

Bolinas Community Public Utility District

Resolution No. 680

Declaring a Prolonged Drought Condition in the Bolinas Community Public Utility District and Implementing Mandatory Conservation Measures Pursuant to a Previously Established Water Shortage Emergency.

THE BOARD OF DIRECTORS OF THE BOLINAS COMMUNITY PUBLIC UTILITY DISTRICT ("BCPUD") HEREBY FINDS AND DECLARES AS FOLLOWS:

WHEREAS, the BCPUD is a public utility district empowered to provide water service within its jurisdictional boundaries; and

WHEREAS, the BCPUD declared a water shortage emergency in 1971 and has reaffirmed that water emergency declaration on numerous subsequent occasions; and

WHEREAS, the BCPUD's adoption of a water shortage emergency and regulations addressing that situation, including a moratorium on new water service connections, have been upheld against legal challenges; and

WHEREAS, the BCPUD regularly requests its customers to take steps to reduce water consumption, particularly during the summer and fall months when water supplies typically diminish; and

WHEREAS, the BCPUD Board of Directors at its regular monthly meeting on June 18, 2020 updated the district's Water Conservation and Dry Year Water Use Reduction Program, reviewed current water consumption data and water supply indicators, and voted to trigger a community-wide heightened water conservation alert, requesting the community to voluntarily reduce water use by 20-30% in an effort to avoid mandatory rationing of water; and

WHEREAS, subsequent to the BCPUD's heightened water conservation alert, water consumption in the district declined by approximately 20%; however, water conservation efforts stalled in September and water consumption in the district began to exceed the water available from the Arroyo Hondo Creek by approximately 50%, requiring the BCPUD to supplement from its emergency back-up water supplies in the Woodrat 1 & 2 reservoirs; and

WHEREAS, the BCPUD Board of Directors at a special meeting on September 30, 2020 evaluated current water consumption data and water supply indicators, including but not limited to the probability of sufficient rainfall occurring to replenish creek flows and stored water supplies, and including but not limited to the uneven nature of water consumption in the district (e.g., 22% of customers used 50% of the water supplied during August 2020) and concluded that further water use reduction was needed to reduce the potential for mandatory water rationing; and

WHEREAS, the BCPUD therefore requested all customers to voluntarily conserve and use no more than 150 gallons per day *per connection*, which the BCPUD warned may need to be revised downward if water supply conditions worsened; and

WHEREAS, as of January 31, 2021, the cumulative rainfall in Bolinas since July 1, 2020 was 10.2 inches. Average annual rainfall in Bolinas is 32.5 inches, so the BCPUD has received less than one-third of its average annual rainfall as of January 31, 2020; and

WHEREAS, during the 2019-2020 rain year, (i.e., July 1, 2019 through June 30, 2020), the BCPUD received a total of 22.7 inches of rain, which is approximately two-thirds of the BCPUD's annual average rainfall; and

WHEREAS, based on BCPUD staff analysis of nearly 70 years of recorded rainfall data in Bolinas, during prior years in which the BCPUD received 10 inches or less of rain as of January, the district ultimately received a minimum of 15.6 total inches of rain, a maximum of 27.6 total inches of rain and an average of 20.7 total inches of rain. As such, BCPUD staff projects that the remainder of the 2020-21 rain year is likely to be relatively dry, with well-below average total rainfall; and

WHEREAS, as a result of the above-noted relative lack of rainfall during the last rain year which has continued into the current rain year, BCPUD staff projects that the district's available raw water supply from the Arroyo Hondo Creek will be at historic lows by this summer; and

WHEREAS, as of the date of enactment of this resolution and based on current and historic consumption levels and water supply availability documented in a report by BCPUD staff, a copy of which is attached to this resolution as Exhibit A and incorporated herein, BCPUD staff projects that the district could be out of emergency back-up reservoir water before the end of 2021 if water consumption increases consistent with historic seasonal demand (i.e., if water use increases in late Spring, Summer and Fall).

NOW, THEREFORE, BE IT RESOLVED that the BCPUD adopts this resolution as follows:

Section 1. Authority. This resolution is enacted pursuant to BCPUD's statutory powers, Gov't Code Section 53069.4, and the water shortage emergency provisions of Water Code sections 350 *et seq.*, including but not limited to the power to implement regulations addressing the delivery and consumption of water as provided in Water Code section 353, and BCPUD resolutions, including but not limited to BCPUD Resolutions 173 and 247. These regulations are issued in the sound discretion of the BCPUD Board of Directors and will conserve the water supply for the greatest public benefit with particular regard to domestic use, sanitation and fire protection.

Section 2. Drought Declaration. The BCPUD hereby finds and declares, based on the evidence and conclusions contained in the report of the BCPUD staff attached hereto as Exhibit A, a special water supply emergency and further finds and declares a prolonged drought condition to exist in its service area.

Section 3. New Regulations To Address Drought Conditions. The BCPUD finds that although a program of voluntary measures to reduce consumption has resulted in commendable reductions in water usage by its customers, further measures are necessary to avoid unsustainable demands being placed on its system during the drought. As such, and subject to the special exemption provisions of Section 5, below, the BCPUD enacts the following water use prohibitions within the BCPUD service area, which shall take effect if and when overall water consumption in the BCPUD service area exceeds 76,000 gallons per day averaged over seven consecutive days:

No more than 125 gallons of water per day may be used by any service connection (which is equivalent to 16.71 cubic feet of water per day per service connection); *provided, however, that the following businesses, public entities and multi-use facilities may not use more than the amount of water per day specified below:*

<u>Customer</u>	<u>Permitted Water Use</u> (cubic ft/day)	<u>GPD</u>
Bolinas Laundromat	200	1,500
Coast Café	107	800
Smiley's Schooner Saloon	91	680
California Orchids	70	527
Commonweal	67	500
BCLT-Garage	67	500
Open Space bathrooms	50	375
Bolinas School	40	300
Eleven	40	300
BCLT – Gibson House	40	300
Bolinas Community Center	37	280
BCPUD (270 Elm)	33	250
The Barn (52 Wharf)	27	200
Bolinas Market	20	150

Water use shall be measured by the BCPUD-approved water meter at each connection.

If and when water consumption in the BCPUD's service area exceeds 76,000 gallons per day averaged over seven consecutive days, BCPUD staff is hereby instructed to immediately notify the community that the mandatory water use limits established by this Section 3 are in immediate force and effect.

Section 4. Voluntary Measures. The BCPUD shall continue to urge its customers to:

- a. Not increase their water consumption above current levels at their service connection;
- b. Install only drought-tolerant landscaping, including low-water-using trees and plants;
- c. Install pool and spa covers to minimize water loss due to evaporation;
- d. Retrofit indoor plumbing fixtures with low-flow devices;
- e. Check faucets, toilets and pipes, both indoor and outdoor, including house service laterals and sprinkler piping, for leaks and repair them immediately, or upon demand of the BCPUD;
- f. Hand water gardens/landscaping rather than utilize automatic irrigation systems;

- g. Not serve drinking water to any customer in a restaurant or other public place where food is served, sold or offered for sale unless expressly requested by the customer;
- h. Not wash driveways, sidewalks, parking areas, patios or other outdoor areas with water supplied by the BCPUD; and
- i. Not wash vehicles with water supplied by the BCPUD.

Section 5. Special Exceptions. If and when the mandatory water use prohibitions described in Section 3, above, take effect in the district, written applications for exceptions to or adjustments of said water use prohibitions may be made to the BCPUD. Upon receipt of such an application, the General Manager will schedule a duly noticed special meeting of the BCPUD Board of Directors to consider the request(s). The BCPUD Board of Directors *may* in its sole discretion, based on specific findings of fact about the customer's water use and reasons for the requested exception or adjustment, and considered in all cases within the context of the district's available water supply:

- a. grant exceptions for the uses of water otherwise prohibited in Section 4; or
- b. grant exceptions from the applicable mandatory ration amount if it is found that:
 - (i) to fail to do so would cause an emergency condition adversely affecting the health, sanitation, fire protection, or safety of the customer or the public, or adverse impacts such as loss of production or jobs; or
 - (ii) the customer has demonstrated to the satisfaction of the Board that circumstances have changed warranting a change in the customer's ration amount.

No exception shall be granted or ration amount adjusted by the BCPUD Board of Directors unless and until the requesting customer has adopted all practicable water conservation measures, has demonstrated to the BCPUD's satisfaction that there are no alternatives to the use of water from the BCPUD, and has demonstrated to the BCPUD's satisfaction that the BCPUD's water will be used efficiently and without waste. The Board will not render a final decision on a customer's request for an exception until a water audit of the customer's water use is conducted by BCPUD staff and conveyed to the Board in a written report. The Board's decision on an application submitted under this Section 5 for an exception or adjustment is final.

6. Enforcement. This is a serious water shortage emergency for which the BCPUD must enforce these regulations to protect the health, safety and welfare of the BCPUD's residents. The BCPUD hereby enacts the following enforcement system to take effect upon implementation of the water use prohibitions described in Section 3, above:

- a. *A violation will be deemed to occur any time a customer's water use over a seven consecutive day period exceeds the applicable mandatory water use limit established in Section 3, above, which for most customers will be 875 gallons (125 gallons x 7 days), or 117 cubic feet, with the specific exceptions noted for the fourteen businesses, public entities and multi-use facilities. For every*

customer granted a special exception under Section 5, above, a violation will be similarly deemed to occur on a seven consecutive day period. The intent of this provision is to provide BCPUD customers with some flexibility in their water use on a daily basis, while ensuring that overall water use in the district does not exceed sustainable levels.

b. For customers who own more than one property served by an active connection to the BCPUD's water distribution system, violations will be assessed on the basis of the total daily water use at those properties divided by the number of properties owned (and assessed over a seven consecutive day period as described in the preceding section). As such, if a customer owns two properties served by active connections to the BCPUD's water distribution system and the water use at one property is 150 gallons per day and the water use at the second property is 80 gallons per day, the BCPUD will combine those amounts ($150 + 80 = 230$) and divide by the number of properties (230 divided by 2 = 115), to determine the daily water use by this customer (and violations will be assessed over a seven consecutive day period, as described above).

c. First time violators of the mandatory provisions of Section 3, or of the terms of any special exception granted pursuant to Section 5, shall be issued a written warning within 24 hours of the violation.

d. A second violation (which may occur as soon as seven days after the first violation and each week thereafter may constitute a new violation) shall result in the issuance of another written warning to the violator.

e. A third violation (which may occur as soon as seven days after the first violation and each week thereafter may constitute a new violation) shall result in the immediate discontinuation of the water service for said violator.

f. A customer may immediately petition the BCPUD Board for the restoration of water service and the BCPUD Board will hold an emergency public meeting for this purpose. Among other conditions the Board may place on any restoration of water service, the affected customer must agree to henceforth abide by the *daily* mandatory water use limit and all future violations of said limits by this customer will be determined by the BCPUD on a 24-hour basis, rather than a weekly average basis.

g. Tampering with or altering a BCPUD water meter to either misreport water usage or to restore water service after the BCPUD has discontinued water service due to repeated violations of this resolution is prohibited and declared a criminal misdemeanor, as well as a trespass and public nuisance. The BCPUD shall vigorously enforce any violations relating to meter tampering or alteration.

Section 7. Next Steps. If critical water shortages continue and supplies of water are further reduced, the BCPUD will consider further action to curtail water use, including enhanced mandatory measures, to prevent water waste. If and when water supply conditions improve, the BCPUD will take appropriate measures to rescind some or all of the provisions contained herein.

Section 8. Effective Date and Sunset. This resolution shall take effect immediately. This resolution shall not have a sunset date.

Section 9. Severability Clause. If any provision of this resolution is found to be illegal, unconstitutional or unenforceable for any reason whatsoever, that provision shall be severed from the remaining provisions of this resolution, which shall remain in full force and effect.

PASSED AND ADOPTED at a regular meeting of the Board of Directors on this 24th day of February, 2021.

AYES: COMSTOCK, GODINO, SIEDMAN, SMITH, WALKER

NOES: NONE

ABSTAIN: NONE

ABSENT: NONE



President, Board of Directors

Attest:



Secretary

EXHIBIT A

BOLINAS COMMUNITY PUBLIC UTILITY DISTRICT

BCPUD

BOX 390 270 ELM ROAD BOLINAS CALIFORNIA 94924

415 868 1224



MEMORANDUM

TO: Board of Directors

FROM: Jennifer Blackman *JB*

RE: Recommendation for Mandatory Rationing

DATE: February 24, 2021

First, a brief summary of the status of the District's water supply and current consumption data as of today's date.

1. Water Supply: From February 1 – 23, 2021 our diversions from the Arroyo Hondo Creek averaged 66,284 gallons per day; no water was diverted from Woodrat 1 reservoir during this time, which demonstrates the beneficial impact of the community's conservation efforts and the rain received in January and thus far in February 2021.
2. Rainfall: Rainfall received in January 2021 was 4.5 inches and in February (through today) was 3.5 inches, for an annual total rainfall (since July 1, 2020) of 13.7 inches. As a reminder, we received a total of 22.7 inches of rain last year. Average annual rainfall received in Bolinas is 32.5 inches.
3. Woodrat 1 and Woodrat 2: Our stored usable water supply in the Woodrat reservoirs as of February 22, 2021 (combined) is 8,842,818 gallons¹, an increase of 496,348 gallons in reservoir storage when compared to the 8,346,470 gallons in storage on January 28, 2021 and an increase of 2,021,434 gallons in storage when compared to the 6,821,384 gallons in storage on December 31, 2021. Again, this reflects the beneficial impact of the community's water conservation efforts (since we have not needed to use reservoir water to meet demand in January or February) as well as the rain received to date.
4. Water Consumption. From February 1 – 23, 2021 water *production* averaged 62,235 GPD or 106 GPD per connection. Water *consumption* during this same timeframe averaged 60,651 GPD, or 103 GPD per connection (averaged across the entire district).

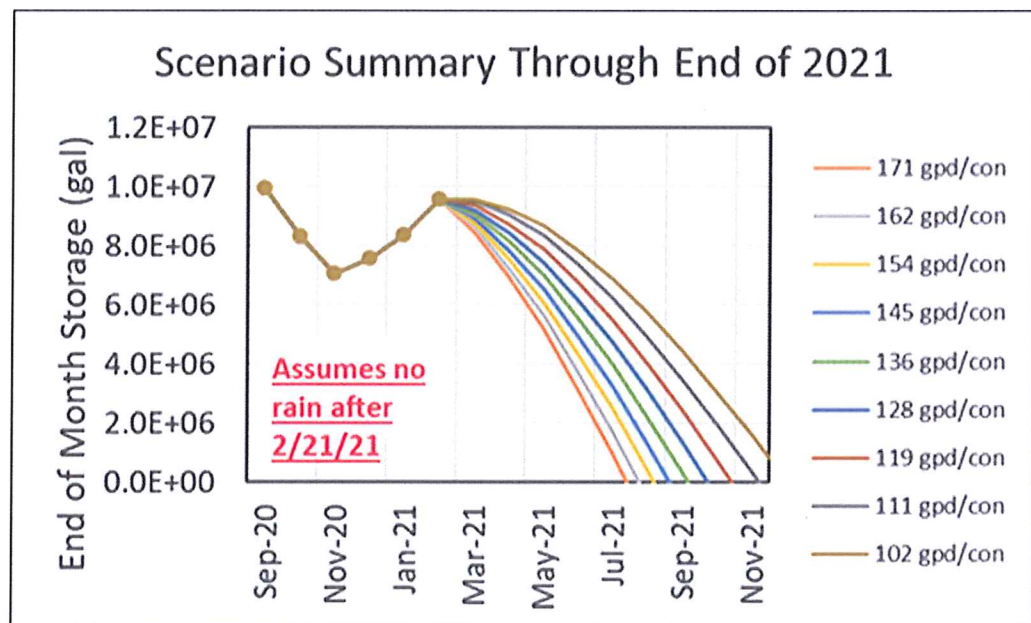
Individual water consumption remains uneven; we continue to measure a wide range of use across the district. For example, in January 2021, the highest 12 water users logged an average consumption of 300 to 1851 gallons of water per day, and 33 customers (including the 12 just referenced) used an average of more than 200 gallons of water per day. Overall, in January, 69 customers used more than the requested 150 GPD and 122 customers used more than the anticipated ration amount of 125 GPD.

¹ We also had 738,833 gallons of treated water in storage in our East and West tanks (combined) as of February 22, 2021.

Over the last two to three months, the number of individual “high users” has declined and staff believes this is largely explained by the lack of landscape irrigation/garden-watering during the winter months. However, as noted in my report last month, some of this water consumption may simply have been transferred: water use at the laundromat downtown doubled in November and December, reaching 1,500-1,665 GPD, on average, as compared to 700-850 GPD (May – October 2020), and spiked even higher in January, to an average of 1,851 GPD.

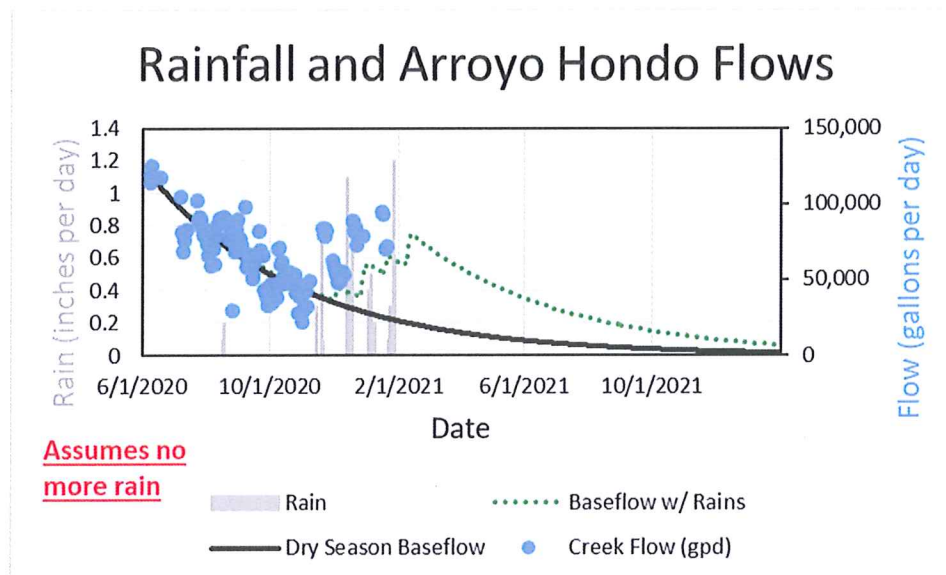
5. Updated Models:

The first graph below is an updated Scenario Summary reflecting the actual data recorded (brown line in upper left area of graph with the six dots) and the “fork” of projections as to how much stored water the district will have available through 2021 based on differing rates of consumption. Current consumption (including unaccounted water loss) places us somewhere between the grey and brown lines (111 and 102 GPD, respectively), which show that we will swiftly deplete our stored water supply beginning with this summer and could deplete it entirely before the end of the year if there is no more rain. Note: the slope of the recorded storage (brown line with dots) has inclined upward since the low point in November 2020. This reflects the beneficial effects on our stored water supply of 1) the decrease in water consumption and 2) rain received in December, January and February.



NOTE: the district's position with regard to its stored water supply has improved since December 31st. At that time, staff projected on the basis of available data that the district could be out of stored water by late May to mid-June 2021 if consumption stayed at current levels *and* we received no more rain. We acknowledged at the time that the latter was a pessimistic assumption. Indeed, that proved to be the case: since December 31st, we received 4.5 inches of rain in January and 3.5 inches of rain in February and our model has been adjusted (favorably) accordingly. While the district's stored water supply position has improved, reservoir levels remain well-below full, which is highly unusual for this time of year, and which places the district in an extremely vulnerable position (particularly given the declining projected creek flows) heading into the dry season.

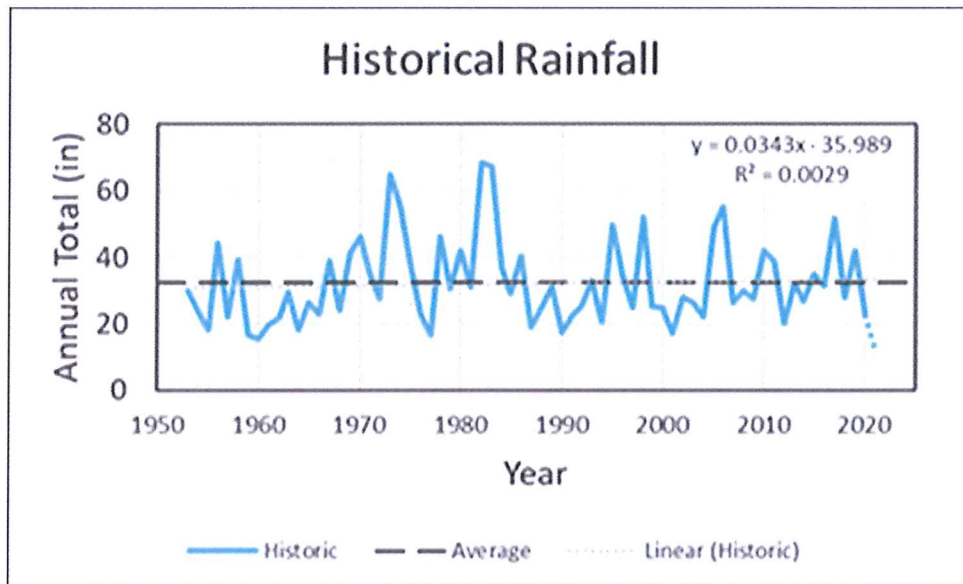
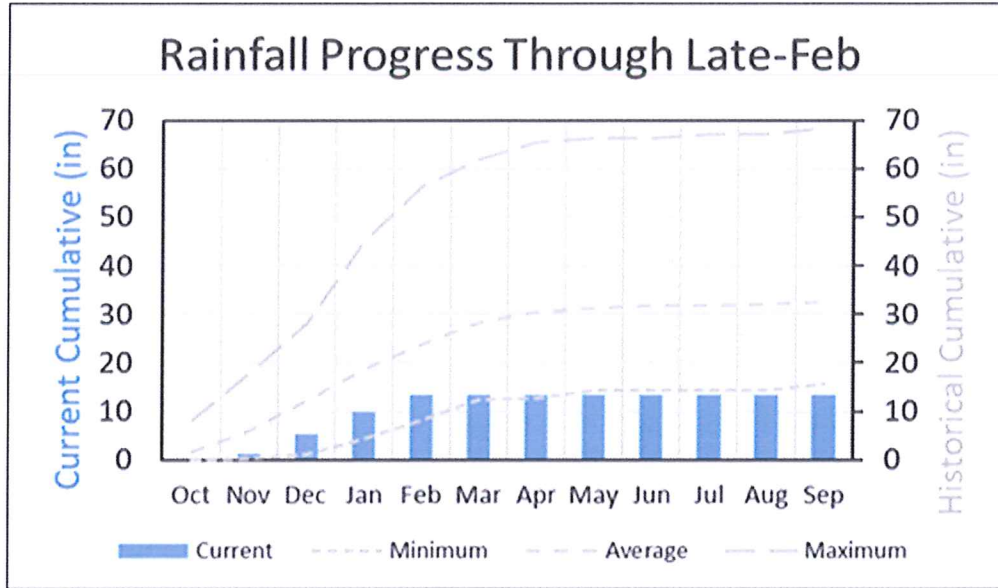
The second graph below is the baseflow recession model² for the Arroyo Hondo creek, updated with data through January 2021 to reflect the beneficial effect of rain on creek flows. This graph was presented at the February 3, 2021 special BCPUD Board meeting. Although creek flows have increased as a result of the rain, this model (created and updated by the district's consulting hydrogeologist, Rob Gailey), projects that the beneficial impact of the rainfall on creek flows will quickly dissipate without more rain.



The next two graphs depict rainfall received in Bolinas as of February 22, 2021 (13.4 inches from October 1, 2020 – February 24, 2021)³ relative to historic minimum, average and maximum rainfall (68 years of BCPUD rainfall data); as these graphs show, while the district is above the minimum recorded rainfall for this time of year, it remains well below average.

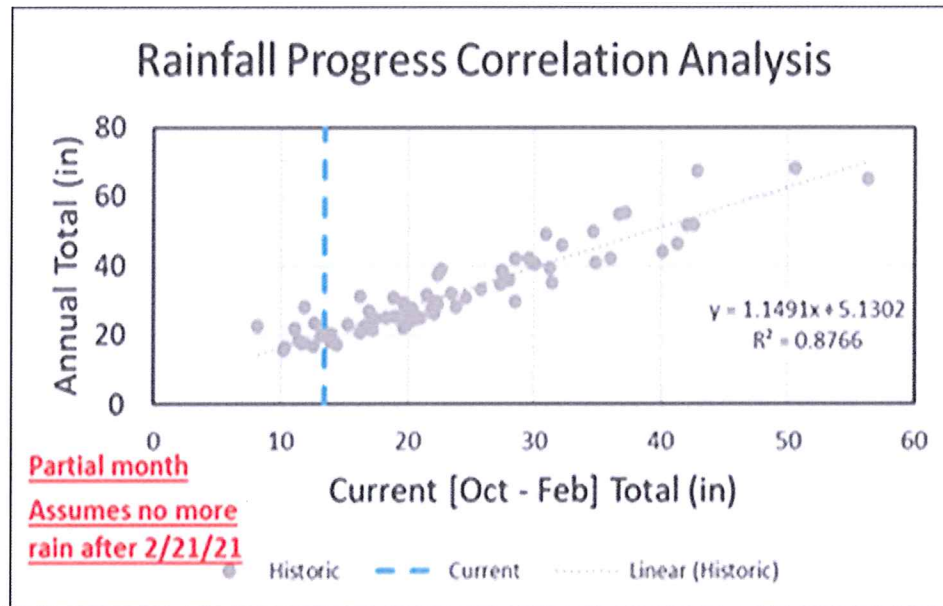
² The term baseflow recession curve is typically used to describe such a model because the flow decreases, or recedes, with time since the last rainfall event. The effects of recent rains as well as surface flows to the creek (which are not modeled) are indicated.

³ Note: the BCPUD measures rainfall as of July 1 for each rain year; the models in this memorandum utilize the October 1 start date for the rainy season. The difference is a negligible 0.3 inches as the district received 0.3 inches of rain in August 2020.



The next graph correlates the rainfall progress as of February 22nd with total annual rainfall for the available historical record (preceding 68 years). During that time, the district has

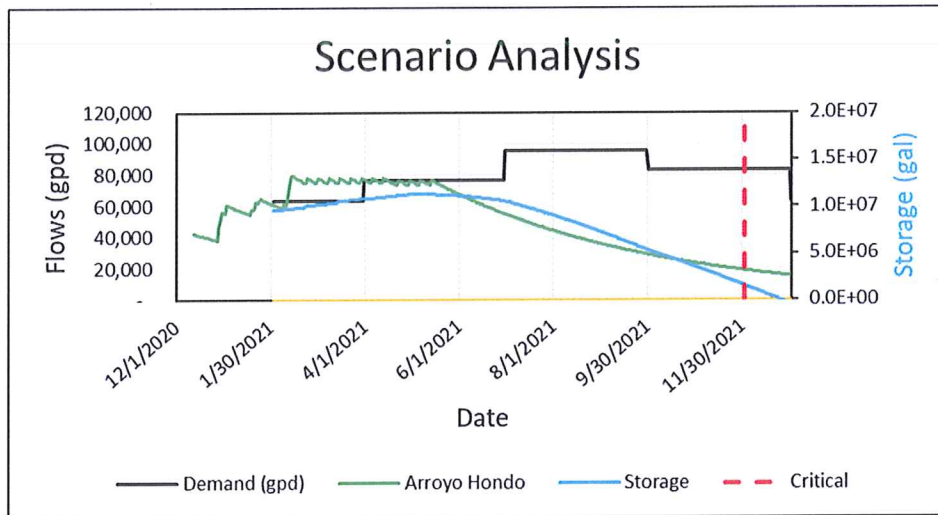
experienced only 10 other years where the rainfall received was 13.4 inches or less as of the end of February. Those rain years generally turned out to be drier than normal years with a minimum total rainfall received of 15.6 inches, a maximum of 28.1 inches, an average of 20.1 inches and a line of best fit projection of 20.5 inches. These statistics suggest there is a high potential for the 2020-21 year to be a well-below average rainfall year.



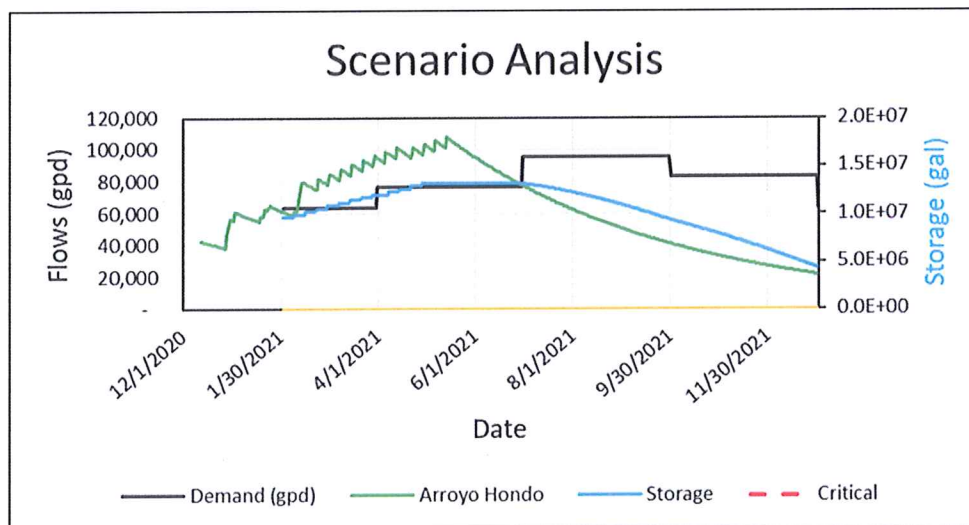
6. Recommendation to Implement Mandatory Rationing.

Given the well-below average rainfall received to date (13.4 inches as of February 22, 2021) following a much drier than average rain year last year (22.7 inches in 2019-2020), the likelihood that the current year (2020-21) will be a drier than average year, the predictions of our updated baseflow recession model for flows in the Arroyo Hondo creek, and the status of our stored water supply, ***staff recommends the BCPUD Board authorize staff to implement the mandatory rationing of water throughout the district's service area as soon as overall water consumption in the district exceeds 76,000 gallons per day averaged over seven consecutive days*** in order to enable the community to have sufficient water during 2021.

Staff has presented a variety of scenarios to the Board at regular meetings during late 2020-early 2021, as well as at special meetings on February 3, 2021 and February 8, 2021. For example, at the February 3, 2021 special meeting, staff presented the following scenario (based on data through January 28th) projecting that if the district received only 15.6 inches of rain through April 2021 (the historic low amount of rainfall received during previous dry-years) *and* water use were to increase throughout the district on a (conservative) seasonal basis beginning in April, the district would run out of water by the end of November and water quality would be exceedingly poor by as early as mid-summer. *See scenario below:*

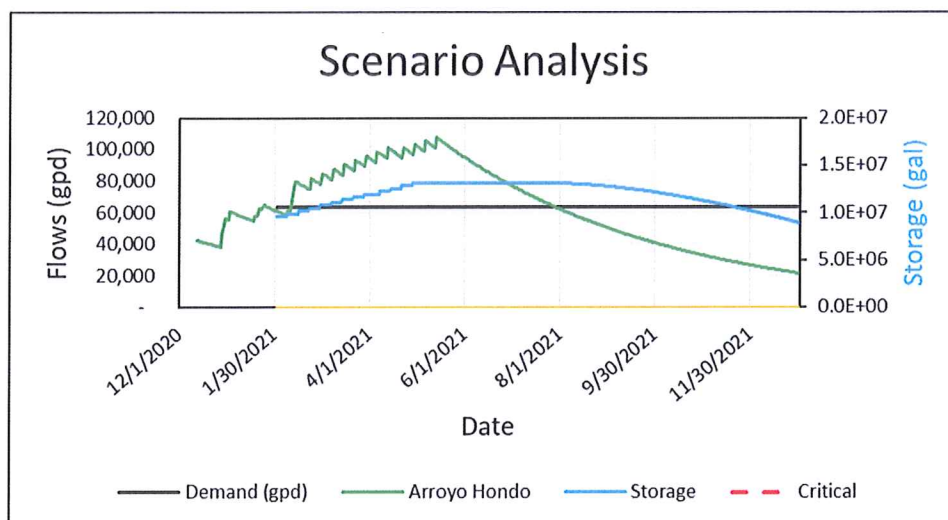


Staff also presented the scenario in which the district receives a total of 20.7 inches of rain through April 2021 (the historic dry-year average) *and* water use were to increase through the district on a (conservative) seasonal basis beginning in April: creek flows and storage would be critically low (and water quality exceedingly poor) by early Fall (fire season). *See scenario below:*

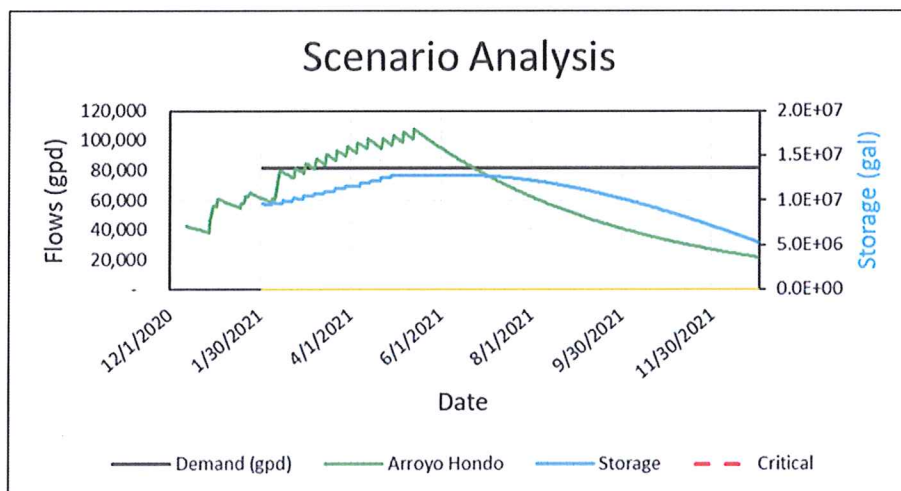


Staff therefore recommended at the February 3, 2021 special Board meeting that the district ration water effective March 1, 2021 to no more than 100 GPD per connection (subject to specific exceptions for businesses, public-serving and multi-use entities, in addition to others the Board may approve at a duly noticed public meeting) to ensure that a seasonal demand increase does not occur.

Assuming that the district receives the historic dry-year average rain fall of 20.7 inches *and* community water use is not allowed to increase above the ration level, staff projected the town would not run out of water in 2021 and would be in a much more resilient position in terms of stored water as creek flows drop and we enter the fire season. *See scenario below:*



During the February 3, 2021 special Board meeting, numerous concerns were expressed to staff about the 100 GPD per connection limit and extensive discussion ensued about possible exceptions to that limit, the exception criteria, and so forth. In light of the complexities, time and costs of the district of endeavoring to establish criteria for exceptions and then undertake evaluating them (and the resulting implications for the water supply), BCPUD staff decided to reevaluate its underlying water supply assumptions and projections to explore whether the recommended mandatory ration amount of 100 GPD per connection could be modestly increased. Specifically, BCPUD staff considered the implications for the district's water supply *if* the district receives 20.7 total inches of rain (the historic dry-year average) *and* community water use is limited to 76,000 gallons per day, or 125 GPD per connection via mandatory rationing (subject to specific business, public-serving and multi-use exceptions), *see scenario below:*



As illustrated in the foregoing scenario, BCPUD projected the town will not run out of water if the ration amount is modestly increased to 76,000 GPD (or 125 GPD per connection), but will be in a somewhat less resilient position in terms of stored water at the end of 2021: 5.3 million gallons vs. the 9 million gallons depicted in the preceding scenario (with a ration amount of 100 GPD per connection). Staff therefore concluded it was reasonable to revise the mandatory rationing recommendation to establish the 76,000 GPD water use limit across the district, or 125 GPD per connection, subject to specific exceptions for businesses, public-serving and multi-use entities and presented this revised recommendation to the BCPUD Board and community at a special meeting on February 8, 2021. With regard to exceptions for customers other than those businesses, public-serving and multi-use entities approved for exceptions by the Board, BCPUD staff strongly recommended that any consideration of such exceptions be deferred until after mandatory rationing has been enacted and customers demonstrate their best efforts to comply. Staff is committed to working with customers, conducting water audits, and providing all possible conservation assistance.⁴ BCPUD staff made this commitment because the prospect of granting numerous exceptions is complex, time-consuming, resource-intensive and has the potential to divide the community and/or significantly impact the remaining available water supply for other customers.

Subsequent to the February 8, 2021 special Board meeting, staff further considered the district's overall water supply and demand, particularly the fact that water consumption across the district (*currently at 60,651 GPD*) is less than the proposed ration amount. As previously explained, staff is very worried about the prospect of very near-term seasonal demand increase (especially if the district does not receive significantly more rain and the weather begins to warm as the days lengthen); as such, staff stands firm on its determination that the district cannot allow that to occur. However, given the cost and burden of enforcing mandatory rationing, ***BCPUD staff believes that the district will be better served by establishing a "trigger" based on the overall district consumption for such rationing rather than setting the specific March 1, 2021 date, as set out in the accompanying resolution. In this manner, the community's destiny in its own hands: if community water consumption does not increase above 76,000 GPD averaged over a seven consecutive day period, then mandatory rationing may not be necessary.***

7. Conclusion.

Staff is keenly aware that the mandatory rationing of water will require significant lifestyle changes by some of our customers on a temporary basis – changes that are neither easy nor pleasant. However, for all of the reasons stated above, we believe that mandatory rationing must be implemented as soon as overall water consumption in the district exceeds 76,000 (averaged over a consecutive 7-day period). BCPUD staff will continue to monitor all available water supply indicators and adapt its projections and rationing recommendations accordingly throughout 2021. The Board and the community should be prepared that staff may need to revise the ration amount downward from time-to-time during 2021, depending on circumstances and until the rains sufficiently replenish supplies.

⁴ For example, the most recent BPUD Pipeline newsletter sent out with the winter water bills explains the district's limited water supply status, describes the need for mandatory rationing, and provides a water audit form.