drought conditions Santa Rosa could turn into a water sensitive city through the exploitation of diverse water resources, for example like cape town in africa

- Diverse infrastructures
- Making optimal use of stormwater and urban waterways for flood control, water reuse, and recreation
- Put dams in fulton or in small creeks/lakes to conserve that water
- Use recycled water for commercial farming

Cape town



Dams



Marin county

Pilas



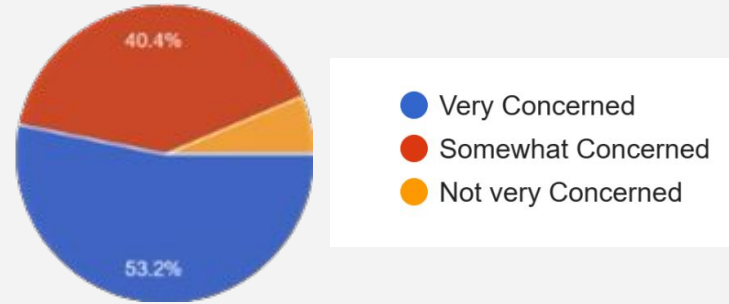
Mexico

Lesson Learned

Interviewed Friends and Family

Responses:

- 50% very concerned
- 40 not very concerned

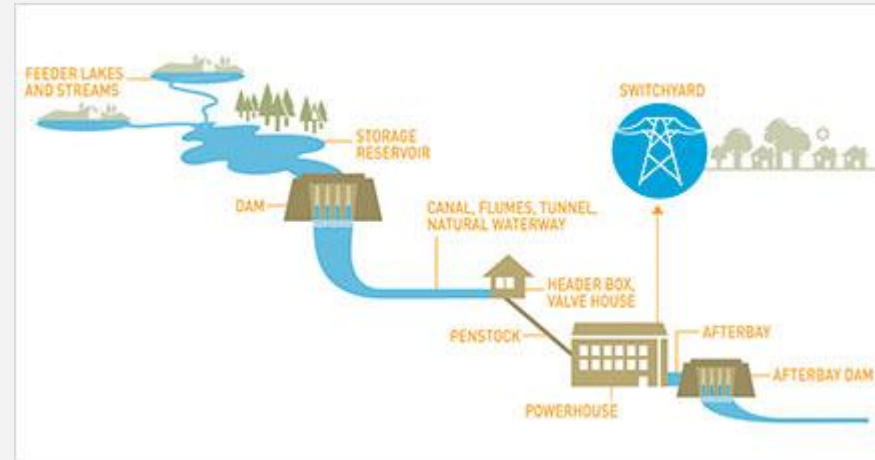


How to conserve water:

- Take short showers (10mins)
- Use rainwater for plants

Steps to making short term changes:

- Open mindedness
- Community help
- Pg&e helping as a contributing member
- Incentives

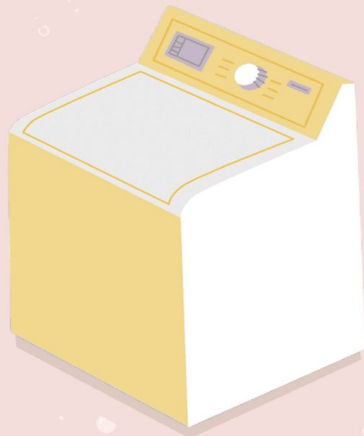


Short Term Recommendations

- Switching over to water conserving appliances(like toilets and washing machines)
- A partner with **Pg&e** and **Sonoma Water**
- Open door to **rebates**
- Highly efficient washers reduce the amount of water up to **80%**
- Highly efficient toilets have been saving up to **20%** more water

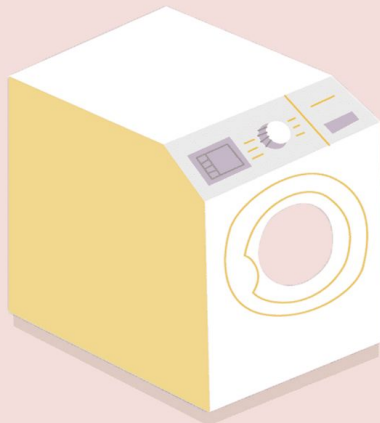


Top Load vs. Front Load Washers



Top Load

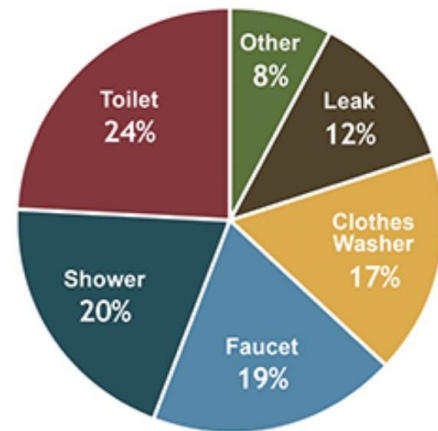
- Easy to load due to waist-height opening
- Items can be added during wash cycle
- Motor is more accessible for DIY repairs
- Uses a central agitator to spin clothes
- Uses ~19 gal water/load for HE, ~41 gal water/load for standard
- Lifespan is ~14 years



Front Load

- Easier to load for those who must sit
- Locks while in use
- Glass doors make the wash cycle visible
- Best repaired by technicians
- Tumbles clothes, similar to hand-washing
- Uses ~ 13 gallons of water/load
- Lifespan is ~11 years

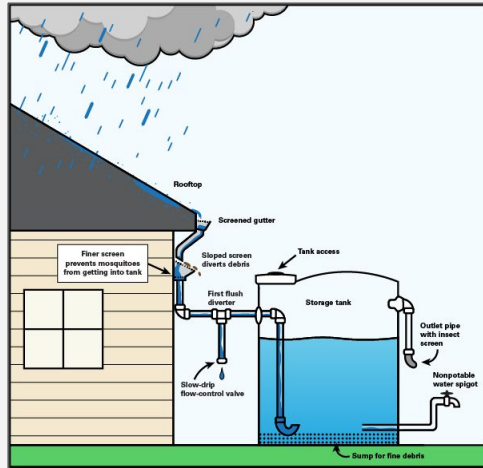
How Much Water Do We Use?



Source: Water Research Foundation, Residential End Uses of Water, Version 2, 2016

Long Term Recommendations

Rainwater Storage



Water Conserving Appliances



Every household should be provided with these

Long Term Recommendations

Water Reservoirs





Thank You!

Sources

<https://bawasca.org/water/use/percapita> case study(expensive neighborhoods more water)

<https://zerodown.com/rankings/santa-rosa--ca/expensive> (Fountaingrove top 3)

<https://www.epa.gov/watersense/residential-toilets#:~:text=Specification-,Flush%20Facts,of%201.6%20gallons%20per%20flush.>

<https://www.northbaybusinessjournal.com/article/industry-news/santa-rosa-fountaingrove-water-system-needs-43m-replacement-after-sonoma/> (replacing water system in FG)

<https://www.oecd-ilibrary.org/sites/a804bd7b-en/index.html?itemId=/content/publication/a804bd7b-en#:~:text=Cape%20Town's%20new%20Water%20Strategy,aquifer%20recharge%2C%20water%20reuse%20and> (Case study)