BOLINAS COMMUNITY PUBLIC UTILITY DISTRICT

BCPUD BOX 390 270 ELM ROAD BOLINAS CALIFORNIA 94924 415 868 1224

MEMORANDUM

TO: Board of Directors

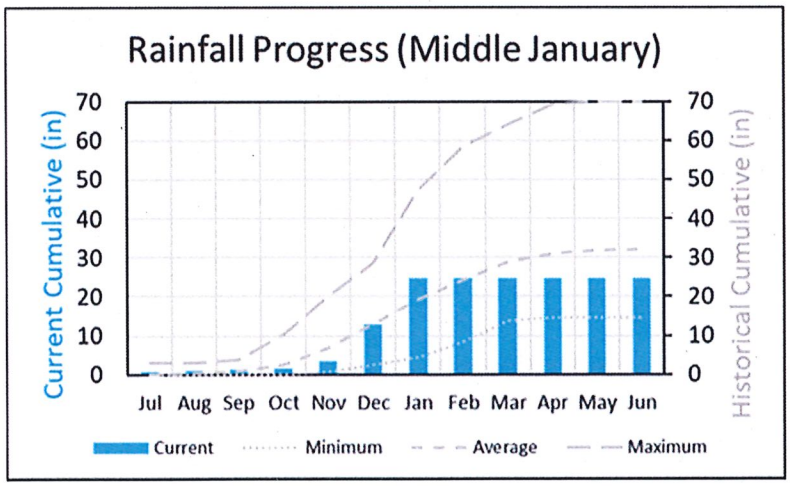
FROM: Jennifer Blackman JNB

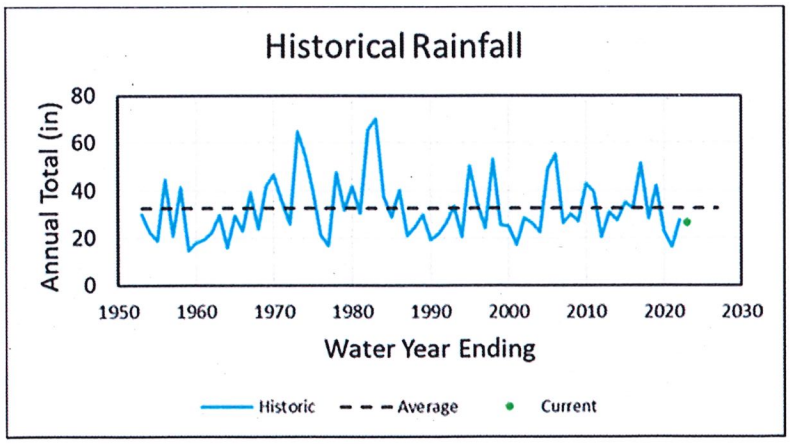
RE: Update on Water Supply

DATE: February 15, 2023

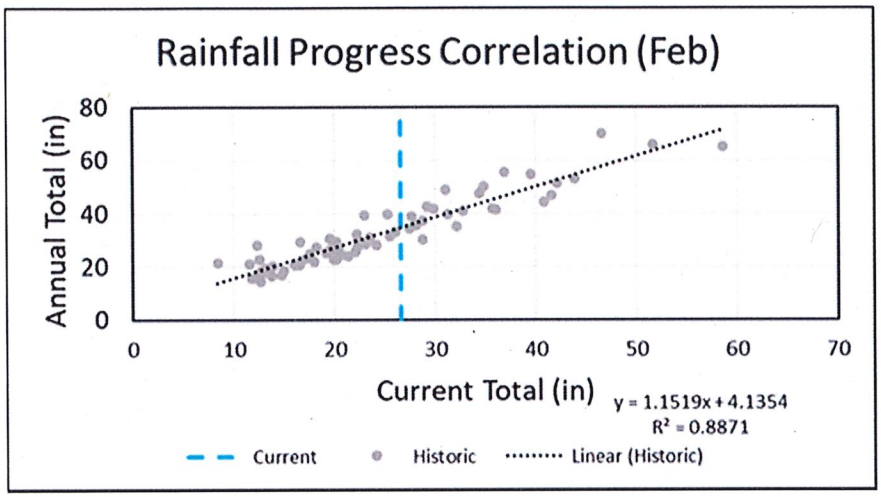
This memorandum provides a summary of the status of the District's water supply and related data and projections since the last memorandum to the Board dated January 17, 2023.

1. Rainfall: Thus far in the 2022-23 rain year, the district has received 26.52 inches of rain as of today, February 15, 2023, with most of that rain received during the succession of "atmospheric river" storm events in late December and the first half of January. This cumulative rainfall is just above the average rainfall for this time of year (see Rainfall Progress graph below), even if there is no more rainfall in February. That said, more rain is needed this season to meet or exceed the average annual rainfall.





A rainfall progress correlation analysis (see graph below) indicates that there are 53 years in the BCPUD's rain records when the district has received 25.02 inches or less of rain through the end of January. During those 53 years, the district subsequently received a minimum annual rainfall of 14.49 inches, a maximum annual rainfall of 48.80 inches, an average annual rainfall of 26.82 inches, and a "best fit" of 39.15 inches. Given the relatively dry February thus far (1.5 inches of rain received so far this month) at this time staff expects this "best fit" prediction will drop considerably when next month's analysis is conducted.



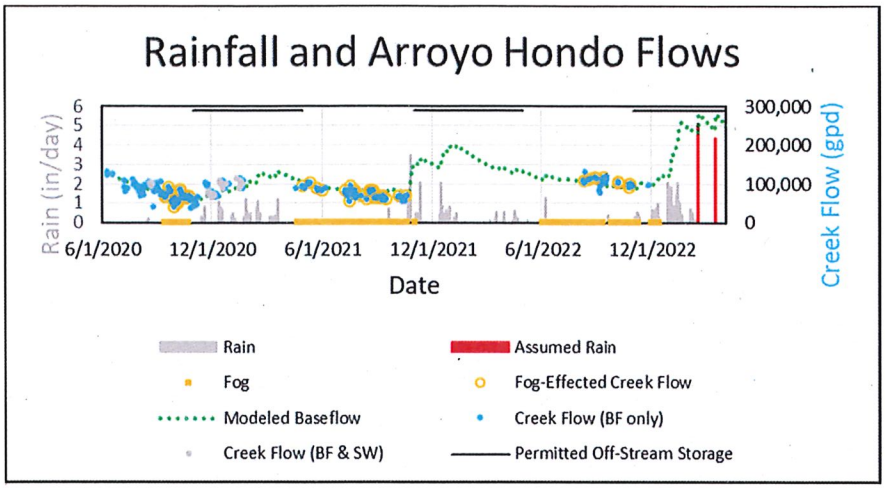
2. Water Production and Consumption: From January 17, 2023 – February 13, 2023, water *production* in the district averaged 51,657 gallons per day (GPD), which is a decline of approximately 8,000 GPD in production as compared to the last reporting period, when production averaged 59,479 GPD. Note that the water treatment plant was off for five (5) days during this reporting period for operational reasons. Water *consumption* during this same timeframe averaged 61,552 GPD (approximately 105GPD per connection), and is quite similar to the prior reporting period, when consumption averaged 60,259 GPD, or approximately 103 GPD per connection, but the district did experience a significant leak on the booster pump line on February 10, 2023 which impacts the consumption data.

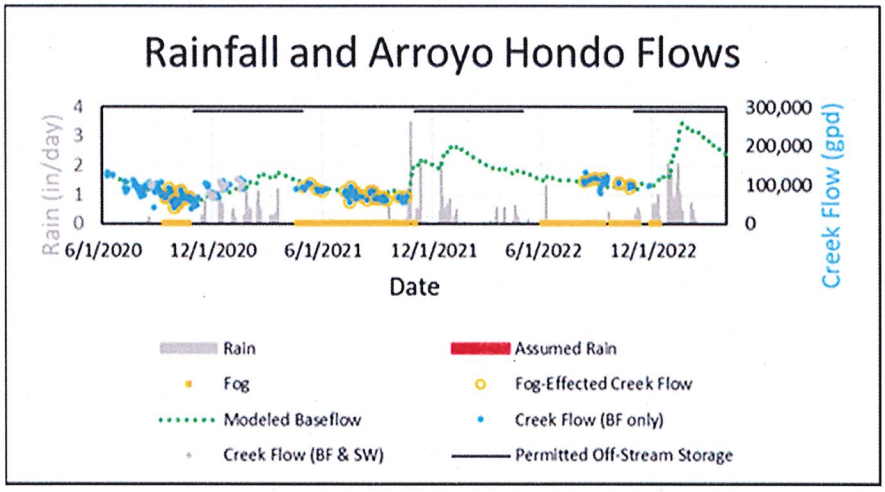
3. Water in Storage:

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 April 2, 20233. Creek flows have responded to the rains with a current creek flow of approximately 250,000 GPD, and a projected creek flow of close to 300,000 GPD if historically average rainfall occurs during February (5.11 inches) and March (4.37 inches) – see the red bars to the right side of the graph. Note, however, that if virtually no rainfall is received in either February or March (hence no red bars on the graph), the projected creek flows for early April are much less, below 150,000 GPD.


Rainfall and Arroyo Hondo Flows
Rain (in/day)
6
5
4
3
2
1
0
300,000
200,000
100,000
0
Creek Flow (gpd)
6/1/2020
12/1/2020
6/1/2021
12/1/2021
6/1/2022
12/1/2022
Date
Rain
Assumed Rain
Fog
Fog-Effected Creek Flow
Modeled Baseflow
Creek Flow (BF only)
Creek Flow (BF & SW)
Permitted Off-Stream Storage


Rainfall and Arroyo Hondo Flows
Rain (in/day)
4
3
2
1
0
300,000
200,000
100,000
0
Creek Flow (gpd)
6/1/2020
12/1/2020
6/1/2021
12/1/2021
6/1/2022
12/1/2022
Date
Rain
Assumed Rain
Fog
Fog-Effected Creek Flow
Modeled Baseflow
Creek Flow (BF only)
Creek Flow (BF & SW)
Permitted Off-Stream Storage