

# BOLINAS COMMUNITY PUBLIC UTILITY DISTRICT

BCPUD

BOX 390 270 ELM ROAD BOLINAS CALIFORNIA 94924

415 868 1224



## MEMORANDUM

TO: Board of Directors

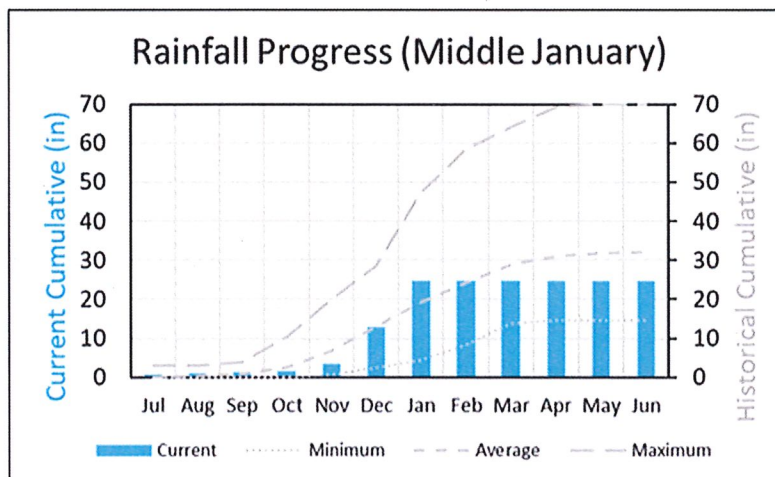
FROM: Jennifer Blackman *JMB*

RE: Update on Water Supply

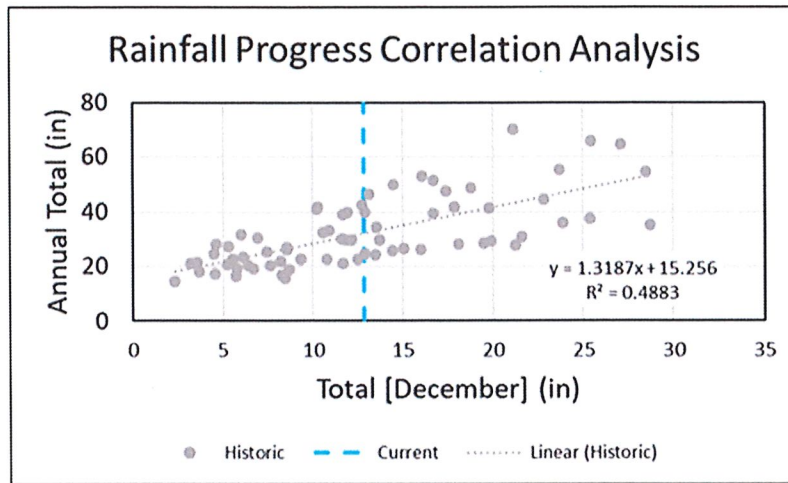
DATE: January 17, 2023

This memorandum provides a summary of the status of the District's water supply and related data and projections since the last memorandum to the Board dated December 14, 2022.

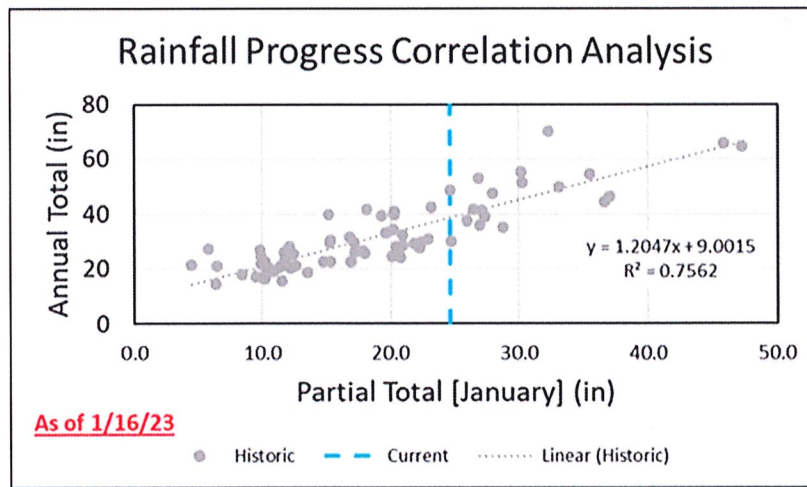
1. Rainfall: Thus far in the 2022-23 rain year, the district has received 24.58 inches of rain as of January 16, 2023, with a total of 12.82 inches received as of the end of December and an additional 11.76 inches thus far in January, courtesy of the succession of "atmospheric river" storm events. This cumulative rainfall is now more than the average rainfall for this time of year (see Rainfall Progress graph), even if there is no more rainfall in January. That said, more rain is needed this season to meet or exceed the average annual rainfall.



A rainfall progress correlation analysis (see graph on top of the next page) based on rainfall data through the end of December 2022 indicates that there are 39 years in the BCPUD's rain records when the district has received 12.82 inches or less of rain through the end of December. During those 39 years, the district subsequently received a minimum annual rainfall of 14.49 inches, a maximum annual rainfall of 42.60 inches, an average annual rainfall of 25.57 inches, and a "best fit" of 32.16 inches.

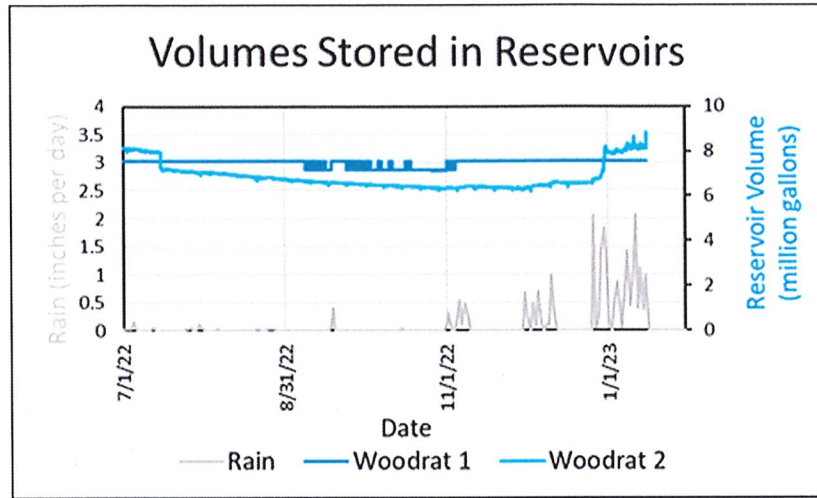


A rainfall progress correlation analysis based on rainfall data through January 16, 2023 (see next graph) indicates that there are 51 years in the BCPUD’s rain records when the district has received 24.58 inches or less of rain through the end of January. During those 51 years, the district subsequently received a minimum annual rainfall of 14.49 inches, a maximum annual rainfall of 42.60 inches, an average annual rainfall of 26.33 inches, and a “best fit” of 38.61 inches. As such, statistically, the outlook for an average year of rainfall looks good; the next few months will be determinative.



- Water Production and Consumption:** From December 13, 2022 – January 16, 2023, water *production* in the district averaged 59,479 gallons per day (GPD), which is a decline of approximately 5% in production as compared to the last reporting period, when production averaged 62,393 GPD. Note that the water treatment plant was off for four (4) days during this reporting period for operational reasons. Water *consumption* during this same timeframe averaged 60,259 GPD (approximately 103 GPD per connection), and is a decline of approximately 8% as compared to the last reporting period, when consumption averaged 65,159, or approximately 110 GPD per connection.

3. Water in Storage:



The graph above depicts the volumes of water stored in each of the district’s reservoirs (Woodrat 1 and Woodrat 2) from July 1, 2021 through mid-January, 2023, with the rain events also shown. The district’s stored usable water supply in the two reservoirs as of January 16, 2023 (combined), plus the amount of treated water in storage, is estimated to be approximately 16.14 million. The Woodrat 1 Reservoir is full (7.6 million gallons, 6.9 million of which are usable), as is the Woodrat 2 Reservoir (9.3 million gallons, 8.6 million of which are usable).

4. Updated Base Flow Recession Model:

The graph below is the district’s base flow (BF) recession model for the Arroyo Hondo Creek, updated to depict predictions of the base flow portion creek flows through January 31, 2023. Creek flows have responded to the rains with a projected creek flow of approximately 250,000 GPD. The benefit of continued rains will be to add water to the subsurface (our natural reservoir) and elevate baseflow in the Arroyo Hondo as we move into the dry season.

