

**SPECIAL MEETING REGARDING
WATER SUPPLY**

**BOLINAS COMMUNITY PUBLIC UTILITY
DISTRICT**



September 30, 2020



MEETING OUTLINE*

- Purposes of Meeting
- Takeaway Points
- Background on Water Supply
- Current Water Supply Conditions
- Planned Course of Action
- Closing Points
- Discussion

* Technical appendix follows the presentation



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PURPOSES OF MEETING

- Update the BCPUD Board of Directors and the Bolinas community on the (declining) available water supply
- Summarize community water use reduction since June
- Discuss further water use reduction that is needed
- Explain next steps if water use is not further reduced
- **Please hold questions until the presentation is complete**



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TAKEAWAY POINTS

- BCPUD staff are guardedly optimistic that additional voluntary conservation will be effective to maintain the water supply until sufficient rains occur
- If the community does not voluntarily reduce water use **immediately**, rationing will be necessary in the coming weeks or months



TAKEAWAY POINTS

- Water use declined commendably -- by 20% -- from June levels in response to the BCPUD's heightened water conservation alert
- Conservation efforts stalled this month (September)
- Water use in the district during September was approximately the same as in August
- The water use reduction needed right now is achievable



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BACKGROUND ON WATER SUPPLY

- The primary water source for the BCPUD water system is the **Arroyo Hondo Creek** located in the southern portion of Point Reyes National Seashore
- This small perennial creek has supplied the district since the 1920s



BACKGROUND ON WATER SUPPLY

- The limited flow from the Arroyo Hondo Creek is one of the reasons for BCPUD's water shortage emergency declarations in the 1970s, culminating in BCPUD Resolution 173, enacted in 1977, known as “the moratorium resolution”
- In the 1980s, the BCPUD constructed two water storage reservoirs, Woodrat 1 and Woodrat 2, as emergency, back-up water supply sources



BACKGROUND ON WATER SUPPLY

- The Arroyo Hondo Creek and the Woodrat 1 and 2 reservoirs are **surface water sources**
- The Woodrat 1 and 2 reservoirs are supplied by **intermittent** creeks that flow during the rainy season
- When the rains cease the dry season begins, the Woodrat 1 and 2 reservoirs are at their maximum storage capacity



BACKGROUND ON WATER SUPPLY

- The Arroyo Hondo Creek is a **perennial** creek
- When the rains cease and the dry season begins, the Arroyo Hondo Creek is supplied by groundwater seepage, which decreases slowly over time until the rains occur
- To meet demand when the Arroyo Hondo Creek flows decline, the BCPUD supplements with stored water diverted from the Woodrat 1 and 2 reservoirs



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CURRENT WATER SUPPLY CONDITIONS

- This is a dry year
 - Less than **23** inches of rain was received during the 2019-20 rain year (July 1, 2019 – June 30, 2020)
 - This is well below the district's average rainfall of **33** inches
 - This is approximately half the **42** inches of rain received in the district during the prior rain year (2018-19)



CURRENT WATER SUPPLY CONDITIONS

- Arroyo Hondo Creek flow in September 2020
 - 50,000 - 65,000 gallons per day (approx.)
- Current Community Water Use in September 2020
 - 100,000 gallons per day (approx.)



CURRENT WATER SUPPLY CONDITIONS

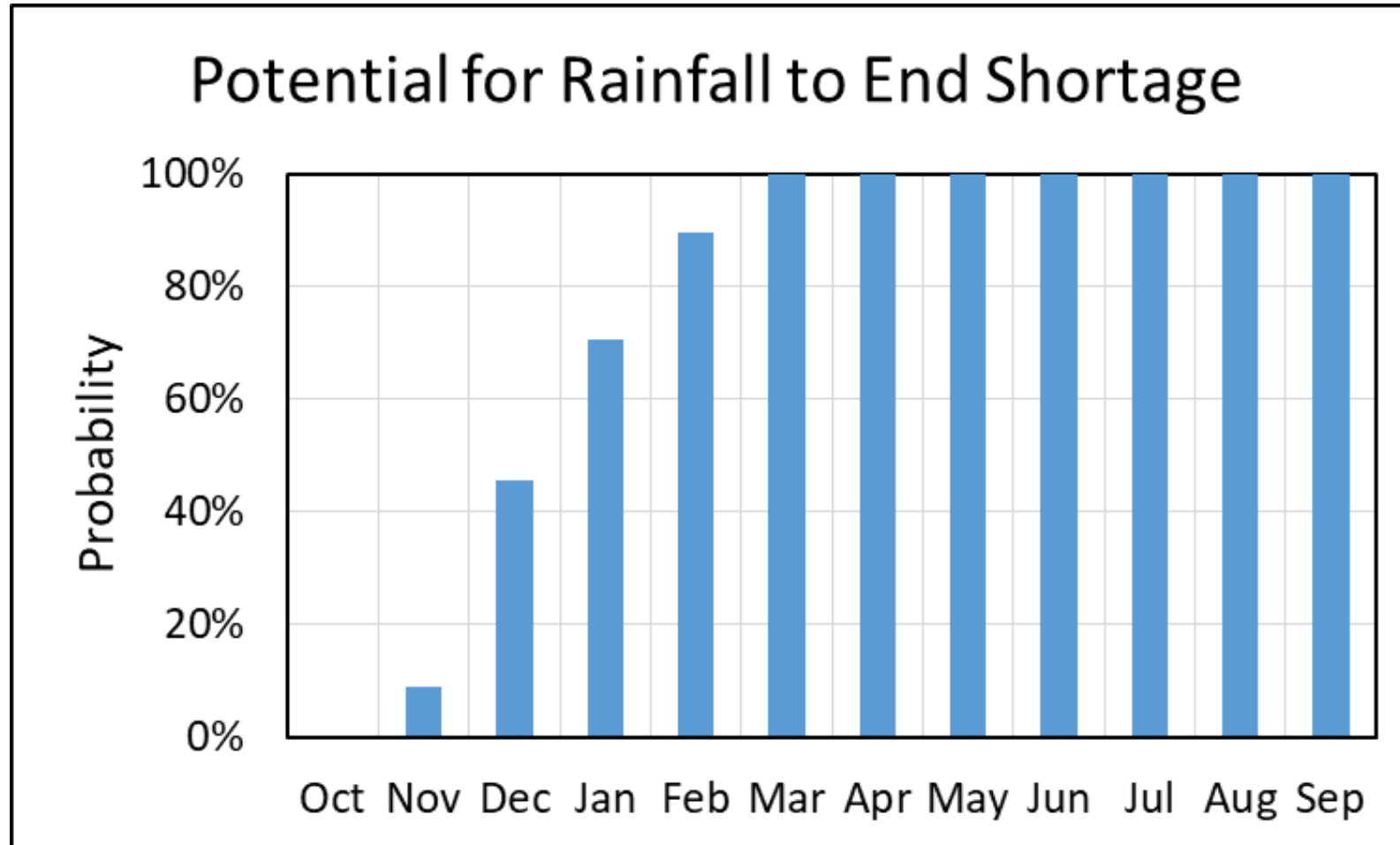
- Community water use currently exceeds the Arroyo Hondo Creek flow by at least 50 percent
- To supplement, the BCPUD is diverting water from storage (our tanks and reservoirs)
 - Available stored water as of 9/25/20
 - Water storage tanks: 643,500 gallons
 - Woodrat 1 and 2 reservoirs: 9,303,000 gallons



CURRENT WATER SUPPLY CONDITIONS

- The community must reduce water use during this critically dry period
 - Reducing water use will make the available water supply (i.e., Arroyo Hondo Creek flow + supplemental stored reservoir water) last until the rains occur
 - The rains will replenish the Arroyo Hondo Creek flows and our reservoirs
- It is uncertain when the rains will occur

CURRENT WATER SUPPLY CONDITIONS



Assumes 12 inches accumulated rainfall required to replenish Arroyo Hondo flows. Analysis based on 68 years of monthly rainfall data collected by BCPUD



CURRENT WATER SUPPLY CONDITIONS

- Community water use during July and August declined by approximately 20 percent from June levels
- August use:
 - Community overall: 97,282 gallons per day
 - Average per connection: 166 gallons per day
- September water use is approximately the same

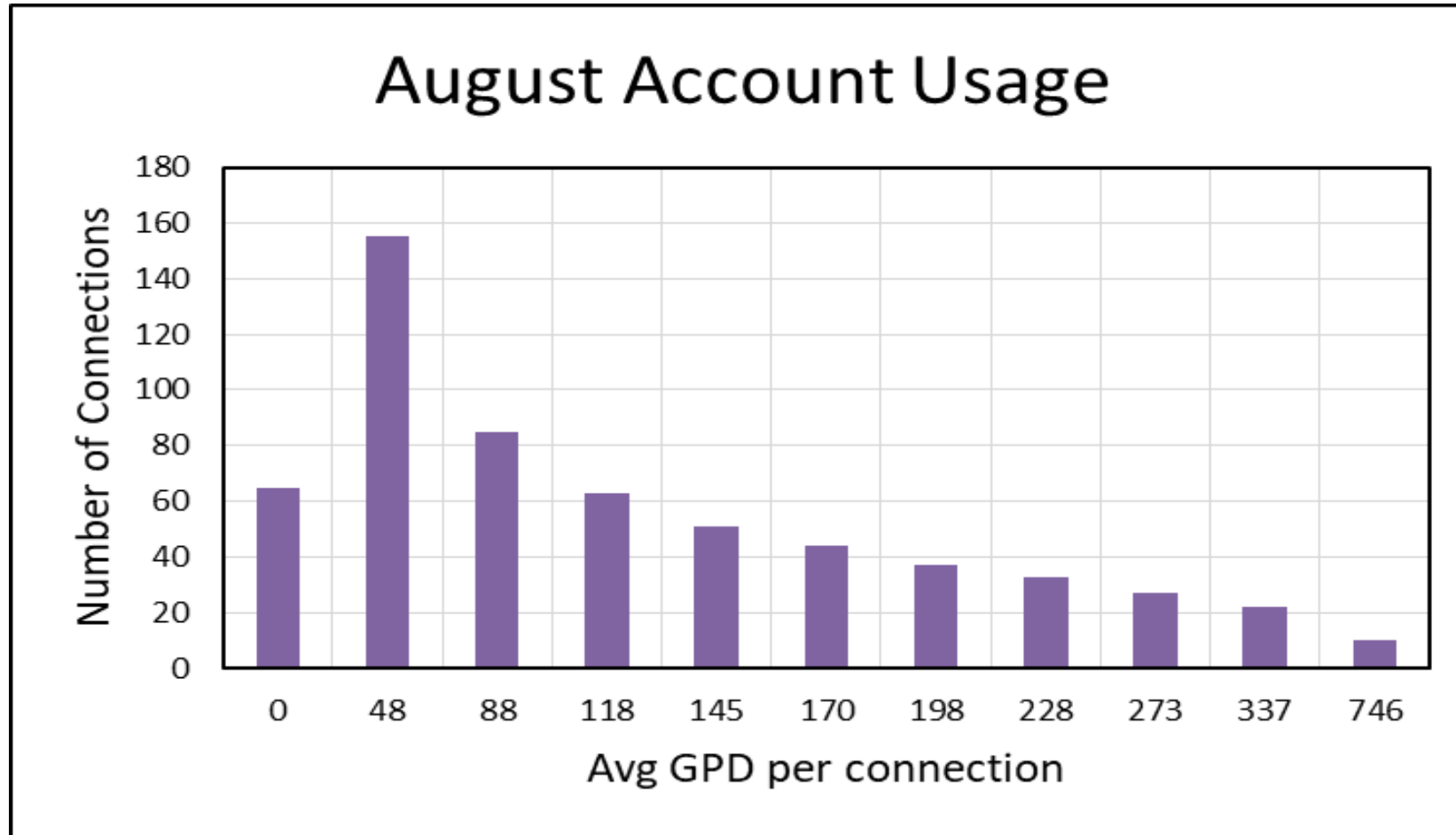


CURRENT WATER SUPPLY CONDITIONS

- Not all customers have sufficiently reduced their water use
- Further water use reduction is achievable, on a voluntary basis, especially by the highest water users
- Further water use reduction is needed to reduce the potential for mandatory water rationing



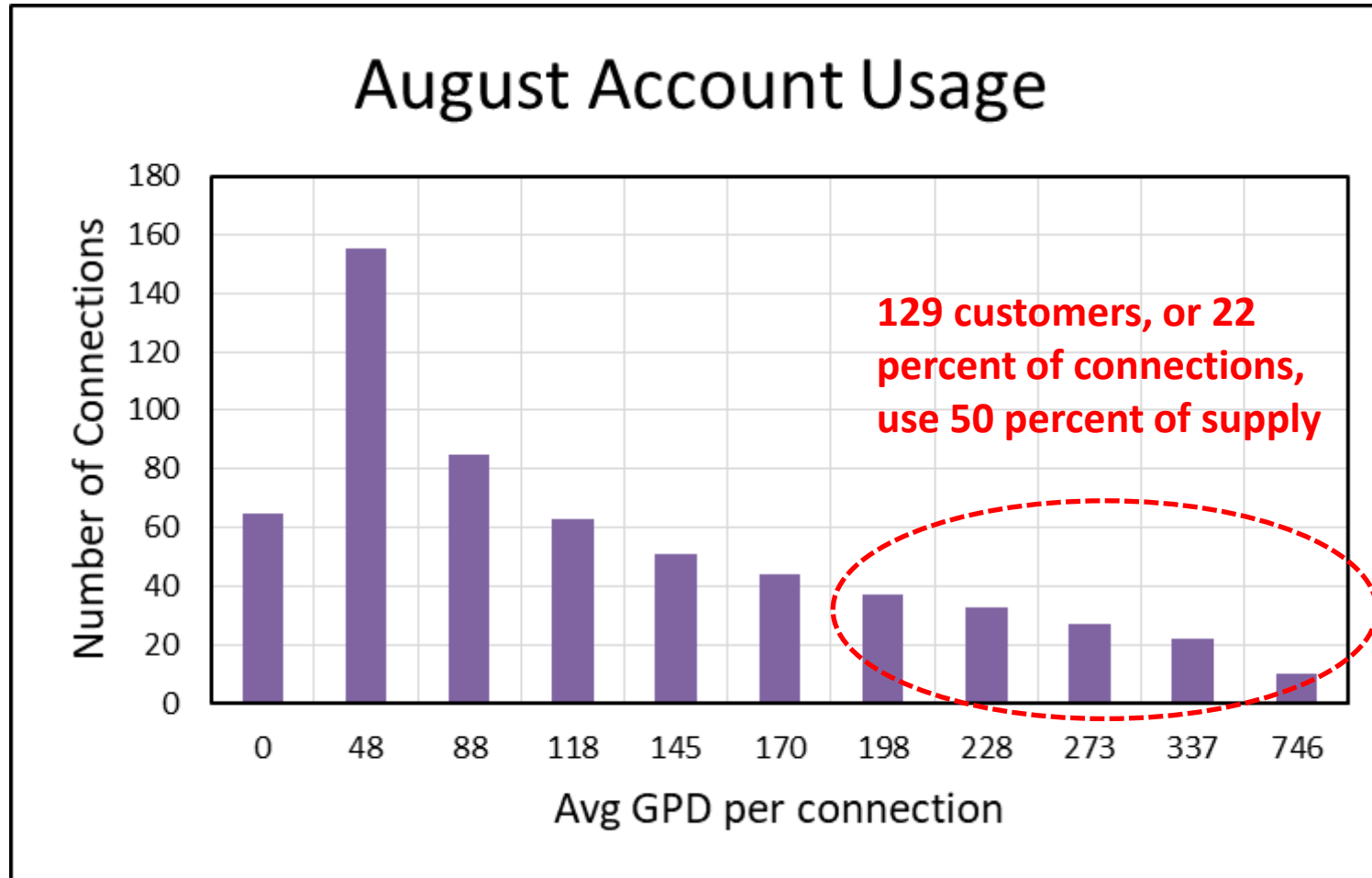
CURRENT WATER SUPPLY CONDITIONS



Each bar with a value greater than zero (i.e., all bars other than the bar on the far left) is equivalent to 10 percent of total community use



CURRENT WATER SUPPLY CONDITIONS



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CURRENT WATER SUPPLY CONDITIONS

- Who are the high water users?
 - Long-time Bolinas business-owners and residents
 - New Bolinas business-owners and residents
 - Full-time Bolinas residents
 - Part-time Bolinas residents
 - Property Owners
 - Renters
 - Visitors
 - People sheltering-in-place
 - Properties with gardens
 - Properties without gardens



CURRENT WATER SUPPLY CONDITIONS

- The high water users are . . . people you know and love!
- How do we know?
 - BCPUD staff are reading every water meter in town on at least a monthly basis
 - BCPUD staff are in communication with lots of customers about their usage



CURRENT WATER SUPPLY CONDITIONS

- No single “type” of customer is to “blame”
- A divided community cannot stand
- We **ALL** need to do our part to reduce water use



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PLANNED COURSE OF ACTION

- Further water use reduction is needed
- What does this mean?
- Water use in the district needs to decline to an average of 150 gallons per day per connection (not per person, per connection!)



PLANNED COURSE OF ACTION

- 150 gallons per day per connection is BCPUD staff's **current** projection of the sustainable level of water use in the district until the rains occur
- If/when conditions worsen, this 150 gallons per day per connection target will be revised downward



PLANNED COURSE OF ACTION

- Who will be most affected?
 - In August 2020, **226 customers, or approximately 38% of BCPUD's 587 customers, used more than 150 gallons/day of water**
 - If you are not one of these 226 customers, thank you for your low water use and your conservation efforts!



PLANNED COURSE OF ACTION

- What about businesses, public-serving entities and multi-use facilities?
 - BCPUD staff will work with these customers to determine an appropriate amount of daily water use
 - **Fewer than 20** of the 226 customers currently using more than 150 gallons per day are businesses, public serving entities or multi-use facilities



PLANNED COURSE OF ACTION

- How does voluntary conservation differ from mandatory rationing?
 - To implement rationing, among other things the BCPUD Board must pass a resolution with specific findings and consequences for violating the ration amount
 - Consequences would include warnings followed by termination of water service (i.e., shutting off your water) for non-compliance



PLANNED COURSE OF ACTION

- Adaptive management by BCPUD staff to avoid rationing:
 - Monitor water supply conditions on a daily basis
 - Closely track customer water use
 - Emphasize further reductions by high water users
 - Community outreach
- Alert BCPUD Board and community immediately if conditions worsen and more conservation (or rationing) is needed



PLANNED COURSE OF ACTION

- Community outreach
 - Flyers delivered town-wide
 - Updates on Nextdoor and in the Hearsay News
 - Meeting materials posted on the BCPUD website
 - Signage regarding water supply and need to reduce water use to be placed at strategic locations in town
 - Continue to engage with high water users



PLANNED COURSE OF ACTION

- What can **YOU** do?
 - Learn to read your water meter and track your usage (instructions on BCPUD's website at www.bcpud.org or call and ask the BCPUD for help)!
 - Or, call (415-868-1224) or email (bcpud@bcpud.org) the BCPUD office and find out how much water you are using



PLANNED COURSE OF ACTION

- What can **YOU** do? (cont'd)
 - If your property is using more than 150 gallons of water per day, please reduce your water use immediately!
 - Our staff is available for advice and consultation weekdays between 9 am and 3 pm



PLANNED COURSE OF ACTION

- Unlike pandemics and wildfires, reducing water use is completely within our control
- The BCPUD is here to help you
- Together, we can do this!



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CLOSING POINTS

- BCPUD staff are guardedly optimistic that additional voluntary reductions in water use will be effective to maintain the available water supply until sufficient rains occur
- The amount of water reduction needed at this time (**150 gallons per day per connection**) is achievable on a voluntary basis
- If the community as a whole does not reduce water use as requested (or if conditions worsen), rationing will be necessary in the coming weeks or months



OUTLINE

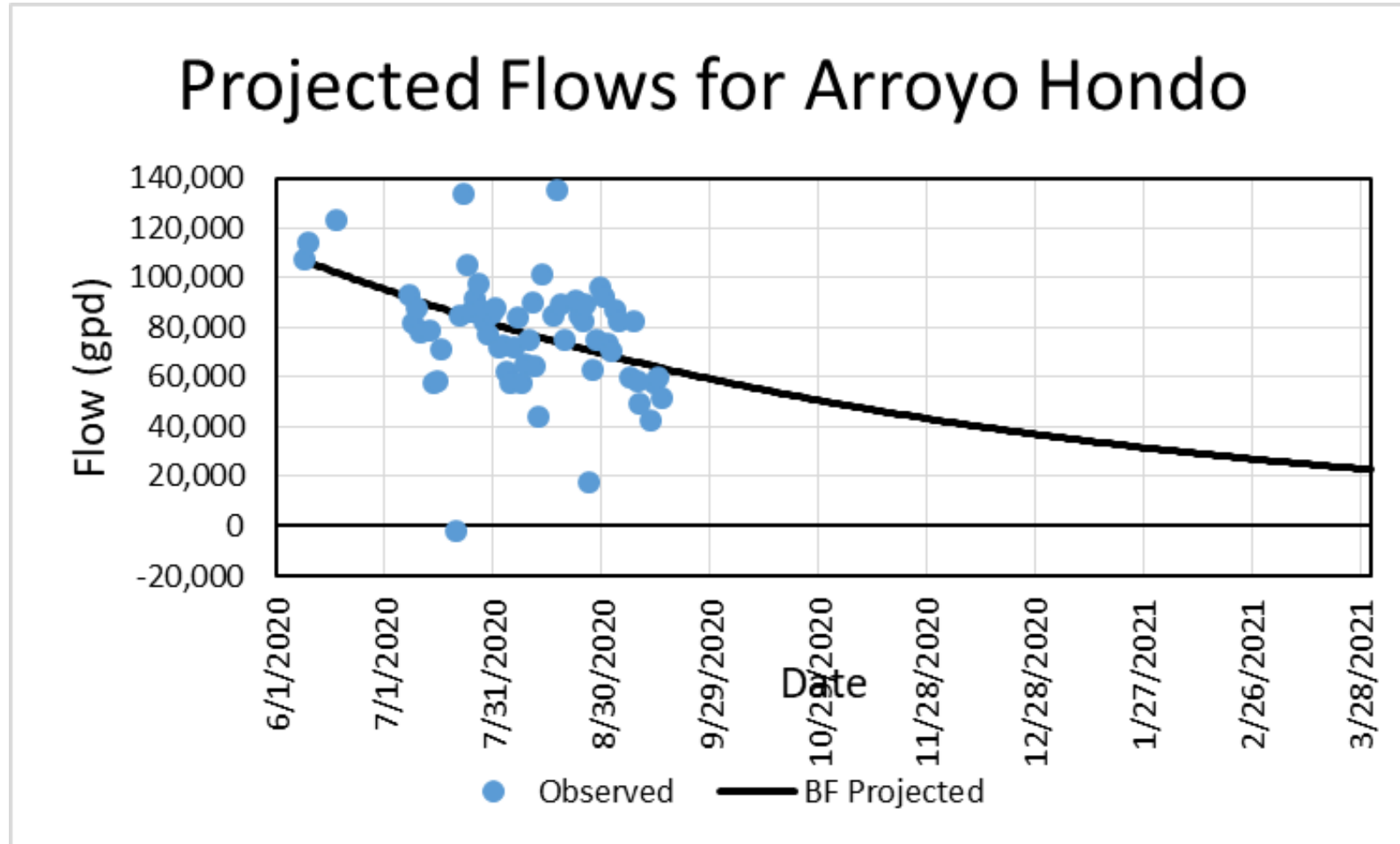
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TECHNICAL APPENDIX

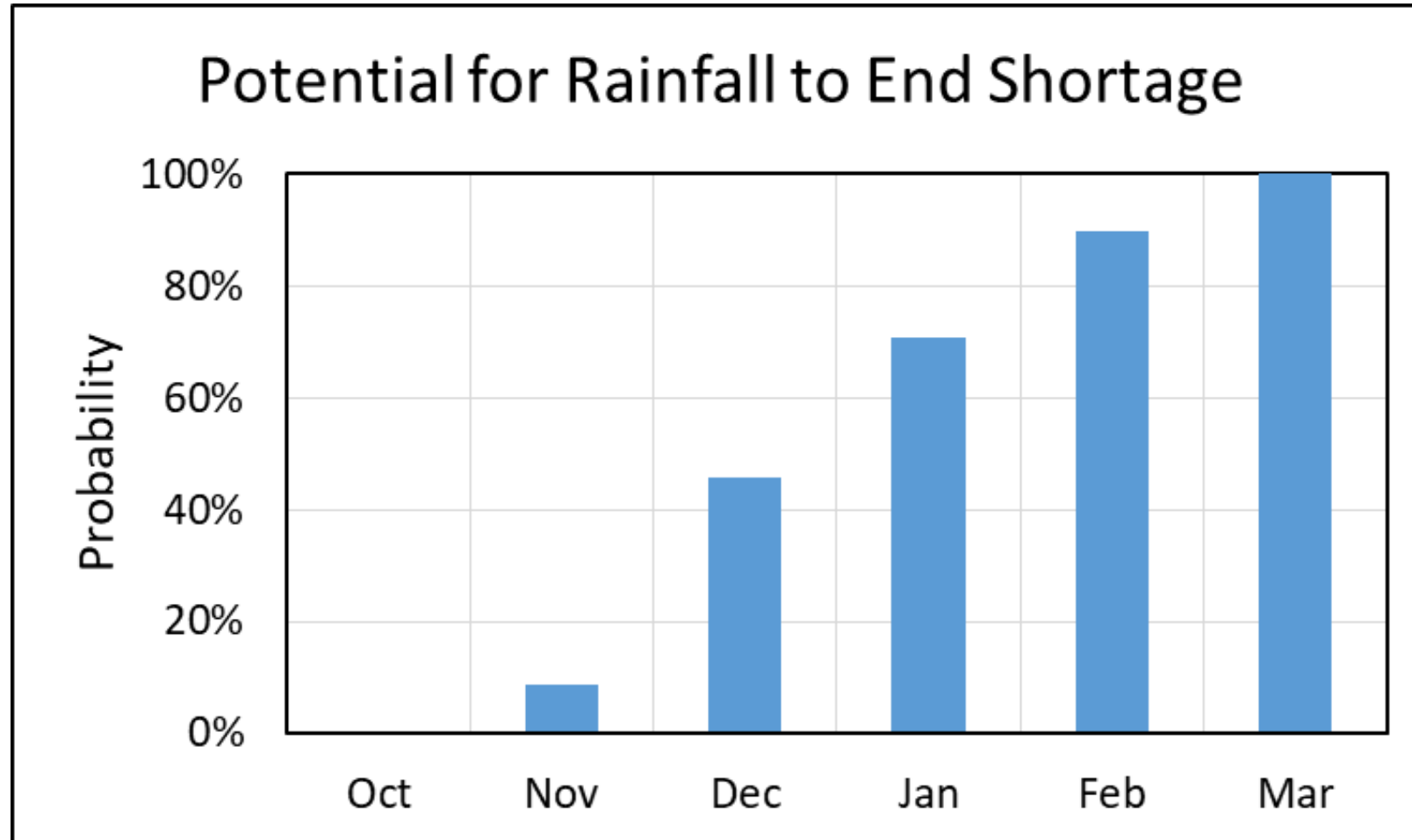
- Projected Flows for Arroyo Hondo Creek
- Potential for Rainfall to End Shortage
- Scenario Summary
- Scenario Summary (cont'd)

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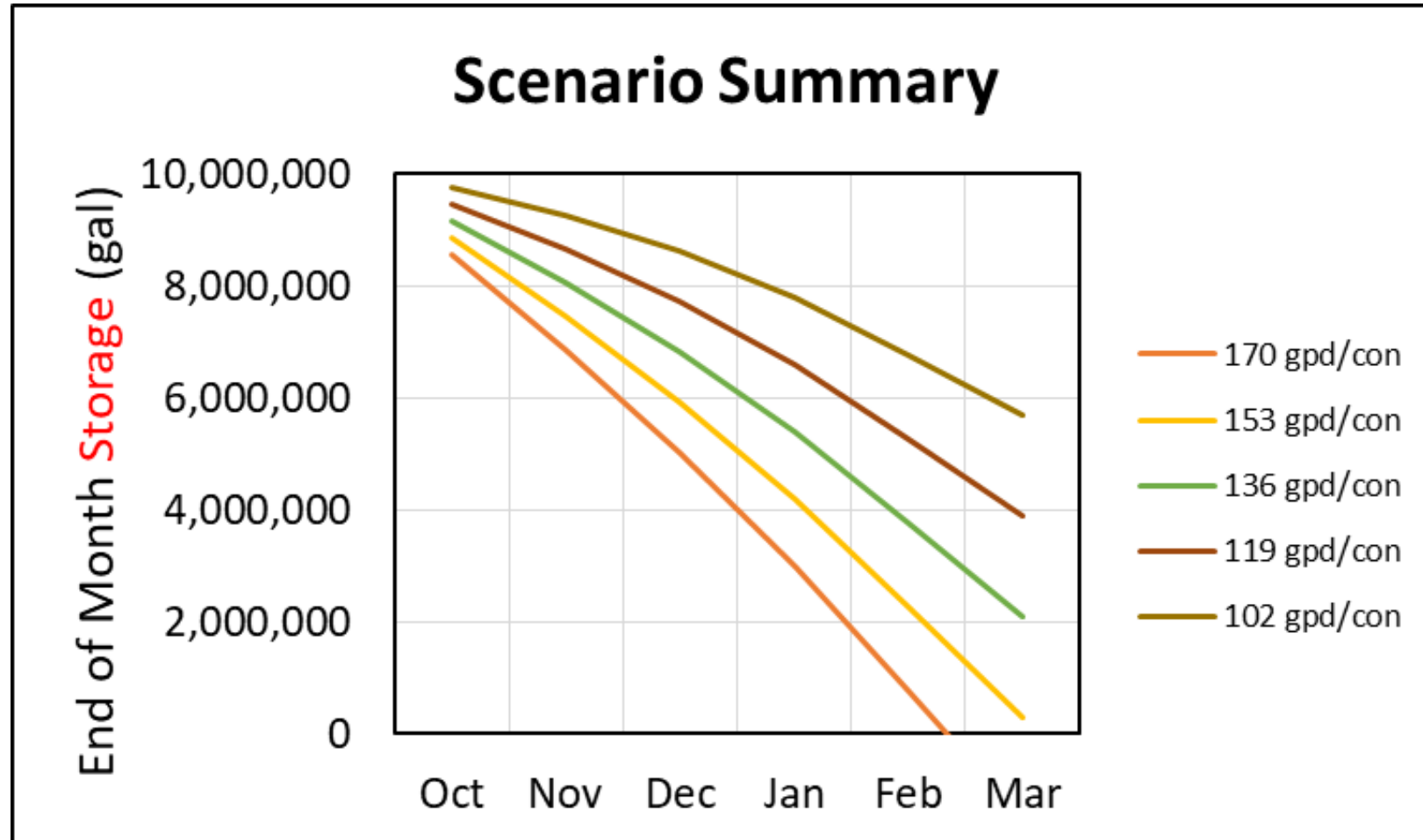


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