



City of St. Helena
Special City Council Meeting
Friday, April 2, 2021 @ 9:00 AM
Published: Tuesday, March 30, 2021 5:56 PM

PLEASE NOTE: Any person who wishes to speak regarding an item on the agenda or make a comment under the "public comment" portion of the agenda may do so, but please observe the time limit of four minutes.

In accordance with Executive Order N-29-20, and guidance from the California Department of Public Health on gatherings, remote public participation is allowed. We will address the Order in the following ways: Members of the public may not physically attend meetings. The City Council meeting will be live-streamed on Comcast Channel 28 and on the City's website, barring technical difficulties. Those members of the public wishing to participate must do so remotely via Zoom electronic meetings in the following ways; by either logging onto the Zoom link located on the meeting agenda (please download the app to your computer or mobile device) and enter the meeting ID or by calling a listed number and enter the meeting ID. Public comment for City Council meetings will be accepted via email to publiccomment@cityofstheleena.org. All public comments must be emailed by 4:00 PM prior to the meeting. Emailed public comments will not be read out loud but will be publicly available and attached to the on-line City Council agenda.

In the event a quorum of the City Council loses electrical power or suffers an internet connection outage that is not corrected within 10 minutes, the meeting will automatically be adjourned. Any items noticed as public hearings will be continued to the next regularly scheduled evening meeting of the City Council. Any other items on the agenda that the Council has not taken action on will be placed on a future agenda.

Please see the end of the agenda for detailed PUBLIC PARTICIPATION instructions. Spanish translation for this meeting will be offered. To access Spanish translation, you will need to join the meeting using the Zoom app from a computer, iPad or Iphone. You will see an icon on the screen that will allow you to choose Spanish translation. To learn how to use Zoom, please see the instructions below.

Please click the link below to join the meeting:

<https://us02web.zoom.us/j/89648892117>

Or One tap mobile :

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Or Telephone:

Dial(for higher quality, dial a number based on your current location):

US: +1 669 900 6833 or +1 346 248 7799 or +1 253 215 8782 or +1 301 715 8592 or +1 312 626 6799 or +1 929 205 6099

Meeting ID: 896 4889 2117

1. CALL TO ORDER
2. ROLL CALL
Mayor: Geoff Ellsworth, Vice Mayor: Paul Dohring, City Council Members: Anna Chouteau, Eric Hall and Lester Hardy.
3. ADOPTION OF THE AGENDA
4. PUBLIC COMMENT:
Under California law, public comments at special meetings are limited to subjects on the agenda only. Therefore public comment will take place during consideration of the item. Each person's comments shall be limited to 4 minutes.
5. NEW BUSINESS:

- 5.1. Discussion and analysis of City of St. Helena water supply to assess need for establishing Phase III water regulations pursuant to St. Helena Municipal Code Section 13.04.250 (Staff Report Forthcoming Provided 4-1-2021 3:20 pm)

5 - 35

CEQA Determination: Not a CEQA project
Prepared By: Mark T. Prestwich, City Manager
Recommendation:
Discuss and provide direction to the City Manager.

[Staff Report - Pdf](#)
[Public Comment.Tom Belt](#)

6. ADJOURNMENT
The next Regular City Council meeting is scheduled for April 13, 2021 at 6:00 p.m.

I do hereby certify that a copy of the foregoing agenda was posted on the City website on March 30, 2021. Republished 4-1-2021 with item 5.1 Staff Report.



Cindy Tzaafopoulos, City Clerk

In Compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please call the City Clerk's Office (707) 967-2792. Notification 72 hours prior to the meeting as required by Section 202 of the Americans with Disabilities Act will enable the City to make reasonable arrangements to ensure accessibility to this meeting.

**THE CITY OF ST. HELENA ENCOURAGES ONLINE PUBLIC
PARTICIPATION IN
VIRTUAL CITY COUNCIL MEETINGS**

St. Helena, CA— The City of St. Helena is committed to public participation in

City government in a manner that is consistent with guidance provided by the Napa County Public Health Official and Governor Newsom's Executive Order N-25-20. These guidelines relate to social distancing, and are intended to protect everyone by limiting the spread of COVID-19 in our community. In adherence to these guidelines, the St. Helena City Council will host a Virtual Council Meeting on Zoom; a free teleconferencing tool that enables users to watch and/or call into the meeting from their computers or phones. This meeting will be open to public and allows for live public comment. The meeting will also be recorded, livestreamed, and posted on the City's website after the adjournment of the meeting if technical difficulties occur: <https://sthelena.civicweb.net/Portal/>

The ZOOM web link, meeting ID, and phone number will be listed at the top of the City Council Meeting Agenda. You will be required to enter the meeting ID, but there will be no password or participant ID.

How to Watch or Listen to Council Meetings:

1. Watch on Comcast Channel 28
2. Watch the livestreaming video on the City's website
3. Watch and Listen on Zoom.us by clicking on the link in the Council Agenda
4. Listen only by calling the Zoom number listed on the Council Agenda

Watch Council Meeting by Joining the Zoom Meeting:

1. By Computer, Tablet, or Smart Phone:

1. Before joining the virtual City Council Meeting, it is highly encouraged that you download the Zoom App. To sign up for your own free account, visit zoom.us/signup and enter your email address. You will receive an email from Zoom (no-reply@zoom.us). In this email, click Activate Account.
2. If you are logged into your account, Enter the **Meeting ID** listed on the City Council Agenda. If you have not created an account go to: <https://zoom.us/join> and enter the **Meeting ID**
3. Select if you would like to connect audio and/or video and tap **Join Meeting**.
4. For specific instructions for your device, go to: <https://support.zoom.us/hc/en-us/articles/201362193-Joining-a-Meeting>

1. Listen Only by Telephone:

1. **Dial** the number listed on the Council Agenda.
2. At the prompt, enter the **Meeting ID** provided on the top of the City Council Meeting Agenda and **Press #. A participate ID is not required.**
3. To disconnect from the meeting, hang up the phone.

Ways to Provide Public Comment:

While attending the virtual City Council Meeting, the public will have the opportunity to provide live public comment during Public Forum and after each agenda item. When it is the appropriate time for public comment the Mayor will verbally open public comment. At this time each individual is

permitted 4 minutes to speak.

1. Send a Public Comment in by 4:00 PM Prior to the Meeting to:
publiccomment@cityofsthelena.org

The easiest way to provide public comment is to email your public comment. Public comments may be emailed to publiccomment@cityofsthelena.org. Please include in the subject line "COMMENT TO COUNCIL and the AGENDA ITEM". Any public comment is required to be submitted no later than 2 hours before the scheduled meeting and will be included as an attachment to the agenda. All public comments will be made publicly available and attached to the agenda item and will not be read out loud. All public comments that are received after 4:00 PM will be attached to the agenda the following day.

2. Provide Comment through Zoom meeting from a computer, tablet, or smart phone

This option allows the public to virtually attend the meeting as a muted 'attendee' with no video or screen sharing capabilities. You will be able to see and hear those participating in the meeting, but they will not be able to hear you until the host unmutes you.

If you wish to provide public comment during a specific agenda item or during public forum, you can use the **"raise hand"** feature located in the control panel at the bottom of your screen. The icon is a small blue hand. In Windows you can also use the Alt+Y keyboard shortcut to raise or lower your hand. In Mac you can also use the Option+Y keyboard shortcut to raise or lower your hand.

The host will be notified that you've raised your hand and you will be placed in a queue with all incoming requests.

When it is your turn to speak, you will be notified that the host has unmuted you. To be removed from the queue, just click the **'raise hand'** button again.

3. Call in to the ZOOM meeting from a cell phone or landline phone only

This option allows the member of the public with the opportunity to verbally participate in public comment.

If you wish to speak during public comment time dial ***9** on your telephone.

The host will be notified that you would like to speak and you will be placed in a queue with all incoming requests.

When it is your turn to speak, you will be notified that the host has unmuted you. You may press ***9** again if you wish to be removed from the queue.

You will be notified at the end of your statement that you have been muted.



Report to the City Council
Special City Council - 02 Apr 2021

Agenda Section: NEW BUSINESS:

Subject: Discussion and analysis of City of St. Helena water supply to assess need for establishing Phase III water regulations pursuant to St. Helena Municipal Code Section 13.04.250

CEQA Determination: Not a CEQA project

Prepared By: Mark T. Prestwich, City Manager

Reviewed By: April Mitts, Finance Director

Approved By: Mark T. Prestwich, City Manager

BACKGROUND

St. Helena Municipal Code (SHMC) Section 13.04.220 et seq establishes that at any time the City Council finds and determines a water shortage emergency condition exists within the criteria of Sections 13.04.230 through 13.04.250, and that it is necessary to limit usage by the customers of the municipal water system, the City Council shall adopt a resolution setting forth the applicable phase.

On June 23, 2020, City Council adopted Resolution 2020-72 establishing Phase I Water Regulations based on SHMC Section 13.04.230. At the time of the declaration, the City had extremely low rainfall (20"), a forecast for a potential multi-year drought, and Bell Canyon Reservoir was at 60% capacity.

On October 27, 2020, City Council adopted Resolution 2020-107 establishing Phase II Water Regulations based on SHMC Section 13.04.240. As of October 13, 2020, Bell Canyon was at 39.4% capacity.

DISCUSSION

Without sustained water conservation actions of the community, the City may shortly be facing Phase III Water Regulations based on SHMC Section 13.04.250 (Attachment 1). The criteria for establishing Phase III is as follows:

1. The volume of water anticipated to be available prior to the next November 1, 2021 from all potable water sources is not sufficient to meet the projected demands through November 1st without demand reduction measures beyond the Phase II reductions being implemented.
2. In assessing the need to impose Phase III restrictions, due weight shall be accorded to the trigger system developed and defined by the safe yield committee for use by the director of public works. The trigger system is based on water levels in Bell Canyon Reservoir, with the level necessary to trigger a water emergency being adjusted each month to reflect the supply capacity of groundwater and water to be delivered by the City of Napa at that time. (Attachment 2 - Safe Yield Committee Report.)

There are several factors which have led to the declaration of both the Phase I and Phase II water emergency and potentially leading to the declaration of a Phase III water emergency. These include:

- Lack of Rain - total rainfall this year as of February 28, 2021 is 10.84". Total rainfall by the end of February 2020 was 15.57 inches. An annual average rainfall year is 36.7".
- LNU and Glass Fires - both the LNU and Glass Fires required the use of any and all available resources for fire suppression activities. The amount of loss is unknown; however, water was used from fire hydrants, residential pools, and Bell Canyon Reservoir.
- Evaporation - high temperatures in the summer months caused additional water loss due to evaporation at the reservoir.
- Hydrant Flushing Routine Maintenance - hydrant flushing is necessary to maintain the quality of water that is delivered to City customers and is an important practice necessary to assure that hydrants are in proper working condition in the event of a fire. Routine flushing removes sediment and rust from the water and helps maintain proper chlorine concentrations in the water. This routine maintenance keeps the water moving thus preventing it from being stagnant and helps sustain the integrity of the pipes.
- Hydrant Flushing Repairs - similar to maintenance, it is also necessary to flush water lines when repairs/or upgrades are made to the City's water supply lines. Over the past year there have been eight instances where hydrant flushing was necessary totaling approximately 120,000 gallons.

The current status of the City's potable water system is shown in Table 1 and Table 2 provides the average five-year average historical use through November.

Table 1 - 03/30/21 Status of the City's Potable Water System

Water Source	AF Available	% Capacity
Bell Canyon Reservoir*	466	43%
Stonebridge Wells	90 (2/28/21)	20%

City of Napa Water	312 (2/28/21)	52%
TOTAL AVAILABLE	868 AF	

*removes 25% set aside for fire suppression

Table 2 - 5-year Average Historical Use

Month	5-year historical average use
April	109
May	142
June	169
July	197
August	195
September	192
October	179
November	124
December	93
TOTAL AVERAGE USE	1400 AF

If no additional rain is received and if water conservation requirements are not met, the City's Bell Canyon Reservoir will have 654 AF water available which represents 27% percent capacity on November 1. However, only 58 AF will be available for water supply as the reservoir must be maintained at 25% or higher.

The calculations presented by Raftelis at the March 23, 2021 City Council meeting estimate Phase II conservation efforts would result in an approximate 30% reduction of water use in the City. A review of January through March 2021 customer use indicates customers have collectively reduced consumption by 29% below the 5-year average use. If the target of 30% reduction is met through October 2021, then it does not appear a Phase III water emergency will be issued and the City will be better prepared to endure another year of drought should 2022 rainfall totals fall short for the third straight year.

During Phase III water regulations, all conservation requirements under Phase I and Phase II are in effect as well as additional conservation measures. Attachment 1 provides details in the SHMC for mandatory conservation measures under all Water Emergency Phases and Attachment 3 provides a summary for all mandatory conservation measures under the Phase III emergency. If needed, Phase III regulations would include strict conservation measures including prohibiting the use of irrigation of lawns and landscaping, the refilling of pools and hot tubs, and new water connections.

Water Conservation is the Solution!

Today's analysis forecasts the City can avoid a Phase III water emergency through aggressive conservation efforts. As the temperatures warm in the coming months, one

of the most effective water conservation measures our community can implement will be to significantly reduce outdoor irrigation.

If the community reduces water use by 30%, the City will save approximately 425 acre feet of water through the remainder of calendar year 2021 and avoid a Phase III water emergency. Every drop counts and all residents and businesses are encouraged to contribute their collective efforts to reducing water use by at least 30% through the remainder of the year. Several recommended conservation measures are provided below in Table 3 and attached to this report. Updates on community conservation efforts will be shared at future Council meetings and via the City's communication channels.

Table 3 - Recommended Water Conservation Measures

Activity	Efficient Use	Conservation
Landscaping	Install efficient sprinkler nozzles and smart weather-based system.	Reduce watering cycle and eliminate one cycle per week.
Car Washing	Use an auto-shut off nozzle.	Use a bucket and sponge or a commercial carwash.
Showering	Install WaterSense-labeled showerheads.	Limit showers to 5 minutes or less and capture cold water with bucket to use for landscaping.
Bathing	Fill bathtub only half full.	
Toilet Flushing	Install high-efficiency toilets.	Limit flushes and don't flush items such as baby wipes, female hygiene products, or paper towels.

Outreach

Due to the nature of the ongoing water emergency, City staff will begin additional water conservation outreach immediately, including the following:

1. Meeting with the business community on April 8, 2021 to discuss the mandatory conservation measures as well as the penalty stage.
2. Implementing an emergency structure in relation to water conservation including frequent press releases and notification about the water emergency.
3. Messaging of the importance of the City's limited water supply and the crisis the City faces.

Immediate City Conservation Measures

Because the lack of rainfall and the necessary conservation measures, effective March 30, 2021, the City proactively began implementing Phase III conservation measures at all City facilities and City-owned properties. Most notable is the discontinuance of using

water for irrigation of turf, lawns, and landscaping. If continued, these measures will turn turf areas brown this summer.

FISCAL IMPACT

The total fiscal impact of implementing Phase III Water Regulations is unknown. Several components will fiscally affect the City including:

1. Drought Rates - The 2017 adopted water rate structure includes a drought period surcharge that begins once the City implements Phase I Water Regulations. Drought rates are applied to use charges (does not affect service (or base) charges). Drought rates are 6% higher than non-drought rates because during drought years the cost of water per 1,000 gallons is 6% higher than during non-drought years. Drought rates went into effect July 1, 2020.
2. Decrease in Consumption - Both Phase II and Phase III Water Regulations limit the amount of use based on winter average for commercial, industrial, and commercial users and limits the amount of use based on the number of persons in a household for residential customers. While drought rates went into effect July 1, 2020, additional water conservation requirements will result in a decrease in water enterprise revenues. A full analysis of this reduction is yet to be completed.
3. Additional Staffing and Outreach - Additional staffing and outreach costs will be associated with the implementation and monitoring of Phase III Water Regulations due to: (a) outreach to all customers which will include mailers and possible follow-up phone calls, (b) calculations which must be done for customers based on classification, (c) customer data input into the City's financial software system for each customer; (d) monitoring of water use for the duration of the water emergency, and (e) implementation of penalties.
4. Penalties - At the March 23, 2021 City Council meeting, City Council directed staff to move forward with the recommended penalty structure presented by Raffelis. The recommended penalty structure will be taken to City Council for adoption on April 13, 2021. The amount of penalties assessed will be dependent on the individual consumption of water customers. Penalties received will be placed in the water enterprise fund to be used for water enterprise activities including offsetting revenue losses due to water conservation measures, paying for additional water from other sources, and to offset the increase costs due to additional staffing and outreach activities.

RECOMMENDED ACTION

Discuss and provide direction to the City Manager.

ATTACHMENTS

[Attachment 1 - SHMC 13.04.220 et seq](#)

[Attachment 2 - Safe Yield Committee Report](#)

[Attachment 3 - Water Emergency Phase Matrix](#)

[Attachment 4 - Water Projections Forecast](#)

[Water Conservation Tips](#)

Article 2

Water Shortage Emergencies, Drought and Water Conservation

13.04.220 Procedure for establishing water emergency phases.

At any time that the city council finds and determines that a water shortage emergency condition exists within the criteria of Sections 13.04.230 through 13.04.250, and that it is necessary to limit usage by the customers of the municipal water department, the city council shall adopt a resolution setting forth the applicable phase. As soon as is practicable after adoption of such resolution, the city clerk shall cause to be published at least once, in a newspaper of general circulation published and circulated in the city, a notice declaring the establishment of such regulatory phase. Such notice shall set forth the limitations of water use applicable to the particular phase being established and shall further declare that violations of such limitations are punishable in accordance with the provisions of Sections 13.04.230 and 13.04.310. The establishment of a particular phase shall be completed and effective as described in the resolution adopting the water shortage phase.

Whenever the cumulative rainfall for the current water year (beginning November 1st) is less than the median amount for the same time period, the director of public works or designee shall report at least monthly to the city council and recommend whether the city should enter into a water shortage phase, and if so, which phase is recommended.

At any time, the state of California may require the city to conform with emergency drought regulations. Notwithstanding any other provisions of this article, the city council may, at the recommendation of the director of public works, activate a water shortage phase as a means of compliance with emergency drought regulations adopted by the state. (Ord. 16-13 § 5 (Att. 6 (part)): Ord. 15-5 § 1 (part): Ord. 11-7 (part): Ord. 02-7A § 1 (part): prior code § 18.23)

13.04.221 Water conservation.

St. Helena has limited water resources and has adopted both required and encouraged conservation measures. All customers shall comply with all mandatory water use efficiency requirements within this chapter for water conservation. Any customer who fails to comply with the mandatory water conservation measures shall immediately stop the water waste by installing the appropriate water-saving devices in their plumbing, appliances, or improvements, or take other such actions as directed by the city to bring about full compliance.

A. All persons are encouraged to use the following water use efficiency guidelines to minimize water waste:

1. Establish procedures in the home and business to recycle water;
2. Install water-saving devices in existing facilities including low flow showerheads, faucet aerators, ULF (ultra-low flush) toilets, and WaterSense certified (or successor certification) appliances;
3. Refrain from additional irrigation and unnecessary use of water, such as car washing, when the temperature exceeds ninety (90) degrees Fahrenheit;
4. Limit the expansion or installation of new water-using appliances, plumbing or improvements, such as lawns, landscaping, pools, sprinkler irrigation systems, wash-down equipment, larger washing machines or garbage disposal units. In the event that a new water-using appliance is necessary, installation of water efficient devices are encouraged;

5. All schools, social and professional groups, churches, etc., should discuss water conservation as a regular agenda item and forward worthwhile suggestions to the department for consideration and implementation;

6. Limit irrigation of potable water to landscaping between the hours of eight a.m. and eight p.m.; and

7. All sites with irrigated landscapes or gardens are encouraged to establish the following irrigation practices:

a. Turn off irrigation systems during the off-peak season (November through April) as defined in Section 13.04.080;

b. Reduce the amount of time for all outdoor irrigation.

B. Mandatory Conservation Measures. The following water conservation prohibitions and limitations are required by all persons:

1. The application of potable water to any driveway or sidewalk is prohibited, unless the person proposing such application of potable water documents to the director of public works' satisfaction that application is necessary to abate a condition constituting a public health hazard.

2. Using a hose that dispenses potable water to wash a motor vehicle is prohibited unless the hose is fitted with a shut-off nozzle.

3. Customers shall install new landscaping in existing or new development that is water efficient within the meaning of the state's water efficient landscape ordinance.

4. Using potable water to water outdoor landscapes in a manner that causes runoff to adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots or structures is prohibited.

5. Using potable water in a fountain or decorative water feature is prohibited unless the water is part of a recirculating system.

6. Withdrawing water from fire hydrants, except for firefighting, firefighting training, and water system maintenance purposes, is prohibited.

7. Use of potable water for grading, dust control, street, pipeline or similar construction is prohibited.

8. The application of potable water to outdoor landscapes during and up to forty-eight (48) hours after measurable rainfall is prohibited.

9. No person shall use potable water to irrigate ornamental turf on public street medians.

10. Restaurants, hotels, cafes, cafeterias, bars or other public places where food or drink is served and/or purchased shall supply water to patrons only upon request.

11. Operators of hotels and motels shall provide guests with the option of choosing not to have towels and

linens laundered daily. The hotel or motel shall prominently display notice of this option in each bathroom using clear and easily understood language.

12. All projects for which the planning department requires approved landscape plans must adhere to the city's xeriscape standards or the state's Model Water Efficient Landscape Ordinance, whichever is stricter, in order to obtain plan approval.

13. Any new water connection for new development must offset new demand by an amount of water equal to the new demand on the city water system using the methodology defined in Section 13.12.030. The offset must be clearly demonstrated, to the satisfaction of the director of public works. (Ord. 16-13 § 5 (Att. 6 (part)))

13.04.230 Phase I water regulations.

A. The criteria for establishing Phase I shall be any or all of the following:

1. The supply/usage balance, as calculated at the beginning of the fiscal year, is in deficit;
2. The volume of water to be delivered by the city of Napa in any fiscal year will not exceed four hundred (400) AF;
3. The volume of water anticipated to be available prior to the next November 1st, as determined by the director of public works, is not sufficient to meet projected demand through November 1st without demand reduction measures being implemented; or
4. Conditions requiring the establishment of a Phase II water emergency, as determined by the director of public works, appear to be imminent.

B. During the Phase I water emergency, the following mandatory conservation measures by customers of the department shall be enforced by the department and publicized by the city:

1. All customers must be in compliance with all water conservation requirements of Section 13.04.221(B) (Water Conservation). If a customer is found to be out of compliance with any part of Section 13.04.221 or provisions of these water shortage emergency requirements, the customer must immediately stop the water waste by installing the appropriate water-saving devices in their plumbing, appliances, or improvements, or take other such actions to bring about full compliance.
2. All customers are prohibited from expanding or installing landscaping or appliances that will increase the overall water use of the property. Replacement of existing appliances, landscaping, plumbing, or improvements shall be allowed only if the change can be documented to the satisfaction of the director of public works to result in more efficient water-using fixtures or systems.
3. Customers shall cease the operation of air-cooling outdoor misting systems using treated water supplied by the city, unless on a timer.
4. Outdoor irrigation of ornamental landscapes or turf with potable water is limited to no more than two days a week. The director of public works shall specify the two days per week in accordance with the needs of any geographical area within the city.

5. No person shall use potable water to irrigate landscaping between the hours of eight a.m. and eight p.m.
 6. Irrigation with potable water of landscapes outside of newly constructed homes and buildings shall be in a manner consistent with regulations or other requirements established by the California Building Standards Commission and the Department of Housing and Community Development. If irrigation systems are installed as a part of new development, they shall be drip or microspray irrigation systems or a system determined by the director of public works or designee to be more efficient.
 7. Draining and refilling of swimming pools shall be permitted only as needed for the purpose of pool repair or to correct a severe chemical imbalance. Draining and refilling of decorative ponds and lakes shall be permitted only as needed for the purpose of lining the bottom to prevent absorption.
 8. All new or replacement industrial and commercial clothes washers shall be high efficiency as defined by the U.S. Environmental Protection Agency. All new or expanded car washing facilities shall include water-saving methods.
 9. In accordance with Section 864 of Title 23 of the California Code of Regulations or any successor regulation, the taking of any action prohibited in this subsection B, in addition to any other applicable civil or criminal penalties (including the penalties set forth in Sections 13.04.230 and 13.04.310), is an infraction, punishable by a fine of up to five hundred dollars (\$500.00) for each day in which the violation occurs.
- C. During the Phase I water emergency, the following actions shall be carried out by the city:
1. The city shall notify customers that one or more of the criteria for Phase I has been met, and shall identify and explain in sufficient detail each criterion that forms a basis for establishing a Phase I water emergency.
 2. The city shall notify customers of the water usage allocation for each account that would be allowed under a Phase II water emergency if a Phase II water emergency appears to be imminent.
 3. The city shall advise customers of the Phase I water shortage and of restrictions and opportunities for exception permits that are available under Section 13.04.280 if a Phase II water emergency appears to be imminent.
 4. Any applicant for, or holder of, a building permit for construction that may be affected by the existence of this or future water emergency phases shall be informed of the impact of such phases, but lack of such notice shall not permit a new water connection that is otherwise prohibited.
 5. The city shall not issue permits for construction of any new swimming pool unless the pool is to be supplied with water other than treated water supplied by the city. Customers are encouraged to fill existing pools from water other than treated water.
 6. If a Phase II water emergency appears to be imminent, the city shall make plans for implementation of a water shortage disaster plan, which shall include provisions for:
 - a. Emergency water stations;

b. Acquisition of private property under the right of eminent domain, with immediate possession to alleviate the emergency; and

c. Application for relief assistance from county, state, and federal sources.

7. The city council shall give notice to any customer that has a terminable contract with the department (whereby the department is the supplier) that such contract will be terminated upon implementation of Phase III by the city council.

8. If the declaration of a Phase II emergency appears reasonably imminent, the city council shall cause a water advisory board to be formed consisting of one city council member, one planning commissioner, one winery customer, and two public members, one of whom shall be solely a residential customer. The director of public works shall be an ex officio member of this board. Unless the city council otherwise directs, the board will disband when the water emergency is no longer in effect. The water advisory board shall have access to all records in the possession of the water enterprise necessary in its judgment to perform its duties, including customer records. The board shall maintain the confidentiality of individual customer records unless the board determines by resolution that release of such information is necessary in the pursuit of its duties.

D. In addition to the mandatory measures defined in subsection B of this section, customers of the department and members of the community are encouraged to do the following:

1. Reduce all indoor water use to not more than an average of seventy-five (75) gallons per person per day within the residence, including single-family residences, apartments, condominiums, townhomes, mobile homes and manufactured homes.

2. Reduce indoor water use in the work place and commercial establishments by a minimum of ten percent (10%) from customary consumption.

3. Eliminate or defer all nonessential water use such as topping off swimming pools.

4. All schools, social and professional groups, churches, etc., are encouraged to discuss water conservation as a regular agenda item and to forward worthwhile suggestions to the department for consideration. (Ord. 16-13 § 5 (Att. 6 (part)): Ord. 15-5 § 1 (part): Ord. 14-11 § 3 (Exh. A): Ord. 14-9 § 5 (Exh. A): Ord. 11-7 (part): Ord. 02-7A § 1 (part): prior code § 18.23.1)

13.04.240 Phase II water regulations.

A. The criteria for establishing Phase II shall be:

1. The volume of water anticipated to be available prior to the next November 1st from all potable water sources is not sufficient to meet the projected demands through November 1st without demand reduction measures beyond the Phase I reductions being implemented; or

2. Conditions requiring the establishment of a Phase III water emergency appear imminent.

3. In assessing the need to impose Phase II restrictions, due weight shall be accorded to the trigger system

developed by the safe yield committee for use by the director of public works. The trigger system is based on water levels in Bell Canyon Reservoir, with the level necessary to trigger a water emergency being adjusted each month to reflect the supply capacity of groundwater and water to be delivered by the city of Napa at that time. Details of the system can be obtained from the director of public works.

B. All mandatory and voluntary measures established by Section 13.04.221, Water Conservation, and Phase I, Section 13.04.230(B), (C) and (D) shall be included in Phase II and publicized by the city except insofar as they are inconsistent with subsections C and D of this section.

C. The following mandatory conservation measures by customers of the department shall be enforced by the department:

1. Commercial, industrial, and institutional users other than dedicated irrigation accounts will receive an allocation per billing period which will be ten percent (10%) less than the average use during the four winter months of the preceding non-shortage year; provided, that no commercial, industrial, or institutional user will be required to reduce usage to less than sixty (60) gallons per day. Users with no prior record of use shall be governed by comparable facilities' usage records as determined by the department. Commercial, industrial, and institutional customers with irrigation and domestic use provided by the same water meter may receive an additional landscape allocation of up to seventy (70) gallons per day per thousand (1,000) square feet of landscaped area during April through October by documenting the landscaped square footage served by city water to the satisfaction of the director of public works. For purposes of landscape allocation, the April allocation period will begin on the date the water meter is read in April, and the October allocation period will end on the date the water meter is read in November.

2. Residential users in the single-family residential, multifamily residential, mobile home and manufactured homes customer classes will receive an allocation per billing period which will be limited to sixty-five (65) gallons per person per day. Single-family residences will receive an additional twenty-five hundred (2,500) gallons per month from April through October for landscape irrigation. Multifamily residential, mobile home and manufactured homes customers may receive a landscape allocation of up to seventy (70) gallons per day per thousand (1,000) square feet of landscaped area during April through October by documenting the landscaped square footage served by city water to the satisfaction of the director of public works. For purposes of landscape allocation, the April allocation period will begin on the date the water meter is read in April, and the October allocation period will end on the date the water meter is read in November.

3. For a lawn, landscaping, vineyard or field watered or irrigated through a meter dedicated to that use, usage shall be limited to sixty percent (60%) of current reference evapotranspiration as established in the California Model Water Efficient Landscape Ordinance (MWELO) or successor regulations.

4. No new water connections shall be permitted during a Phase II water emergency.

D. During the Phase II water emergency, the following actions shall be carried out by the city:

1. The city shall notify customers of the water usage allocation for each account that would be allowed under a Phase III water emergency.

2. The department of public works shall make available, or arrange to have delivered, nonpotable water from

either lower reservoir or, if permitted and available, tertiary treated wastewater to city-owned properties for irrigation purposes.

3. Nothing herein shall restrict the authority of the director of public works from imposing more severe usage restrictions on each class of water customer if circumstances so warrant. (Ord. 16-13 § 5 (Att. 6 (part)): Ord. 15-5 § 1 (part): Ord. 11-7 (part): Ord. 02-7A § 1 (part))

13.04.250 Phase III water regulations.

A. The criteria for establishing Phase III shall be:

1. The volume of water anticipated to be available prior to the next November 1st from all potable water sources is not sufficient to meet the projected demands through November 1st without demand reduction measures beyond the Phase II reductions being implemented.

2. In assessing the need to impose Phase III restrictions, due weight shall be accorded the trigger system developed and defined by the safe yield committee for use by the director of public works. The trigger system is based on water levels in Bell Canyon Reservoir, with the level necessary to trigger a water emergency being adjusted each month to reflect the supply capacity of groundwater and water to be delivered by the city of Napa at that time. Details of the system can be obtained from the director of public works.

B. All mandatory and voluntary measures established by Section 13.04.221, Water Conservation, and Phases I and II, Sections 13.04.230(B), (C) and (D) and 13.04.240(B), (C) and (D), shall be included in Phase III and publicized by the city, except insofar as they are inconsistent with subsections C and D of this section.

C. The following mandatory conservation measures by customers of the department shall be enforced by the department:

1. Commercial, industrial, and institutional users other than dedicated irrigation accounts will receive an allocation per billing period which will be twenty percent (20%) less than the average use during the four winter months of the preceding non-shortage year; provided, that no commercial, industrial, or institutional user will be required to reduce usage to less than fifty (50) gallons per day. Users with no prior record of use shall be governed by comparable facilities' usage records as determined by the department. The allocation for landscape irrigation will be fifty percent (50%) of the allocation in Phase II and will be based on the same meter reading period as for Phase II. Landscape allocations are provided for established non-turf plants only.

2. Residential users in single-family residential, multifamily residential, mobile home and manufactured homes customer classes will receive an allocation per billing period which will be limited to sixty (60) gallons per person per day. The allocation for landscape irrigation will be fifty percent (50%) of the allocation in Phase II and will be based on the same meter reading period as for Phase II. Landscape allocations are provided for established non-turf plants only.

3. For a vineyard or approved field (as approved by the water advisory board) watered or irrigated through a meter dedicated to that use, the allocation shall be limited to thirty percent (30%) of current reference evapotranspiration as established in the California Model Water Efficient Landscape Ordinance (MWELO) or successor regulations, and irrigation will be allowed for established non-turf plants only.

4. All nonessential uses of water shall be prohibited. Nonessential uses shall include, but not be limited to, the following:

- a. The use of water for irrigation of turf, lawns, or landscaping;
- b. The refilling of swimming pools, hot tubs and spas, except as required by the fire chief for use as standby neighborhood fire protection. The fire chief shall maintain a list of such pools to be on file at the fire department.

5. No new water connections for new development shall be permitted.

D. During the Phase III water emergency, the following actions shall be carried out by the city:

1. The department shall terminate all nonessential contracts which are terminable. (Ord. 16-13 § 5 (Att. 6 (part)):
Ord. 15-5 § 1 (part): Ord. 11-7 (part): Ord. 02-7A § 1 (part): prior code § 18.25)

13.04.270 Termination of water emergency phases.

Water emergency phases shall be terminated or changed to a less critical phase in the same manner as they are established in accordance with criteria set forth in the preceding sections and at the discretion of the city council. (Ord. 16-13 § 5 (Att. 6 (part)):
Ord. 15-5 § 1 (part): Ord. 11-7 (part): Ord. 02-7A § 1 (part): prior code § 18.28)

13.04.280 Exception permits.

A. Under a Phase II or Phase III water emergency, the director of public works shall, with such conditions as seem to him or her to be reasonable, grant exception permits in addition to any basic allocation, on application of a water customer submitted under penalty of perjury, based on the conditions defined in this section. The city may provide a process for certification of efficiency, lot size, medical condition, or efficient and essential use prior to declaration of a water shortage emergency condition which could result in a customer being prequalified for exception.

1. For any customer with an allocation based on previous water use, if it can be demonstrated to the satisfaction of the director of public works that water conservation measures beyond those required in Chapter 13.12 were in place prior to the preceding non-shortage year, an additional quantity of water may be allocated to recognize the higher efficiency in place prior to the water emergency condition.

2. For single-family residential parcels exceeding seven thousand (7,000) square feet in area, the quantity of up to twenty (20) gallons per day for each one thousand (1,000) square feet that the property area exceeds seven thousand (7,000) square feet for the purpose of maintaining mature landscape or orchard plants. For purposes of this subsection, multiple parcels maintained and fully landscaped as one property may be computed as being one parcel. An exception granted based on this subsection shall allow the use of no more than an additional two hundred fifty (250) gallons per day for this purpose.

3. For medical conditions of a resident, a quantity as required to maintain health standards.

4. For any customer with an allocation based on previous winter water use, if it can be demonstrated to the satisfaction of the director of public works that efficient and essential water uses are not represented in average winter water use, an additional quantity of water may be allocated to provide for these efficient and essential needs.

B. The water advisory board shall meet at least monthly and may grant permits for uses of water or for exceptions to water conservation measures or for water connections otherwise prohibited by Sections 13.04.230, 13.04.240, and 13.04.250 if it finds and determines that such regulations would:

1. Cause an unnecessary and undue hardship to the applicant or to the public;
2. Cause an emergency condition affecting the health, sanitation, fire protection, or safety of the applicant or public; or
3. Promote water conservation by providing for the establishment of water efficient landscaping meeting the standards of Section 17.112.140 and such policies and regulations as have been adopted to implement the provisions of that chapter, replacing more water-intensive landscaping.

C. The water advisory board of the city shall prescribe necessary procedures for application for and use of exception permits.

D. Any decision of the director of public works in granting or denying exceptions may be appealed by the applicant or any other person to the water advisory board by filing a written appeal with the city clerk within ten (10) calendar days after the date of mailing of written notice to the applicant of the decision rendered. The water advisory board shall use its best efforts to hear and determine such appeal within twenty (20) days, and shall affirm, reverse, or modify the decision.

E. Any decision of the water advisory board may be appealed by the applicant to the city council according to the provisions of Chapter 1.16. (Ord. 16-13 § 5 (Att. 6 (part)): Ord. 15-5 § 1 (part): Ord. 11-7 (part): Ord. 02-7A § 1 (part): prior code § 18.28.1)

13.04.310 Violation—Misdemeanor.

Notwithstanding any provision of this code to the contrary, the provisions of Section 377 of the California Water Code shall be applicable to any violation of this article. Any person violating any of the provisions of this article shall be guilty of a misdemeanor. Upon conviction thereof, such person shall be punished by imprisonment in the county jail and/or fined in accordance with the penalties as set forth in the provisions of Section 377 of the California Water Code. (Ord. 16-13 § 5 (Att. 6 (part)): Ord. 15-5 § 1 (part): Ord. 11-7 (part): Ord. 02-7A § 1 (part): prior code § 18.30)

Thursday, March 17, 2011

Report of the Safe Yield Committee

I. INTRODUCTION

In accordance with a policy directive (PF1.1) in the General Plan Update 2030 (revised draft, October 2010), which brought forward a similar but unfulfilled directive from the 1993 General Plan, the City Council on December 14, 2010 appointed the Safe Yield Committee ("the Committee") to ascertain the annual safe yield of the St. Helena potable water system at the present time. The ultimate goal of the Committee was to determine whether, at the present time, potable water usage was below, above, or equal to the safe yield of the potable water supply system.

The Committee consisted of Alan Galbraith, Tim Nieman, and John Sales. The Committee met a total of seven times. The Committee was supported by the Public Works Director, John Ferons. The Committee reviewed its work with Jim Connell of West Yost Associates, the City's outside consulting firm on water supply. This report states the findings, conclusion, and immediate recommendations of the Committee.

The Committee is pleased to report that Mr. Ferons and Mr. Connell are in concurrence with the Committee's calculations of water supply from each water supply source, given the definition of "safe yield" immediately below. They also agree with the Committee's recommendations in Section VII. They take no position on the definition of "safe yield" itself as it is a policy-level issue.

II. DEFINITION OF SAFE YIELD

The meaning of "safe yield" was not defined in the 1993 General Plan. In connection with the general plan update process, the Planning Commission undertook to define the meaning of "safe yield." The City Council approved the definition recommended by the Planning Commission.

The definition of "safe yield" is as follows: **"The safe annual yield of the St. Helena water supply system is that quantity of water which can be reliably delivered on an annual basis through most rainfall years, including a Dry Year (rainfall at 22" to 25.9") without undue hardship on water customers through water shortage restrictions. It is recognized that the safe annual yield, as so defined, could place significant hardship on water customers in a Critically Dry Year (rainfall at 21.9" or less) or in periods of two or more consecutive Dry Years."**

The initial task of the Safe Yield Committee was to quantify the “safe yield” of the City’s potable water supply system *under current operating conditions*.

III. THE SAFE YIELD OF THE ST. HELENA WATER SUPPLY SYSTEM

Based on current operating conditions, the annual safe yield of the St. Helena potable water supply system is estimated to be 1950 AF.

The Committee’s modeling shows that if the City experiences a dry year (22 inches of rainfall) following a series of normal rainfall years, the City can make it through this single dry year with, potentially, the necessity for Phase III restrictions during at least some months in the dry year. This is not deemed an “undue hardship,” even though the imposition of Phase III restrictions would require mandatory rationing and is clearly a significant hardship. The Committee considers “undue hardship” to be Phase IV or V restrictions, or three or more consecutive months of Phase III restrictions.

The basic supply assumptions behind the Committee’s modeling are as follows: (1) the City purchases all Napa water available to it, including the option water (200 AF over 600 AF) in years when it can be purchased; (2) the City limits groundwater production to a long-term average not to exceed 450 AF/yr; (3) the City manages Bell Canyon reservoir as it is currently being managed. The Committee’s model assumes that the City at all times meets its bypass obligations as set forth in Permits 9157 and 14810 from the State Water Resources Control Board.

Detailed computer modeling provides the factual basis for the safe yield finding of the Committee. The models used are extensions of models constructed and used by West Yost Associates. All inputs are based on the best data available; where the data are incomplete, the uncertainties are captured as probabilities and/or examined via sensitivity analysis to gain additional confidence in the stability of the results.

IV. THE NET SAFE YIELD OF THE ST. HELENA WATER SYSTEM

In order to assess total potable water supply of the City’s Water Enterprise that is actually available for sale to customers, it is necessary to subtract from the total supply that amount of water that is not actually available for delivery (“unavailable water”). The safe yield of the St. Helena Water System less unavailable water equals the *net* safe yield of the system.

“Unavailable water” consists of “unaccounted for water,” which is metered water that enters the water supply distribution system but cannot be sold to customers due to loss in the distribution system, metered water necessarily lost in connection with the filtration process at

the Water Treatment Plant at Bell Canyon, and metered water lost in well backwashing at the Stonebridge Well Complex.

The quantity of unavailable water was determined through careful analysis of potable water production and potable water sales in calendar year 2010 (ending December 31, 2010). This data was deemed more reliable than prior year data on account of completion of the meter replacement program prior to 2010. Unavailable water is best expressed as a percentage of production.

Based on calendar year 2010 data, total unavailable water, expressed as a percentage of production, was determined to be 14.96% (15.0% rounded). Of this amount, 14.47% was unaccounted for water loss. The remainder (0.49%) was water lost in production at Bell Canyon and at the Stonebridge complex.

Accordingly, at the current annual safe yield of the potable water supply system at 1950 AF, the *net* safe yield of the potable water supply system is 1658 AF (1950AF – (1950 AF x 15.0%)).

V. CURRENT SYSTEM POTABLE WATER USAGE

Due to the numerous factors that can impact water usage in any single year (total rainfall, seasonality of rainfall, state of economic activity, water restrictions, *etc.*), the Committee, the Public Works Director, and West Yost Associates determined that the most accurate picture of water usage is presented by using a *five-year*, rolling average. Use of any shorter time period carries the serious risk of presenting a skewed picture of “current” usage.

The Committee uses “rainfall year” usage data (July 1 through June 30). A rainfall year coincides with the City’s fiscal year. The City summarizes usage data on a fiscal year basis.

Total potable (metered) water usage was 1853 AF in FY 2006, 2026 AF in FY 2007, 1894 AF in FY 2008, 1807 AF in FY 2009, and 1581 AF in FY 2010.

The current five-year average of metered usage is therefore 1833 AF. Adding in the estimates of unavailable water gives an estimate of total average water usage of 2156 AF (1833 x .85).

VI. THE CURRENT SUPPLY/USAGE BALANCE

Current total usage, 2156 AF, is above the safe yield of the St. Helena water supply system of 1950 AF. The difference is 206 AF.

VII. CONCLUSIONS AND RECOMMENDATIONS

The Committee concludes that the St. Helena potable water supply system, under current conditions, is *not* currently in balance under the definition of safe yield adopted by the City Council. In future years, estimates of total usage should be updated on an annual (fiscal year) basis using the most recent five-year rolling average to re-evaluate the supply/usage balance.

Apart from contracting for new sources of water, the Committee recommends that the City consider two immediate steps to augment potable water supply.

First, the City should seek an amendment to the Napa contract. The current contract with Napa uses a trigger date of April 15 for determining the delivery quantities available to the City, and is based on the allocation of water from the State Water Project (“SWP”) to Napa on that date. The SWP allocation to Napa is often updated after April 15, usually as an increase. The new amendment will seek to change the effective trigger date to June 30. It should provide that if the SWP increases its allocation to Napa in the period between April 15 and June 30, and the increase would have triggered the City’s obligation to purchase 200 AF over the base 400, then Napa will deliver and St. Helena will pay for the additional 200 AF. Similarly, if the SWP increases its allocation to Napa in the period between April 15 and June 30, and the increase would have triggered the City’s option to purchase 200 AF over 600 AF, then Napa will provide St. Helena with the option to purchase 200 AF over 600 AF. The Committee estimates that this change in the Napa contract will increase the annual safe yield of the water supply system by approximately 75 AF.

Second, the safe yield of the system can be increased by giving the Public Works Department more opportunity to attempt to optimize its operations. Specifically, if the pumping capacity of groundwater wells were increased, Bell Canyon could be drawn down more during normal years (less carryover water) but with the ability to produce more groundwater in drought years. The overall anticipated effect would be to increase the total yield of the system and, at the same time, reduce over the long run the City’s average groundwater production from the Stonebridge Wells. Although further study is needed, initial modeling estimates that such a change in operations would increase the annual safe yield of the water supply system.

The Committee has the following **two additional recommendations**:

Third, City should retain West Yost Associates to develop a new system for triggering water emergencies. The current system, developed at a time when Bell Canyon was the City’s primary source of water and at a time when the yields from Bell Canyon were materially greater than they are today, is out-of-date, and a poor indicator of actual conditions. A new system would take into account that the City has three sources of water, and would give the Public

Works Director authority to recommend to City Council an appropriate level of emergency water restrictions in the context of the total supply situation as it exists or is reasonably forecasted to exist. The Committee remains willing to work with West Yost Associates and the Public Works Director on this difficult assignment if deemed appropriate.

Fourth, the City should re-determine the usage/supply balance at the end of each fiscal year in the ordinary course of business of the Water Enterprise. This will require recalculation each year of the forward-rolling, five-year average total potable water usage. It should also take into account any change in supply conditions.

Respectfully submitted,

Alan Galbraith
Tim Nieman
John Sales

Mandatory Water Conservation		Phase I	Phase II	Phase III
1	The application of potable water to any driveway or sidewalk is prohibited, unless the person proposing such application of potable water documents to the director of public works' satisfaction that application is necessary to abate a condition constituting a public health hazard.	X	X	X
2	Using a hose that dispenses potable water to wash a motor vehicle is prohibited unless the hose is fitted with a shut-off nozzle.	X	X	X
3	Customers shall install new landscaping in existing or new development that is water efficient within the meaning of the state's water efficient landscape ordinance.	X	X	X
4	Using potable water to water outdoor landscapes in a manner that causes runoff to adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots or structures is prohibited.	X	X	X
5	Using potable water in a fountain or decorative water feature is prohibited unless the water is part of a recirculating system.	X	X	X
6	Withdrawing water from fire hydrants, except for firefighting, firefighting training, and water system maintenance purposes, is prohibited.	X	X	X
7	Use of potable water for grading, dust control, street, pipeline or similar construction is prohibited.	X	X	X
8	The application of potable water to outdoor landscapes during and up to forty-eight (48) hours after measurable rainfall is prohibited.	X	X	X
9	No person shall use potable water to irrigate ornamental turf on public street medians	X	X	X
10	Restaurants, hotels, cafes, cafeterias, bars or other public places where food or drink is served and/or purchased shall supply water to patrons only upon request.	X	X	X
11	Operators of hotels and motels shall provide guests with the option of choosing not to have towels and linens laundered daily. The hotel or motel shall prominently display notice of this option in each bathroom using clear and easily understood language	X	X	X
12	All projects for which the planning department requires approved landscape plans must adhere to the city's xeriscape standards or the state's Model Water Efficient Landscape Ordinance, whichever is stricter, in order to obtain plan approval.	X	X	X
13	Any new water connection for new development must offset new demand by an amount of water equal to the new demand on the city water system using the methodology defined in Section 13.12.030. The offset must be clearly demonstrated, to the satisfaction of the director of public works. (Ord. 16-13 § 5 (Att. 6 (part)))	X	X	X
14	All customers are prohibited from expanding or installing landscaping or appliances that will increase the overall water use of the property. Replacement of existing appliances, landscaping, plumbing, or improvements shall be allowed only if the change can be documented to the satisfaction of the director of public works to result in more efficient water-using fixtures or systems.	X	X	X
15	Customers shall cease the operation of air-cooling outdoor misting systems using treated water supplied by the city, unless on a timer	X	X	X
16	Outdoor irrigation of ornamental landscapes or turf with potable water is limited to no more than two days a week. The director of public works shall specify the two days per week in accordance with the needs of any geographical area within the city.	X	X	X
17	No person shall use potable water to irrigate landscaping between the hours of 8 a.m. and 8 p.m.	X	X	X
18	Irrigation with potable water of landscapes outside of newly constructed homes and buildings shall be in a manner consistent with regulations or other requirements established by the California Building Standards Commission and the Department of Housing and Community Development. If irrigation systems are installed as a part of new development, they shall be drip or microspray irrigation systems or a system determined by the director of public works or designee to be more efficient.	X	X	X
19	Draining and refilling of swimming pools shall be permitted only as needed for the purpose of pool repair or to correct a severe chemical imbalance. Draining and refilling of decorative ponds and lakes shall be permitted only as needed for the purpose of lining the bottom to prevent absorption.	X	X	X

Mandatory Water Conservation		Phase I	Phase II	Phase III
20	All new or replacement industrial and commercial clothes washers shall be high efficiency as defined by the U.S. Environmental Protection Agency. All new or expanded car washing facilities shall include water-saving methods.	X	X	X
21	Commercial, industrial, and institutional users other than dedicated irrigation accounts will receive an allocation per billing period which will be ten percent (10%) less than the average use during the four winter months of the preceding non-shortage year; provided, that no commercial, industrial, or institutional user will be required to reduce usage to less than sixty (60) gallons per day. Users with no prior record of use shall be governed by comparable facilities' usage records as determined by the department. Commercial, industrial, and institutional customers with irrigation and domestic use provided by the same water meter may receive an additional landscape allocation of up to seventy (70) gallons per day per thousand (1,000) square feet of landscaped area during April through October by documenting the landscaped square footage served by city water to the satisfaction of the director of public works. For purposes of landscape allocation, the April allocation period will begin on the date the water meter is read in April, and the October allocation period will end on the date the water meter is read in November.		X	- Allocation reduced to 20% - Allocation for landscape irrigation will be 50% less of the allocation in Phase II - Landscape allocations are provided for established non-turf plants only
22	Residential users in the single-family residential, multifamily residential, mobile home and manufactured homes customer classes will receive an allocation per billing period which will be limited to sixty-five (65) gallons per person per day. Single-family residences will receive an additional twenty-five hundred (2,500) gallons per month from April through October for landscape irrigation. Multifamily residential, mobile home and manufactured homes customers may receive a landscape allocation of up to seventy (70) gallons per day per thousand (1,000) square feet of landscaped area during April through October by documenting the landscaped square footage served by city water to the satisfaction of the director of public works. For purposes of landscape allocation, the April allocation period will begin on the date the water meter is read in April, and the October allocation period will end on the date the water meter is read in November.		X	- Allocation reduced to 60 gallons per person per day - Allocation for landscape irrigation will be 50% of the allocation in Phase II - Landscape allocations are provided for established non-turf plants only
23	For a lawn, landscaping, vineyard or field watered or irrigated through a meter dedicated to that use, usage shall be limited to sixty percent (60%) of current reference evapotranspiration as established in the California Model Water Efficient Landscape Ordinance (MWELO) or successor regulations.		X	See Line 25 for Vineyard and Field Watering
24	No new water connections shall be permitted during a Phase II emergency.		X	
25	For a vineyard or approved field (as approved by the water advisory board) watered or irrigated through a meter dedicated to that use, the allocation shall be limited to 30% of current reference evapotranspiration as established in the California Model Water Efficient Landscape Ordinance (MWELO) or successor regulations.			X
26	Prohibited - The use of water for irrigation of turf, lawns, or landscaping			X
27	Prohibited - The refilling of swimming pools, hot tubs and spas, except as required by the fire chief for use as standby neighborhood fire protection.			X
28	No new water connections for new development			X

Analysis

City of St. Helena
Water Shortage Forecast

As of 3.30.21

5 Years of Average Monthly Use by Source
March 2016 - Feb 2021 (60 months)
ALL DATA IN ACRE FEET (AF)

	BC Res.	Wells	Napa	Total Usage
Jan	47	5	30	82
Feb	40	10	30	80
Mar	41	4	45	90
Apr	48	10	51	109
May	51	31	60	142
Jun	73	42	54	169
Jul	88	47	62	197
Aug	81	53	61	195
Sep	85	48	58	192
Oct	87	38	54	179
Nov	50	27	47	124
Dec	44	17	31	93
	735	333	583	1652

		Current Capacity	Capacity											
		EOM 3/21	Mar	Apr	May	Jun	July 1st	Jul	Aug	Sep	Oct	Nov	Dec	
Bell Canyon Res.	Avg Monthly Use		41	48	51	73		88	81	85	87	50	44	
	Remaining Supply	466	425	377	326	253	253	166	85	0	-87	-137	-181	
Stonebridge Wells	Avg Monthly Use	90	4	10	31	42		47	53	48	38	27	17	
	Remaining Supply		86	76	44	2	450	403	350	302	264	237	220	
Napa Pipeline	Avg Monthly Use	312	45	51	60	54		62	61	58	54	47	31	
	Remaining Supply						600	538	477	418	364	317	286	
Total Supply - ALL SOURCES:		868	556	504	431	310	1303	1107	912	720	541	417	325	
Total Avg. Monthly Use:			90	109	142	169		197	195	192	179	124	93	
Remaining Overall Supply:			466	395	289	141		910	717	528	363	293	232	

Average Use from now to November: 1397 AF

Optimizing Napa Water

City of St. Helena
Water Shortage Forecast

As of 3.30.21

5 Years of Average Monthly Use by Source
March 2016 - Feb 2021 (60 months)
ALL DATA IN ACRE FEET (AF)

	BC Res.	Wells	Napa	Total Usage
Jan	47	5	30	82
Feb	40	10	30	80
Mar	41	4	45	90
Apr	48	10	51	109
May	51	31	60	142
Jun	73	42	54	169
Jul	88	47	62	197
Aug	81	53	61	195
Sep	85	48	58	192
Oct	87	38	54	179
Nov	50	27	47	124
Dec	44	17	31	93
	735	333	583	1652

		Current Capacity	Capacity											
		EOM 3/21	Mar	Apr	May	Jun	July 1st	Jul	Aug	Sep	Oct	Nov	Dec	
Bell Canyon Res.	Avg Monthly Use		18	32	44	60		70	68	65	52	0	0	
	Remaining Supply	466	448	416	372	312	312	243	175	110	58	58	58	
Stonebridge Wells	Avg Monthly Use	90	5	10	31	42		60	60	60	60	57	26	
	Remaining Supply		85	74	43	1	450	390	330	270	210	153	127	
Napa Pipeline	Avg Monthly Use	312	67	67	67	67		67	67	67	67	67	67	
	Remaining Supply		245	178	111	44	600	533	466	399	332	265	198	
Total Supply - ALL SOURCES:		868	778	669	526	357	1362	1166	971	779	600	476	383	
Total Avg. Monthly Use:			90	109	142	169		197	195	192	179	124	93	
Remaining Overall Supply:			688	559	384	188		969	776	587	422	352	291	

Average Use from now to November: 1397 AF

10% Reduction

City of St. Helena
Water Shortage Forecast
As of 3.30.21

5 Years of Average Monthly Use by Source					
March 2016 - Feb 2021 (60 months)					
ALL DATA IN ACRE FEET (AF)					
	BC Res.	Wells	Napa	Total Usage	10% Reduction
Jan	47	5	30	82	74
Feb	40	10	30	80	72
Mar	41	4	45	90	81
Apr	48	10	51	109	98
May	51	31	60	142	128
Jun	73	42	54	169	152
Jul	88	47	62	197	177
Aug	81	53	61	195	175
Sep	85	48	58	192	173
Oct	87	38	54	179	161
Nov	50	27	47	124	112
Dec	44	17	31	93	83
	735	333	583	1652	1487

		Current Capacity	Capacity											
		EOM 3/21	Mar	Apr	May	Jun	July 1st	Jul	Aug	Sep	Oct	Nov	Dec	
Bell Canyon Res.	Avg Monthly Use		10	21	30	43		63	55	57	56	18	0	
	Remaining Supply	466	456	435	405	362	362	298	243	186	130	112	112	
Stonebridge Wells	Avg Monthly Use	90	4	10	31	42		47	53	48	38	27	16	
	Remaining Supply		86	76	45	3	450	403	350	302	264	237	221	
Napa Pipeline	Avg Monthly Use	312	67	67	67	67		67	67	67	67	67	67	
	Remaining Supply		245	178	111	44	600	533	466	399	332	265	198	
Total Supply - ALL SOURCES:		868	787	689	560	408	1412	1235	1060	887	726	614	531	
10% Reduction of Monthly Use:			81	98	128	152		177	175	173	161	112	83	
Remaining Overall Supply:			706	590	432	256		1058	884	714	565	502	448	

20% Reduction

City of St. Helena
Water Shortage Forecast
As of 3.30.21

5 Years of Average Monthly Use by Source					
March 2016 - Feb 2021 (60 months)					
ALL DATA IN ACRE FEET (AF)					
	BC Res.	Wells	Napa	Total Usage	20% Reduction
Jan	47	5	30	82	66
Feb	40	10	30	80	64
Mar	41	4	45	90	72
Apr	48	10	51	109	87
May	51	31	60	142	114
Jun	73	42	54	169	135
Jul	88	47	62	197	157
Aug	81	53	61	195	156
Sep	85	48	58	192	154
Oct	87	38	54	179	143
Nov	50	27	47	124	99
Dec	44	17	31	93	74
	735	333	583	1652	1322

		Current Capacity	Capacity											
		EOM 3/21	Mar	Apr	May	Jun	July 1st	Jul	Aug	Sep	Oct	Nov	Dec	
Bell Canyon Res.	Avg Monthly Use		1	10	16	26		44	36	38	38	5	0	
	Remaining Supply	466	465	455	439	413	413	369	334	295	257	252	252	
Stonebridge Wells	Avg Monthly Use	90	4	10	31	42		47	53	48	38	27	7	
	Remaining Supply		86	76	44	2	450	403	350	302	264	237	230	
Napa Pipeline	Avg Monthly Use	312	67	67	67	67		67	67	67	67	67	67	
	Remaining Supply		245	178	111	44	600	533	466	399	332	265	198	
Total Supply - ALL SOURCES:		868	796	709	595	460	1463	1306	1150	996	853	754	680	
20% Reduction of Monthly Use:			72	87	114	135		157	156	154	143	99	74	
Remaining Overall Supply:			724	621	481	324		1148	994	843	711	655	606	

30% Reduction

City of St. Helena
Water Shortage Forecast
As of 3.30.21

5 Years of Average Monthly Use by Source					
March 2016 - Feb 2021 (60 months)					
ALL DATA IN ACRE FEET (AF)					
	BC Res.	Wells	Napa	Total Usage	30% Reduction
Jan	47	5	30	82	58
Feb	40	10	30	80	56
Mar	41	4	45	90	63
Apr	48	10	51	109	77
May	51	31	60	142	100
Jun	73	42	54	169	118
Jul	88	47	62	197	138
Aug	81	53	61	195	136
Sep	85	48	58	192	134
Oct	87	38	54	179	125
Nov	50	27	47	124	87
Dec	44	17	31	93	65
	735	333	583	1652	1156

		Current Capacity	Capacity											
		EOM 3/21	Mar	Apr	May	Jun	July 1st	Jul	Aug	Sep	Oct	Nov	Dec	
Bell Canyon Res.	Avg Monthly Use		1	4	1	9		11	9	7	0	0	0	
	Remaining Supply	466	465	461	459	450	450	440	430	423	423	423	423	
Stonebridge Wells	Avg Monthly Use	90	4	10	31	42		60	60	60	58	20	0	
	Remaining Supply		86	76	44	2	450	390	330	270	212	192	192	
Napa Pipeline	Avg Monthly Use	312	58	62	67	67		67	67	67	67	67	65	
	Remaining Supply		254	192	125	58	600	533	466	399	332	265	200	
Total Supply - ALL SOURCES:		868	805	728	629	511	1500	1363	1226	1092	967	880	815	
30% Reduction of Monthly Use:			63	77	100	118		138	136	134	125	87	65	
Remaining Overall Supply:			742	652	529	392		1225	1090	957	842	793	750	

Usage by Source

2016												
Source	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec
Bell Canyon	63	49	48	62	57	71	113	70	85	79	43	44
Stonebridge Wells	0	11	1	6	27	49	46	54	50	26	11	3
City of Napa	32	22	36	59	55	53	60	57	54	50	43	35
Total	95	82	85	127	139	173	218	181	189	155	96	82

2017												
Source	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec
Bell Canyon	39	34	42	39	50	71	74	75	91	104	50	40
Stonebridge Wells	0	6	0	0	35	40	57	60	56	34	29	22
City of Napa	37	30	43	52	64	63	65	65	57	51	43	45
Total	77	70	85	91	149	173	196	200	204	189	122	106

2018												
Source	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec
Bell Canyon	41	37	32	41	58	77	86	80	79	71	53	41
Stonebridge Wells	10	10	4	3	17	26	36	40	37	32	25	7
City of Napa	37	35	48	49	63	63	68	65	66	67	56	35
Total	88	83	85	92	138	166	190	185	182	169	134	83

2019												
Source	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec
Bell Canyon	41	37	42	48	64	71	84	84	95	95	76	42
Stonebridge Wells	0	1	5	9	14	34	34	50	40	37	17	3
City of Napa	39	34	33	37	54	59	59	59	58	55	60	40
Total	80	72	80	94	133	164	178	194	193	187	152	85

2020												
Source	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec
Bell Canyon	41	38	39	51	25	75	82	94	78	85	30	53
Stonebridge Wells	3	14	11	34	63	62	60	62	59	60	55	51
City of Napa	34	43	63	58	65	32	60	58	57	48	32	1
Total	78	95	112	142	153	169	202	215	193	194	117	106

2021												
Source	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec
Bell Canyon	74	56										
Stonebridge Wells	15	18										
City of Napa	0	9										
Total	89	83										

Average												
Source	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec
Bell Canyon	47	40	41	48	51	73	88	81	85	87	50	44
Stonebridge Wells	5	10	4	10	31	42	47	53	48	38	27	17
City of Napa	30	30	45	51	60	54	62	61	58	54	47	31
Total	82	80	90	109	142	169	197	195	192	179	124	93

10% Reduction	74	72	81	98	128	152	177	175	173	161	112	83
20% Reduction	66	64	72	87	114	135	157	156	154	143	99	74
30% Reduction	58	56	63	77	100	118	138	136	134	125	87	65

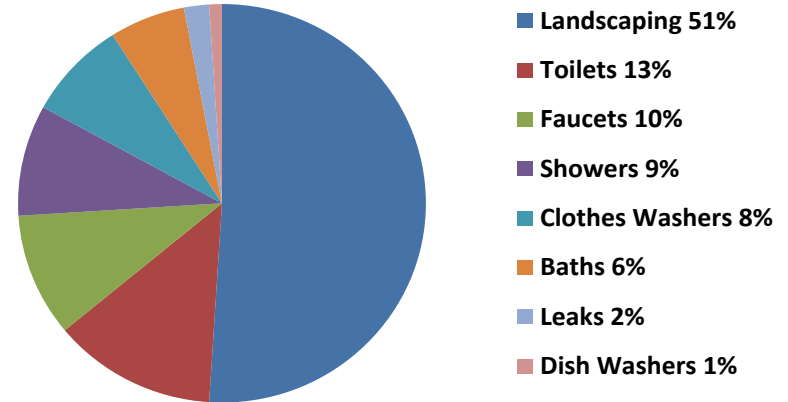


City of St. Helena

Keep Saving Water!
Keep Saving Money!

Water Conservation Tips!

Average Residential Water Use



Activity	Efficient Use	Conservation
Landscaping	Install efficient sprinkler nozzles and a "smart" weather based irrigation system	Reduce each irrigation cycle by two minutes or eliminate once cycle per week
Car Washing	Use a hose with an auto-shut off nozzle	Use a bucket and sponge or a commercial carwash
Showering	 Install WaterSense-labeled showerheads and limit showers to 5 minutes or less	Limit showers to 5 minutes or less and capture cold water with bucket to use for landscaping
Bathing	Fill bath half full	Fill bath to a minimal water level
Toilet Flushing	 Install high-efficiency WaterSense-labeled toilets	Limit flushes and don't flush items such as baby wipes, female hygiene products, or paper towels. DO NOT use the toilet as a trash can!!!
Dishwasher	Install a water and energy efficient dishwasher	Only wash full loads and on a light wash setting
Hand Washing/Teeth brushing	 Install a WaterSense-labeled faucet aerators and turn water off when washing	Wash only when necessary and turn off water when soaping hands. Also turn water off when actively brushing teeth.

For more information contact Public Works at 707-967-2658

What is 100 Cubic Feet (HCF)?



The City of St. Helena uses 100 cubic feet (HCF) to measure water consumption through an individual water meter. 100 cubic feet is equal to 1 unit on your water bill and 1 unit is equal to 748 gallons. The total amount of water units consumed can be found on your water bill each month. Below are some examples of how high and low efficiency water appliances and fixtures use water in different amounts.

Residential Water Uses	High - Efficiency Appliances and Fixtures	Low - Efficiency Appliances and Fixtures
Toilet Flushes	1.28 gpf - 584 Flushes	5 gpf - 150 Flushes
10 Minute Showers	2.5 gpf - 30 Showers	3 gpm - 25 Showers
Laundry	30 gpl - 25 Loads	40 gpl - 19 Loads
Dishwasher	8 gpl - 93 Loads	13 gpl - 57 Loads
Running Faucet	2 gpm - 374 Minutes (6.2 Hours)	2.5 gpm - 300 Minutes (5 Hours)
Glass of Water	8 oz. - 13,464 Glasses	Same
Brushing Teeth	0.5 gpb - 1,496 Brushings	2 gpb - 374 Brushings
Leak Loss	None	0.25 gpm – Every 2 days

gpf = gallons per flush, gpm = gallons per minute, gpl = gallons per load, gpb = gallons per brushing

A 0.25 gpm leak is the water loss through a hole in a pipe about the size of this period •

For more information contact Public Works at 707-968-2658

Cindy Tzaopoulos

From: TOM BELT <tmbelt@comcast.net>
Sent: Thursday, April 1, 2021 5:05 PM
To: Public Comment
Subject: [External] April 2 City Council Meeting

I would like to make the following comments regarding city council's April 2nd discussion relating to Phase 3 water restrictions:

1. I find it interesting that in staff's assessment of fiscal impacts that no mention was made of the loss of revenue the city will receive under the escalating water phase restrictions St. Helena has employed since July of 2020. As in past years, when the city has implemented water restrictions, the loss in water enterprise revenue has had a direct adverse impact on the city's water bond covenants. This in turn has resulted in the need to raise water rates higher than the already outrageous rates we currently pay. It seems to me the city's utility enterprises have been managed like they are in a negative spiral.
2. In my opinion the penalties for excessive water use are significantly too low considering the customers who want the water can easily afford minimal 100 dollar penalties for exceeding their allotments. This will end up being a simple business expense for some customers. The city has implemented the appointment of an ad hoc Water Advisory Committee to assist the city in determining appropriate penalties for water customers exceeding their allotments.
3. The allotments assigned to residential, commercial and industrial water customers place the greatest burden to conserve on residential water customers. This was a discussion item at the last city council meeting yet the same unbalanced allotments from the 2011 Safe Yield Committee remain in effect despite the fact that St. Helena has endured 8 of the last 10 years with below average rainfall.
4. Several capital improvement projects that were projected to be completed with 2011 and 2016 water rate increases have yet to be started. The latest CIP list has increased by over another \$5 million to complete the same previously projected water capital improvements. How was the money earmarked for these improvements been spent?

Thank you for opportunity to comment,

Tom Belt