

Michael and Kathy Quast
1881 Heritage Way
Yountville, CA 94599
July 18, 2022

Yountville Town Council Members
6550 Yount St.
Yountville, CA 94599

Dear Council Members,

We are writing due to of our concern that a resident can save over 50% of their water use this June (vs the base year of 2019/20) and still be in violation of your Water Restriction Resolution. It appears that the daily water use limit of 450 gallons is at odds with your direction to water only twice a week using auto timers and sprinklers. The 450 gallons per day seemed to be created for a weekly or monthly restriction when the days were not limited.

As an example, for a small yard of 1000 square feet (SF), the UC Master Gardeners state on average you need to apply 1 inch of water per week which is 623 gallons. Given that your Public Works Director states a family of four needs 185 gal/day which leaves only 265 gallons a day for landscaping. In order to deliver a week of water on only two days you would need to apply 311.5 gallons each of the two days and are thus over the limit each watering day. Therefore, you could not deliver the needed water weekly on the prescribed two days without being over the 450 gal/day limit for even a small yard.

FACTS:

- Though an average need of water is 1 inch per week, the CA Dept. of Water Resources notes by ETo Maps that the average monthly evapotranspiration rate (the amount of water to replace soil moisture loss) for our area is the following for these months: May = 6.2 inches, June = 6.9 inches, July = 7.44 inches, August = 6.51 inches, and September = 5.1 inches. These are significantly different than the yearly averages (4.25 inches monthly) and should be given consideration in regards to the restrictions for tree and plant health.
- (reference from: https://cimis.water.ca.gov/App_Themes/images/etozonemap.jpg)
- The Public Works Director does not know how the 450 gallon/day basis was created or predicated upon. He said he would look into its basis.
- At two days a week with limited hours for irrigation, your Resolution only allows watering during 19% of the hours during the week to deliver the weekly water. (3 similar days would allow 28.5% of the weekly hours to irrigate.)
- The CA State recommended guidelines suggested only watering two days a week, yet they did not recommend a daily limit to the water use in their Emergency Regulations.

Unanswered QUESTIONS – info that would help us understand how to water

- How was the 450 gallons/day limit created and what is its basis?
- In regards to the evapotranspiration rate, what is the recommended amount of water to replace transpiration during our drought yet help preserve our trees and plants? Should it decrease 10%, 20%, or 30% and yet be adequate? Where is this data from the Dept. of Water Resources or elsewhere?
- What amount of water did the 607 Single Family Residences (SFR) use last fiscal year in total and individual average?
- What is the average size of SFR and what is the average Town lot size?
- How many SFR are year round residents of Yountville vs. vacation homes? How does this skew the data?
- What individual SFR average do we need to reach for the Town's required contract allocation? Please show this data since we were told we needed a 20% savings and now it's stated that the 25% savings was not enough.

In Regards to the Staff Report:

- The Staff Report appears focused on SFR. The report should list all other categories and their water usage and savings.
- The Report treats all SFR the same, yet there are many categories due both to residence size and lot size. It treats a 2 person cottage on a 4000 SF lot the same as a 6 person residence on a 10,000 SF lot. What common SF factor can be used to equilibrate the uses?
- The Report makes new recommendations for SFR only and yet has not delineated the use of the 607 SFR. Providing the total 607 SFR use and individual average, and savings as well as the other categories would be beneficial. Once we have a known use for 607 SFR, then it would appear the Council could determine the decrease on average as needed.
- The suggestion to decrease to 2000 gal/week is not substantiated by the data shown in the Report. It is stated the town needs 4 or 6 % further decrease in its use to meet the contract allocation depending on which parameter is used. Yet, to decrease from 3,150 gallons/day to 2,000 gallons/day is a further 37% decrease per SFR and does not seem warranted. In fact, it is saying that only 100 gallons a day can be used for landscape. This equates to less than 1000 SF which is all you could water, a resident then must let the remainder of their landscape forcibly die.

- The report does not offer a clear easy solution on the 450 gal/day vs. the 2 day a week restrictions. Again, to know the basis of the 450 gal/day and how SFR water usage was last year would help residents understand the situation. Also, to understand the monthly drought recommended water evapotranspiration rate adjustments would also help.

SUGGESTIONS:

- First, please get answers to the questions in the sections above.
- Next, what is the basis of 450 gal/day? If it is correct, it seems likely it is the daily average for weekly or monthly use – if so, couldn't it be applied in the correct manner (not as a pejorative second limit)?
- In regards to a two day limit on automatic irrigation systems: your resolution of 2 limited days of weekly irrigation currently only allows watering 19% of the week. It is difficult to determine the watering needs and patterns with this scale. To allow watering 3 days a week is less confusing and you can basically deliver the water over half the week, yet only 28.5% of the hours has been provided in a 3 day program. Watering 3 days a week is better for vegetables which struggle on 4 hot days in a row. Also, a lot of Yountville has clay soil that dries hard in 4 days of 90+ degree weather – then the next watering tends to run off and not soak in as readily if the schedule was 3 days a week.
- We should set an average size for SFR lots and see the bell curve of smaller to larger lots and their water use. Single Family Residence lots should be allotted to a comparable group such as cottage, small, medium, large, and corner vs. rectangular vs irregular shapes so that water use is allotted and compared by like groups. It is suggested to use SF and use 4-5 groups. Then you could see the water savings per group. Thus violations would be compared to a like group.
- Consideration should be given to year round residents vs. vacation homes in regards to water use.
- In regards to the weekly amount of water used: First let us see what the 607 SFR use was last year, was it over or under 3,150 gallons a week? Then if 6% further savings is needed the amount could be averaged to $3,150 \times 94\% = 2961$ gallons a week and adjusted as needed.
- The monthly use should have a recommended adjustment for the monthly evapotranspiration rate.
- When a customer has shown they have saved over 30% of the water they previously used, then their daily water use should not be the determining factor since they had met your goal of over 20-30% water savings.

- In regards to the notices: they should not be a generic notice. They should not state the threat of fix your appliance or we will turn off your water. The notice should state clearly what is seen as an issue, the customer should be invited to contact the Town so you can help them correct the issue. It seems the main threat to turn off your water is against health and safety and not what the Council desires.
- Lastly, the appeal process of \$1,000 is cost prohibitive and a barrier for most residents when your penalties start at \$100-\$200. This appears to be out of balance and discourages further discussion with your residents who should be able to bring their concerns to the Council.

We look forward to the Council's thoughtful regard upon these issues to help us all save water in an equal and just manner.

Respectfully Yours,

Michael and Kathy Quast