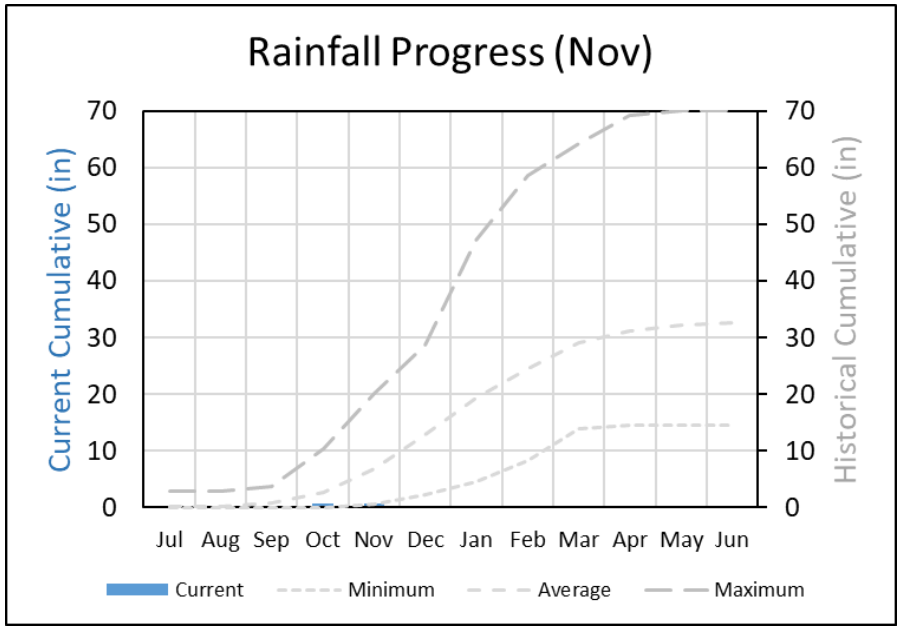
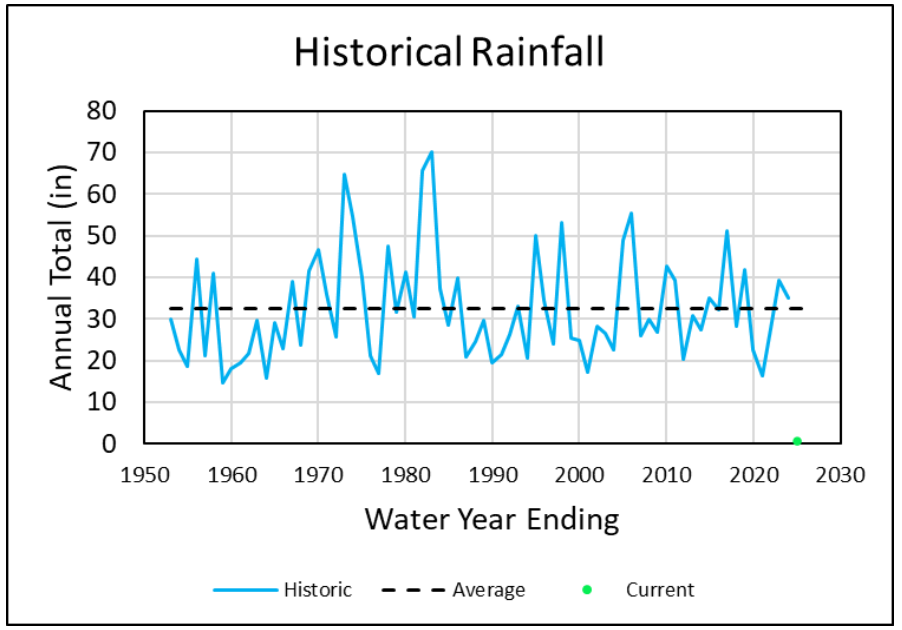
November 2024
BCPUD Water Supply Memo

Status of BCPUD’s Water Supply

Rainfall through the end of November

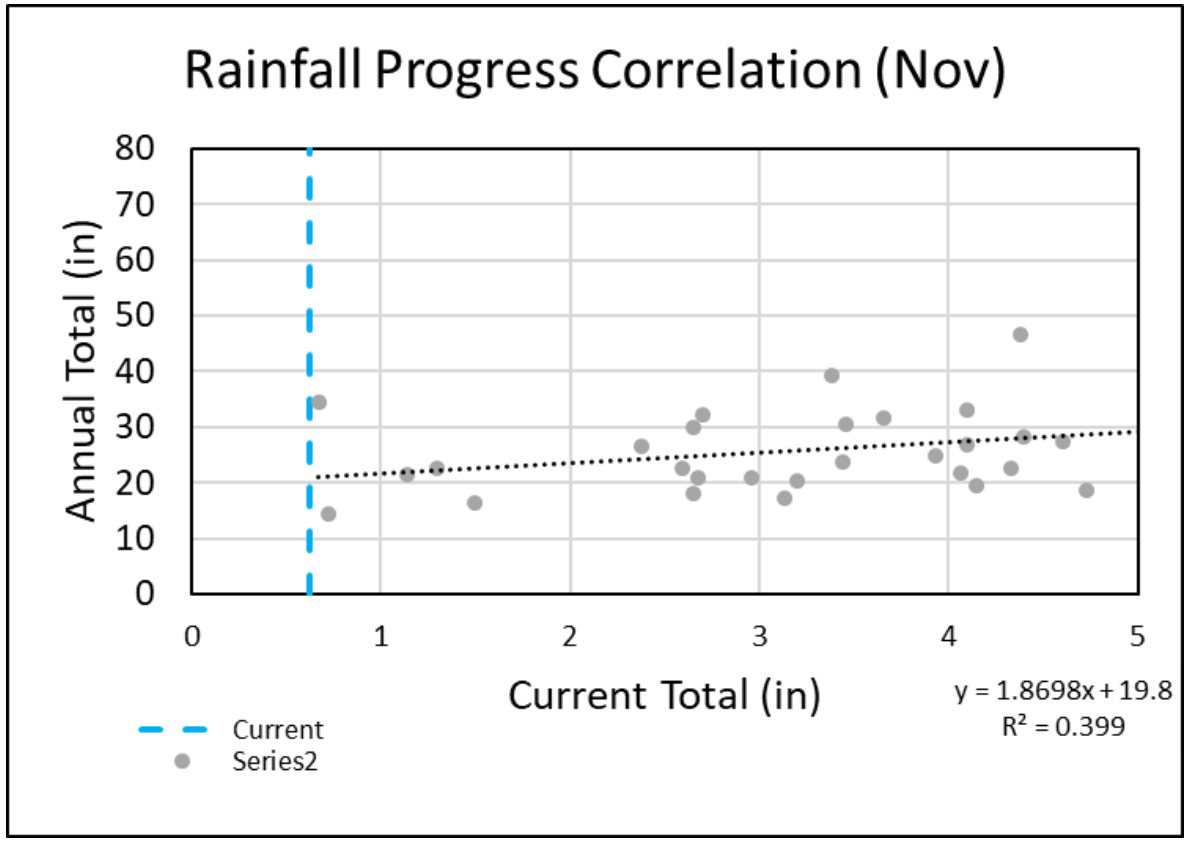




As of the end of November 2024, the District had received 5.87 inches of rain since July 1, 2024 (the beginning of the rain year), which is slightly below the historical average of 6.71 inches by the end of November.

We received 5.25 inches of rain in November.

Rainfall Progression Analysis

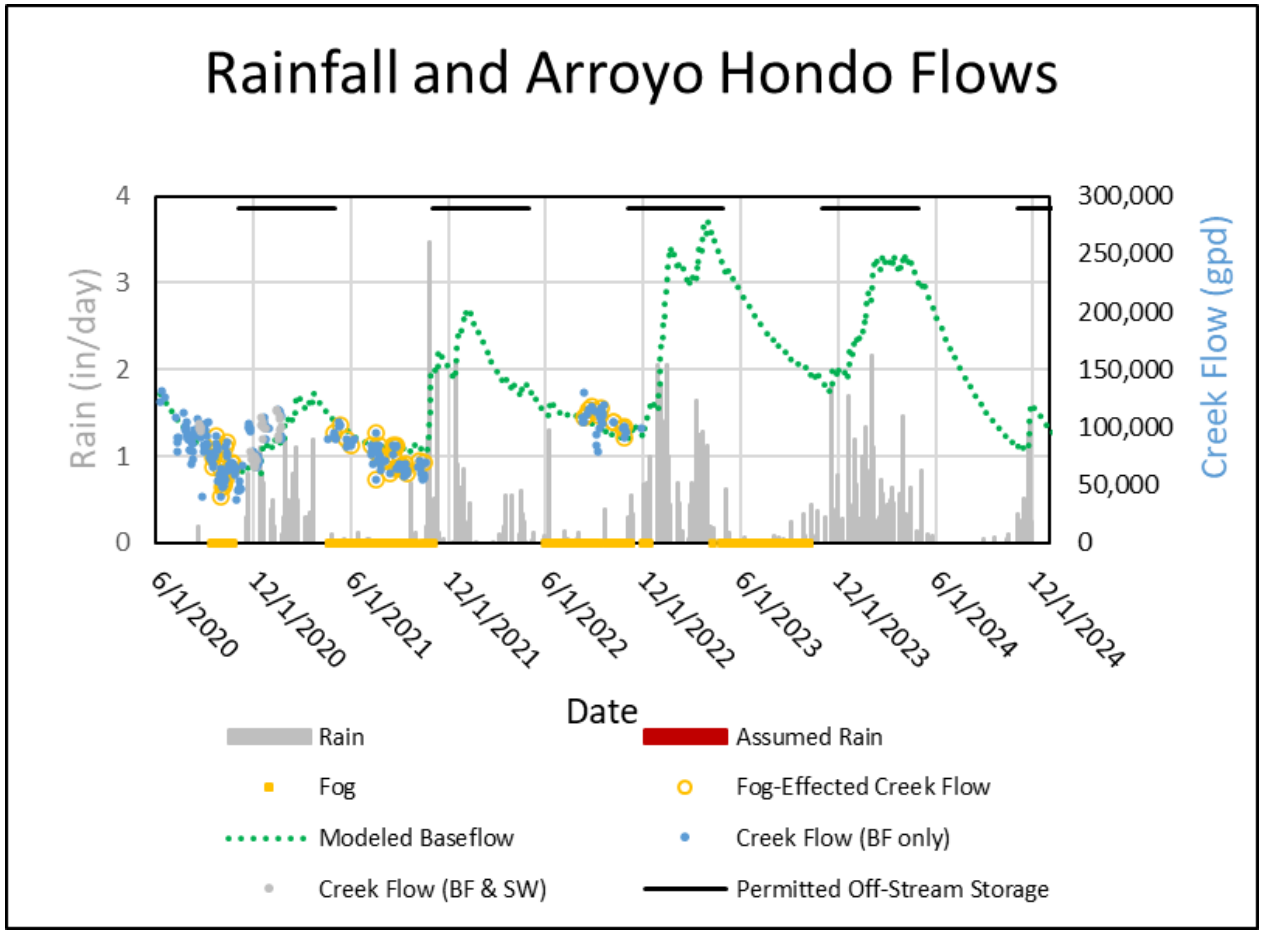


The cumulative total through November 30 is 5.87 inches. 53% of the 73 years on record had more or an equal amount of rain by the end of November, compared to this year (24/25 Rain Year).

Using this progression correlation analysis, we are projecting that we will have 30.78 inches by the end of this rain year (June 30, 2025).

This analysis uses historical data to predict how much rain we will have by the end of the year, based on the current year total.

Model of Arroyo Hondo Creek Flows

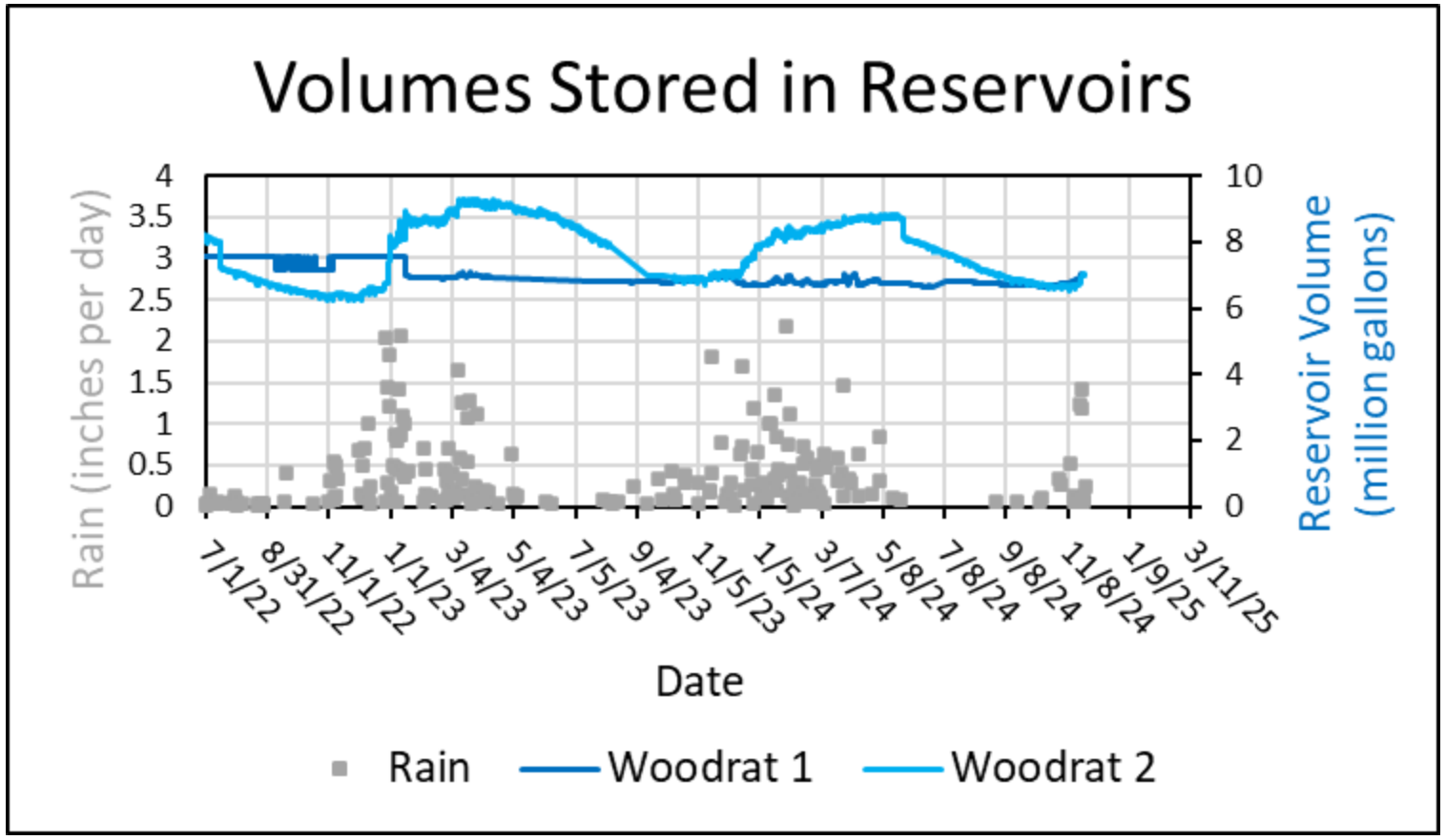


Graph is the District's Base Flow (BF) recession model for the Arroyo Hondo Creek, updated to depict predictions of the base flow portion of creek flows through the end of December 2024, based on actual rainfall through November. The creek is no longer flowing over the impoundment structures, and depending on the rate of water production, when we are drawing from the creek, water levels recede below the lip of the dam. This would allow us to gather empirical data to calculate actual creek flows, and to validate the model, however we have not yet collected this data.

Creek flows continue to meet District Demand

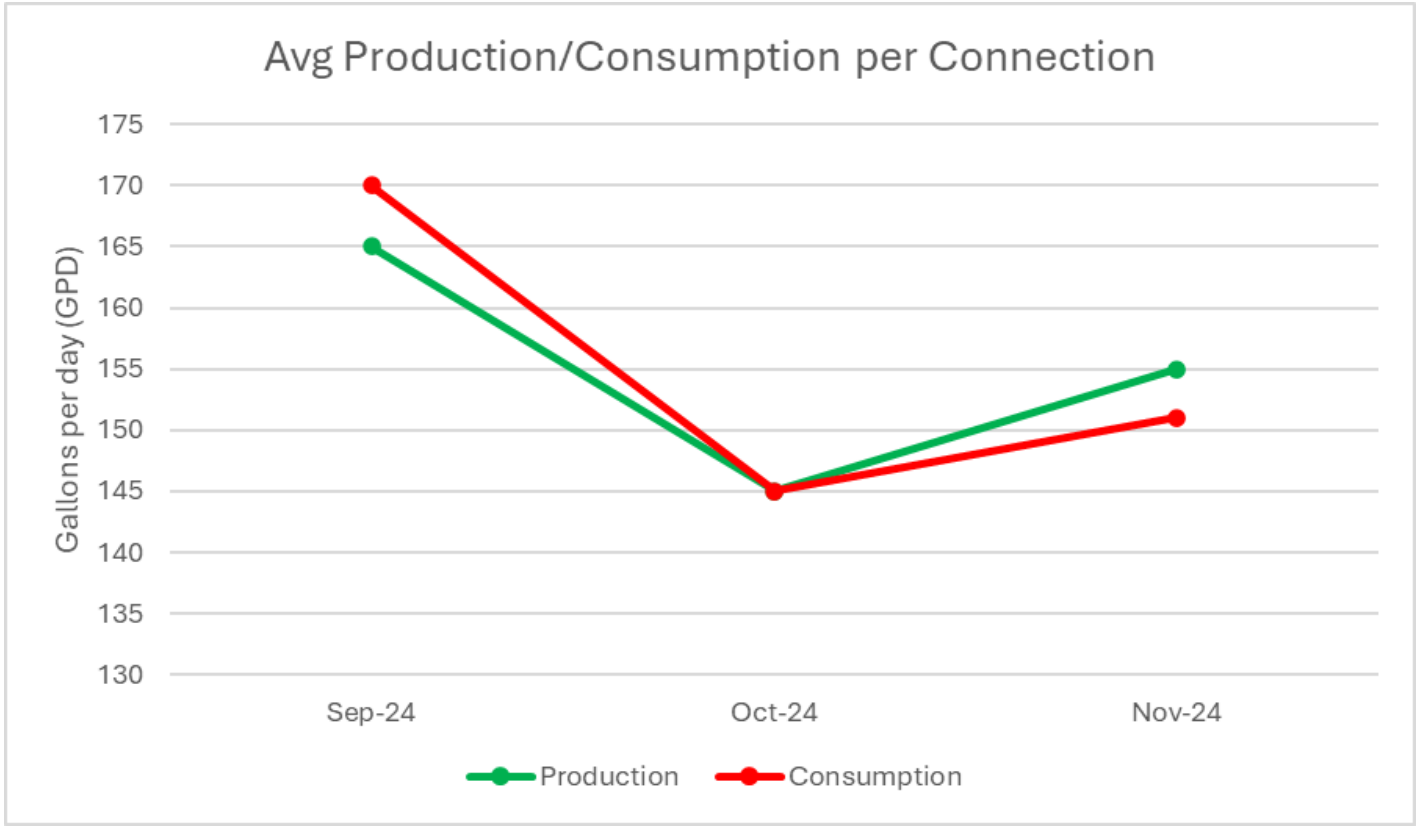
- Average flows by the end of November were modeled at ~120,905 GPD
- This is above flows at the end of October, which were estimated at ~84,556 GPD
- Flows by the end of December (<u>WITHOUT RAIN</u>) are predicted to be ~ 114,645 GPD

Water Storage



Woodrat 1 Reservoir and Woodrat 2 Reservoir are no longer spilling but are still relatively full.

Fall 2024 Water Usage Trends



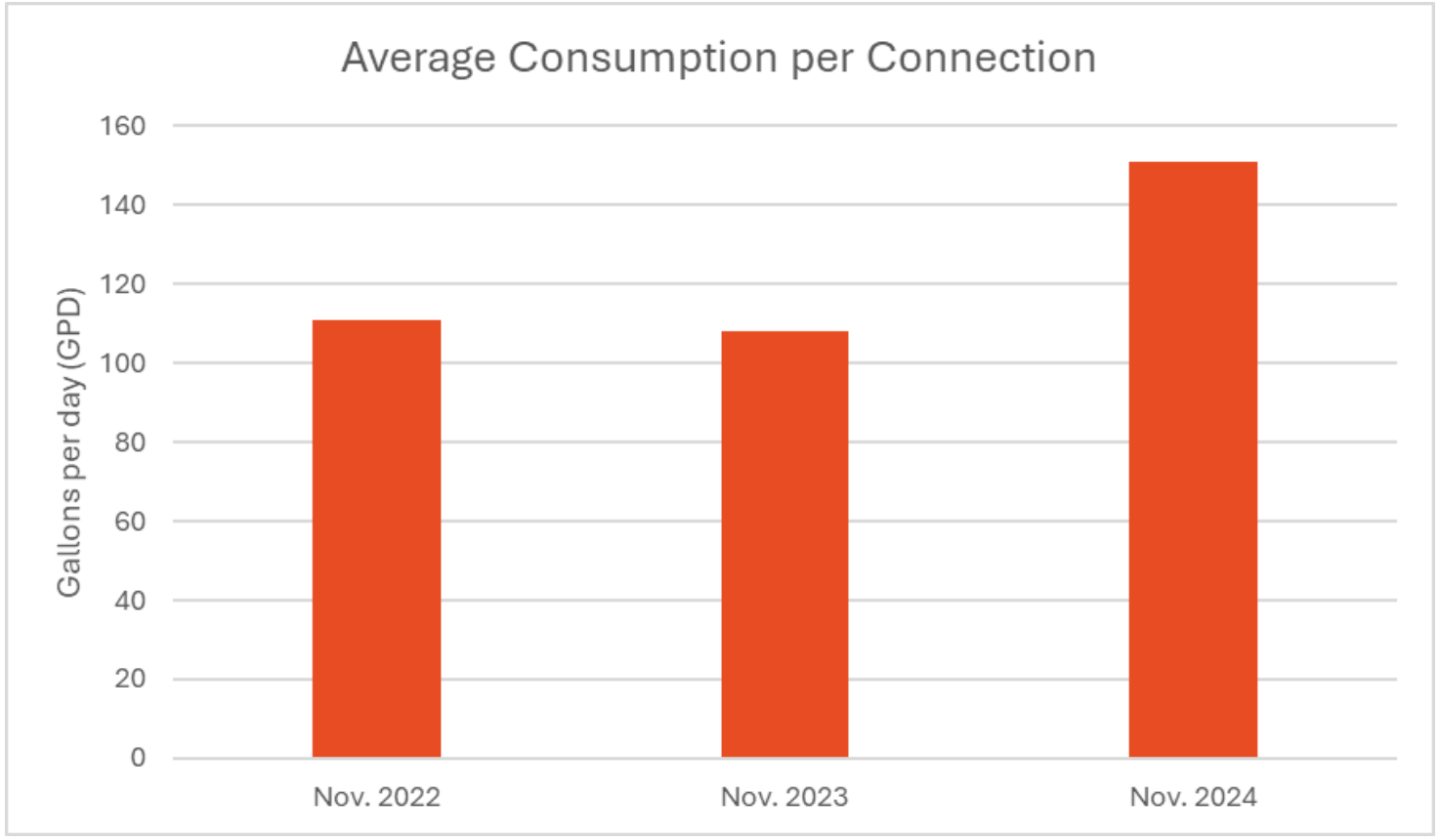
PRODUCTION

- In November 2024, water *production* in the district averaged **90,691** gallons per day (GPD)
- This is **UP** from October's production, which averaged **84,616** GPD

CONSUMPTION

- Water *consumption* in November averaged **88,108** GPD (approximately **151 GPD** per connection)
- This is **UP** from October consumption, which averaged **84,616** GPD (approximately **145 GPD** per connection).

Comparison to past two years

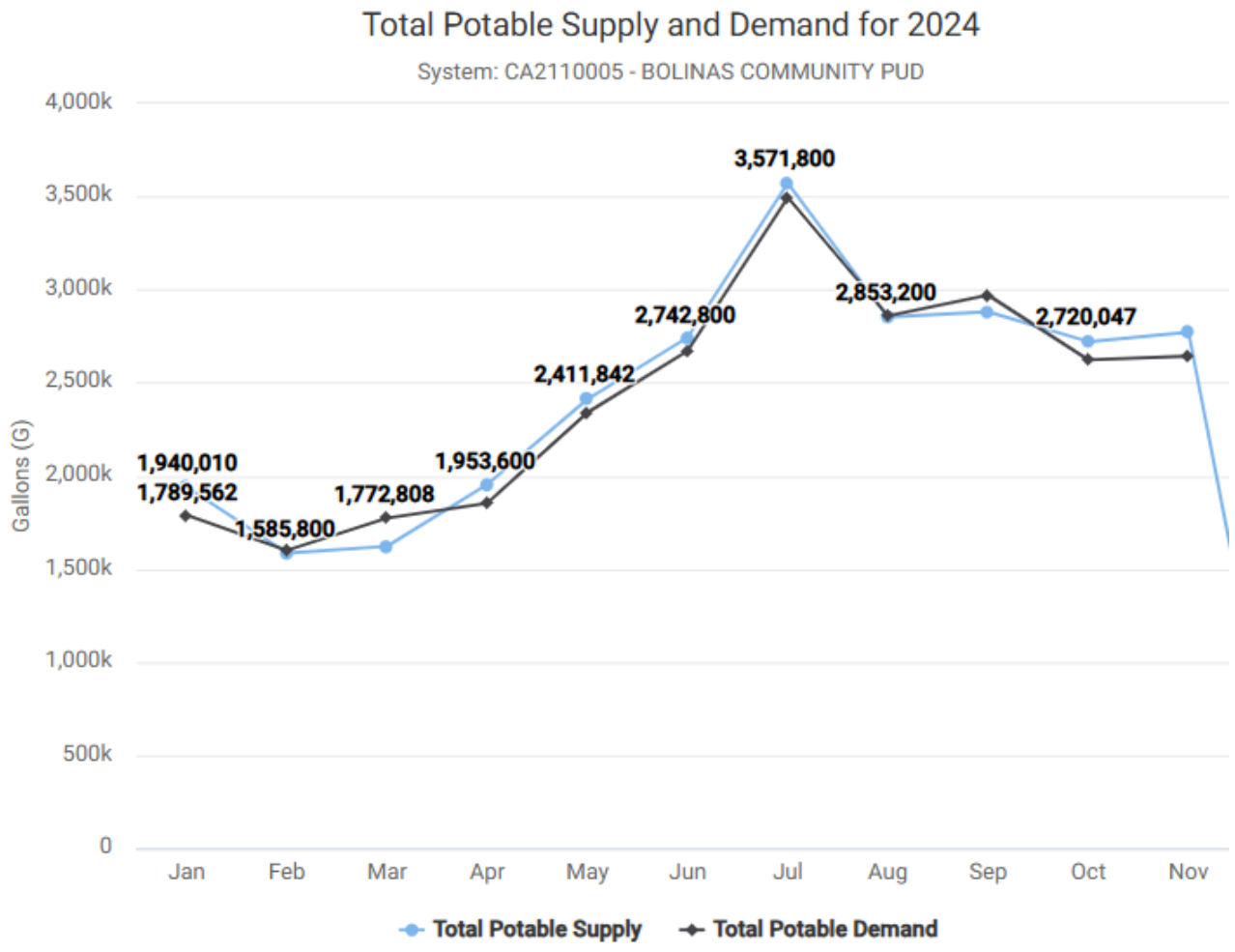


Average use per connection:

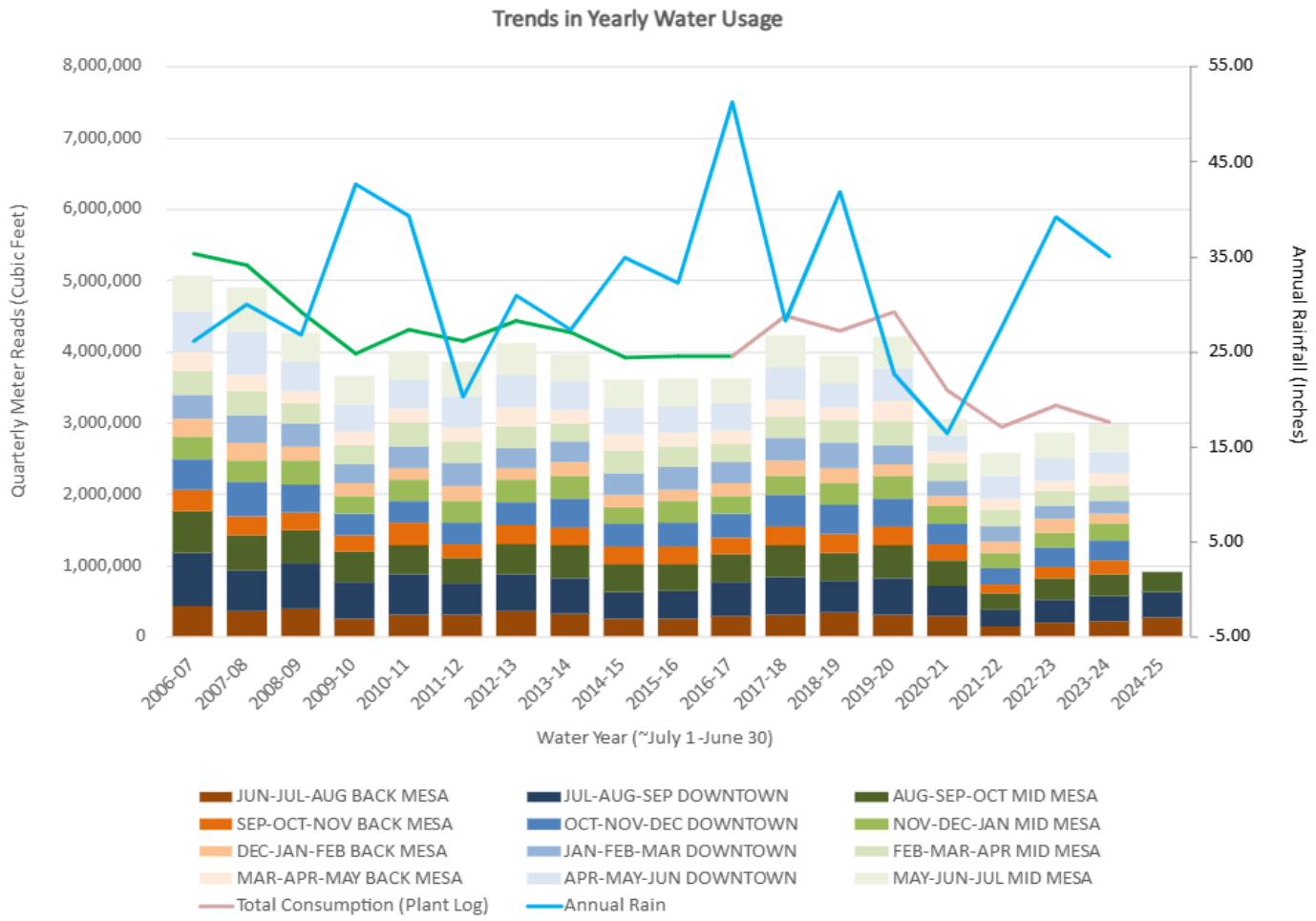
- Nov 2022 – 111 GPD
- Nov 2023 – 108 GPD
- Nov 2024 – 151 GPD

28% increase per connection compared to last November (significant leaks undoubtably contributed to higher consumption numbers)

2024 Water Usage Trends



Annual Trends Since 2006
Quarterly Water Usage through Nov 2024



This graph shows "Cumulative Quarterly Water Usage", as measured by "Regional Quarterly Water Meter Reads"

- Remember: at the beginning of each month staff reads all meters within 1 of 3 given regions:
  - **1) BACK MESA**
  - **2) DOWNTOWN**
  - **3) MID MESA**

- Annual Rain Fall is plotted as a BLUE LINE

- Town Consumption Estimates, based on the amount of water leaving the treatment plant daily is shown in PINK LINE.

- GREEN LINE is an extension of pink line, which models consumption based on an absolute unaccounted for water loss of 437,856 CuFt (~10% loss)