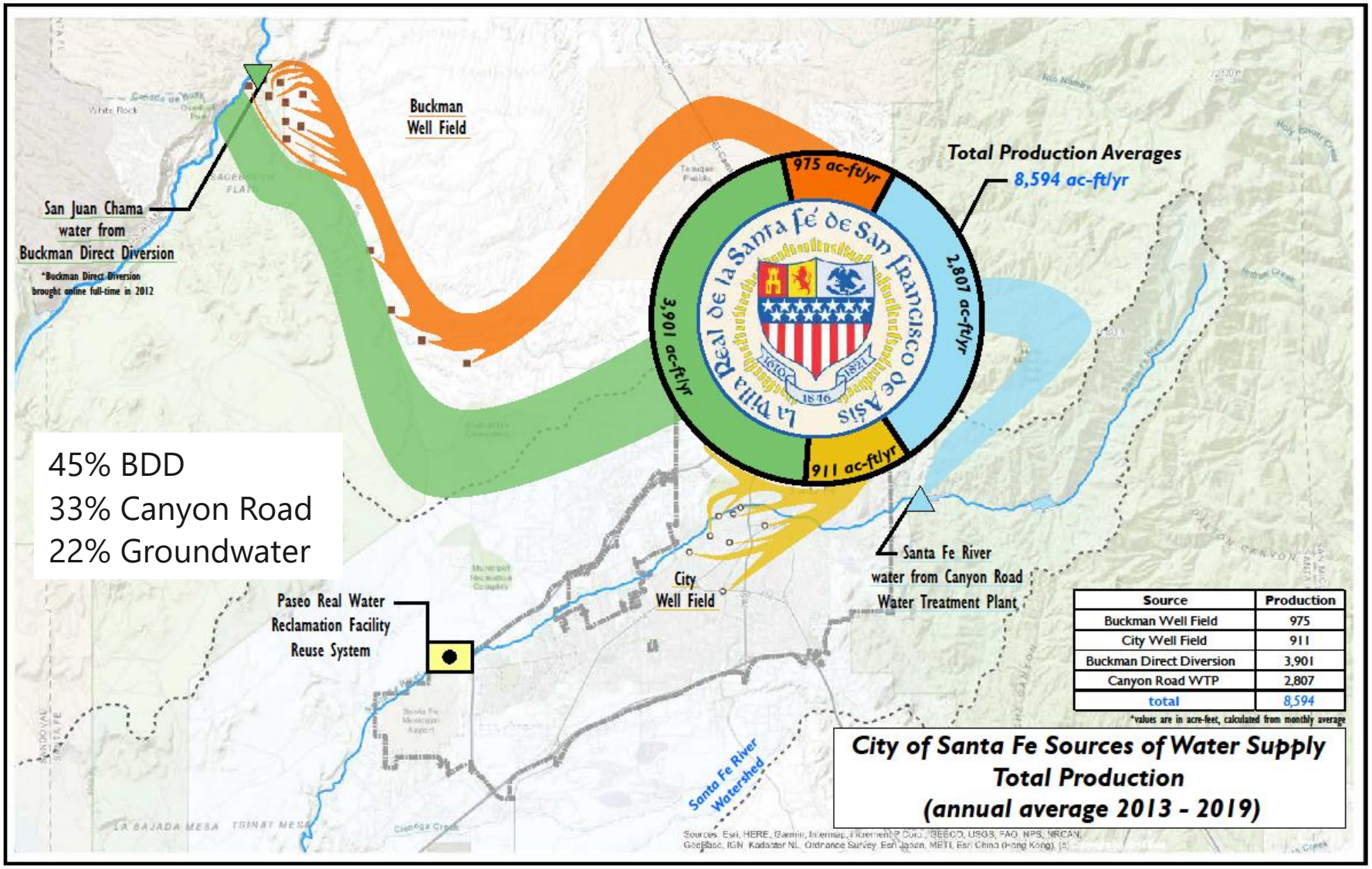
CoSF Water Supply & Demand Update: 2021

This report is available at https://www.santafenm.gov/water

Background and Jargon

- City of Santa Fe Water has 4 water sources
  - 2 utilize river water or "surface water"
    - Canyon Road Water Treatment Plant treats Santa Fe River Water stored in two reservoirs in the Upper Santa Fe River Watershed.
    - Buckman Direct Diversion Water Treatment Plant treats water diverted from the Rio Grande, that (for accounting purposes) is Colorado River Water delivered into the Rio Grande system through the San Juan Chama Project. It is stored in 3 reservoirs in the Chama system.
    - Surface water is settled, filtered, and chlorinated at treatment plants
  - 2 utilize well water or "groundwater" from underground aquifers
    - The City Wellfield consists of 7 wells, 5 of which are clustered near the Santa Fe River between St. Francis and Alire.
    - The Buckman Wellfield consists of 13 wells, 9 of which are clustered near the Rio Grande at the end of the Buckman Road
    - Groundwater is naturally filtered as it moves underground and is chlorinated before being delivered into the potable system.

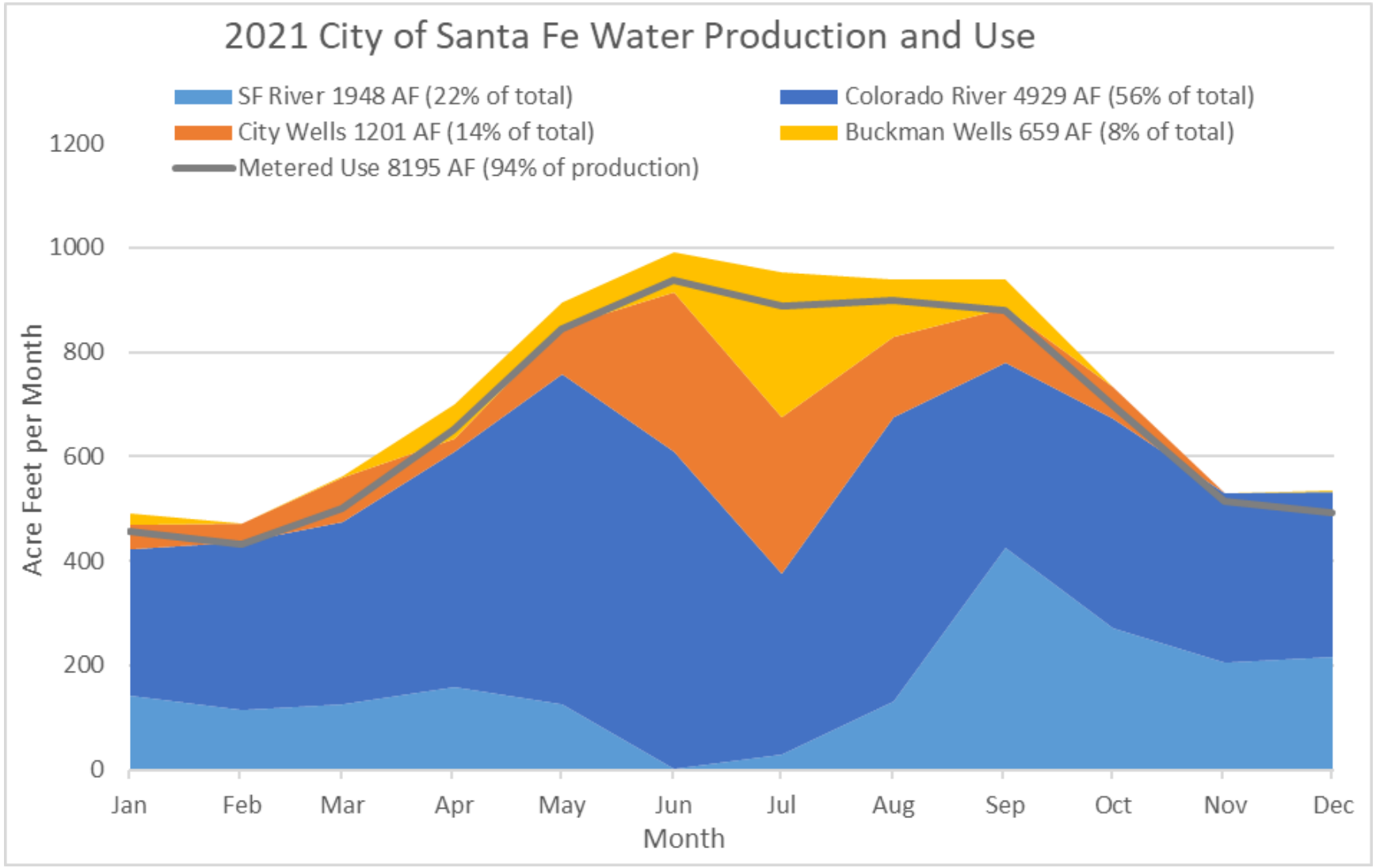


Source	Production
Buckman Well Field	975
City Well Field	911
Buckman Direct Diversion	3,901
Canyon Road WTP	2,807
total	8,594

*values are in acre-feet, calculated from monthly average

1. Monthly Supply and Demand Summary

- City of Santa Fe Water produced about 8700 Acre Feet (AF) of potable water in 2021.
- 79% (about 6840 AF) of production came from surface water sources (rivers).
- 21% (1860 AF) of production came from groundwater sources (wells).
- 94% of potable water produced was delivered to City customers (6% "unaccounted" water loss).
- Potable production and use by month is shown on Page 4.

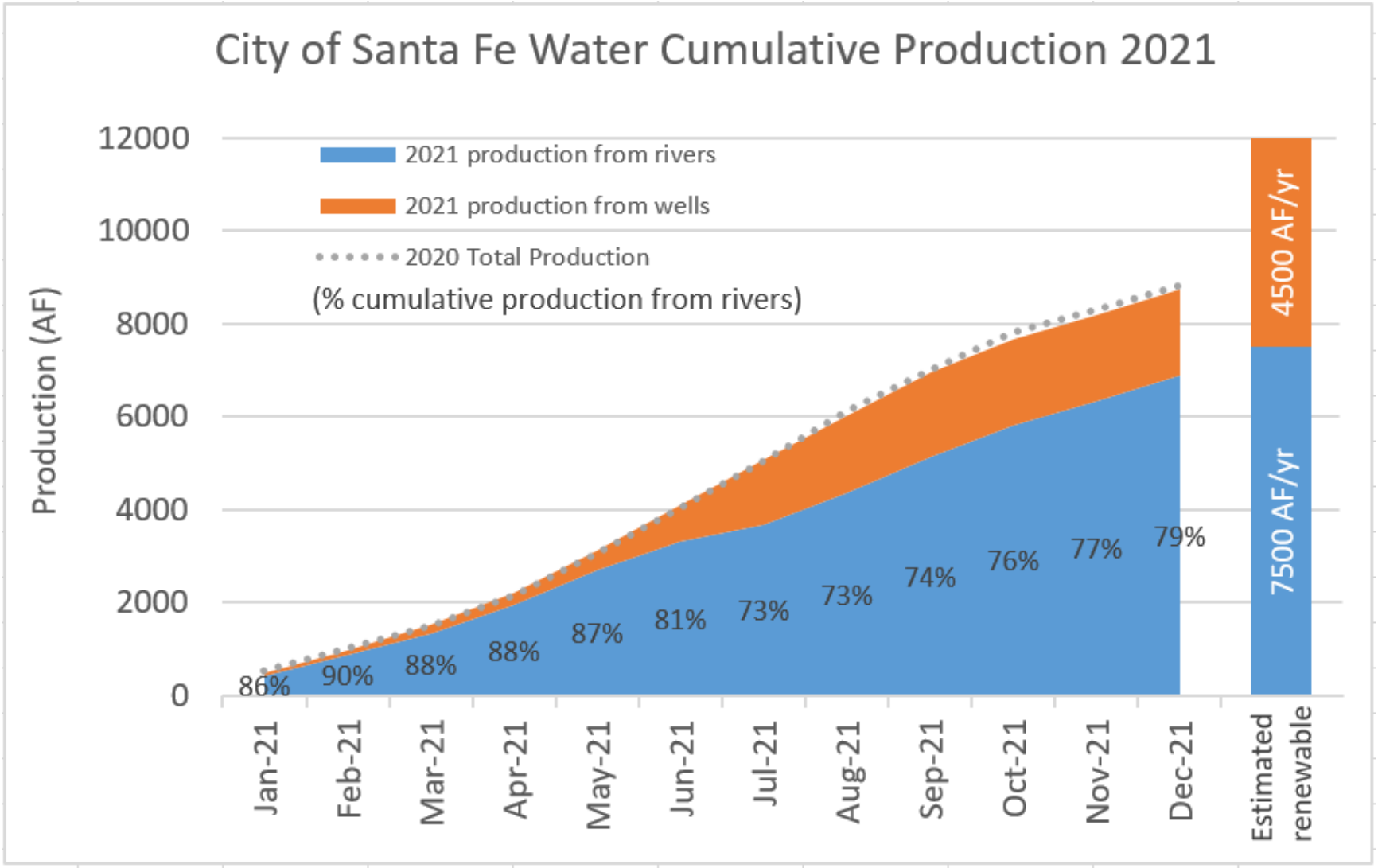

2021 City of Santa Fe Water Production and Use
SF River 1948 AF (22% of total)
Colorado River 4929 AF (56% of total)
City Wells 1201 AF (14% of total)
Buckman Wells 659 AF (8% of total)
Metered Use 8195 AF (94% of production)
Acre Feet per Month
0
200
400
600
800
1000
1200
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month

2. Cumulative Annual Surface Water and Groundwater Production

- Despite an approximately 1% increase in number of meters in 2021, 2021 City production was lower than 2020 production. This is likely a result of both continued conservation efforts and relatively good summer rains.

- City of Santa Fe Water used about 8700 AF of water in 2021, only 3/4 of our average estimated renewable water availability of **12,000 AF per year**.
  - For the 12 years from 2010 through 2021, average Colorado River water allocated to City of Santa Fe was 4841 AF per year. Accounting for evaporation and other losses, we assume availability of 4500 AF per year.
  - For the 23 years from 1999 through 2021, average treatable Santa Fe River water (accounting for Acequia and Living River uses) was ~3000 AF per year.
  - We estimate renewable groundwater availability from all of our wells of ~4500 AF per year (2000 AF from City Wells, 2500 AF from Buckman Wells).
  - Combined, City of Santa Fe water estimates a renewable water supply of approximately 12,000 AF per year (4500 AF/yr from the Colorado River, 3000 AF/yr from the Santa Fe River, and 4500 AF/yr from wells)

- Cumulative annual production from rivers and wells is shown on Page 6.


City of Santa Fe Water Cumulative Production 2021
Production (AF)
12000
10000
8000
6000
4000
2000
0
2021 production from rivers
2021 production from wells
2020 Total Production
(% cumulative production from rivers)
86%
90%
88%
88%
87%
81%
73%
73%
74%
76%
77%
79%
4500 AF/yr
7500 AF/yr
Jan-21
Feb-21
Mar-21
Apr-21
May-21
Jun-21
Jul-21
Aug-21
Sep-21
Oct-21
Nov-21
Dec-21
Estimated renewable

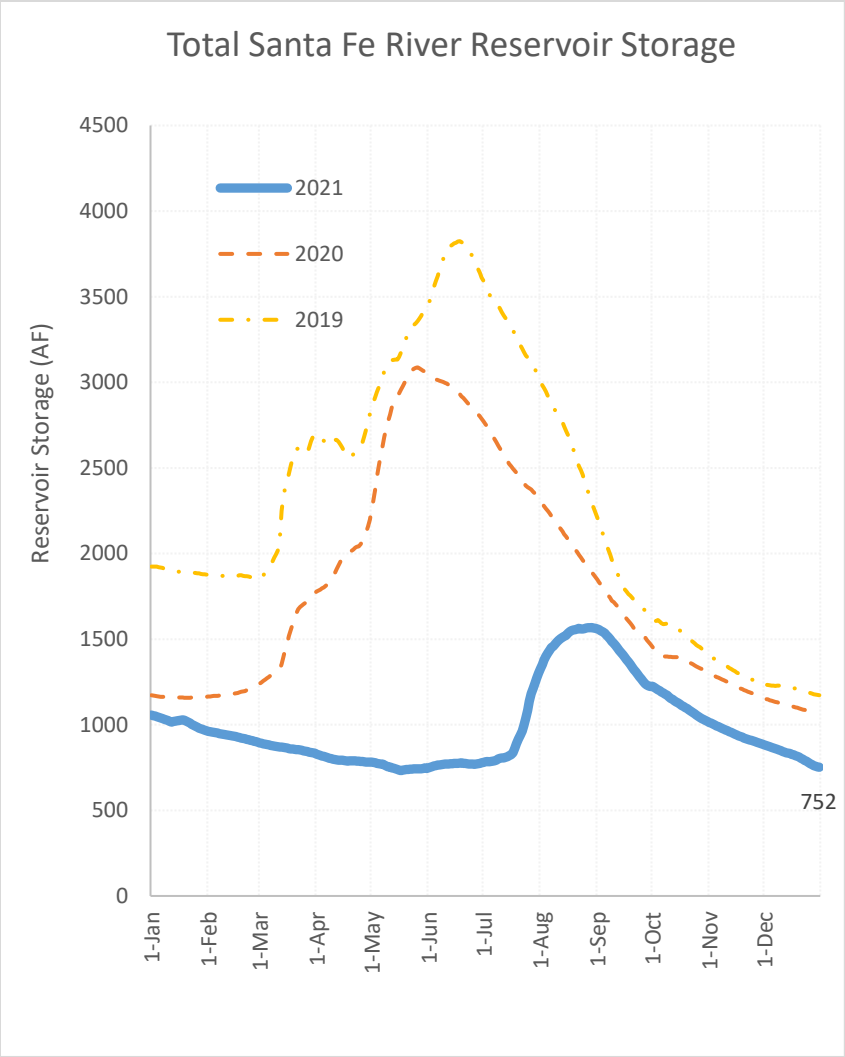
3. City of Santa Fe Water Reservoir Storage

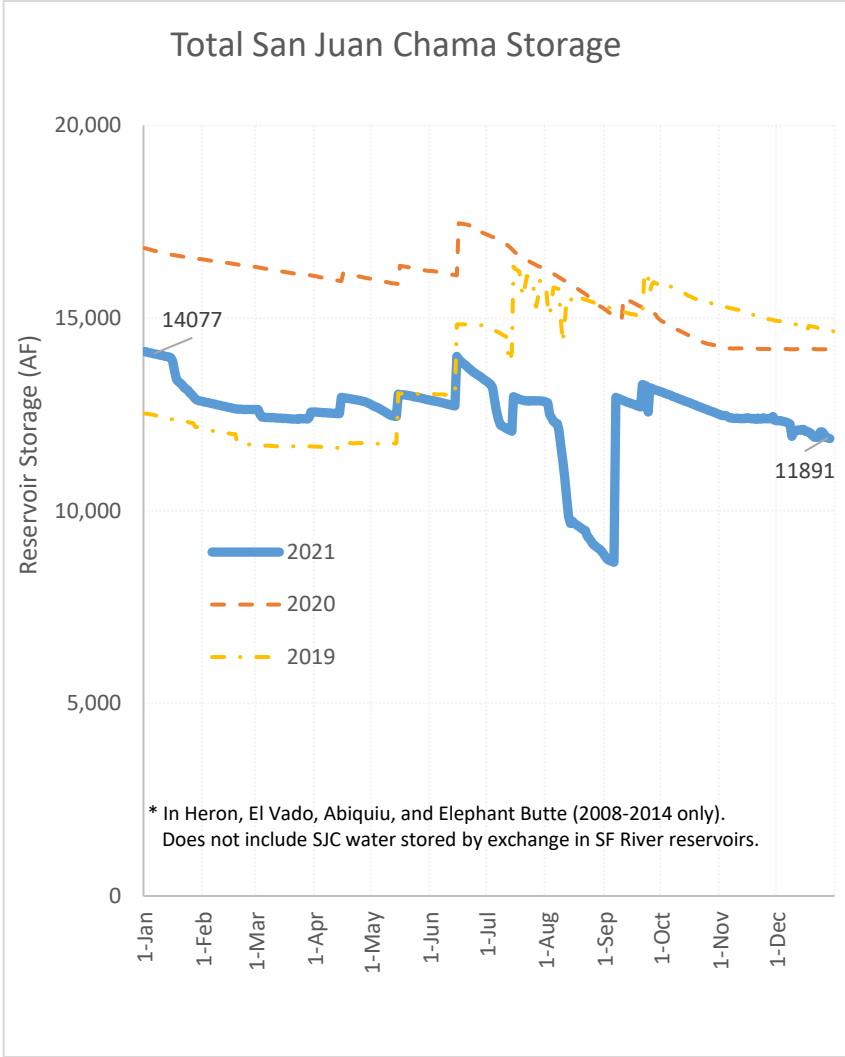
- Santa Fe Reservoirs had 752 AF of water in storage at the end of 2021 (19% capacity).

- City of Santa Fe Water had 11,891 AF of Colorado River (San Juan – Chama Project) water in storage in Heron, El Vado, and Abiquiu reservoirs on December 29th 2021 (~1.4x City total annual potable demand).

- There is extra Colorado River water in storage because of the City-County Shared Pool Agreement under which the City used native County water instead of Colorado River water, effectively storing that water for potential future use by the County.

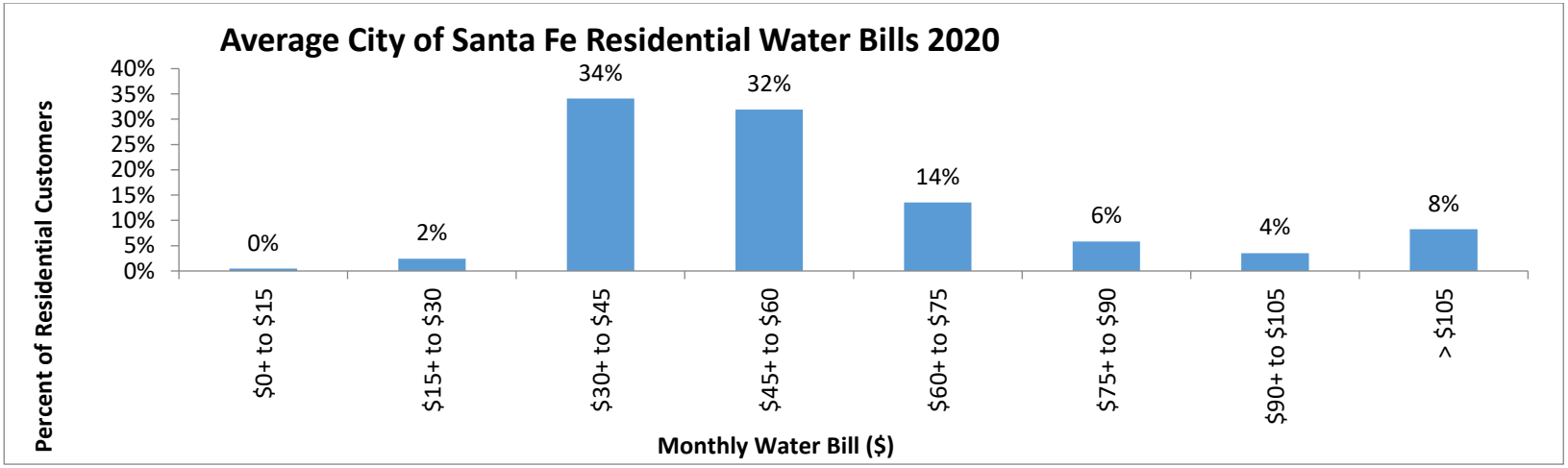
- Reservoir storage in 2021 compared to 2019 and 2020 is show on Page 8.


Total Santa Fe River Reservoir Storage
Reservoir Storage (AF)
4500
4000
3500
3000
2500
2000
1500
1000
500
0
2021
2020
2019
752
1-Jan
1-Feb
1-Mar
1-Apr
1-May
1-Jun
1-Jul
1-Aug
1-Sep
1-Oct
1-Nov
1-Dec

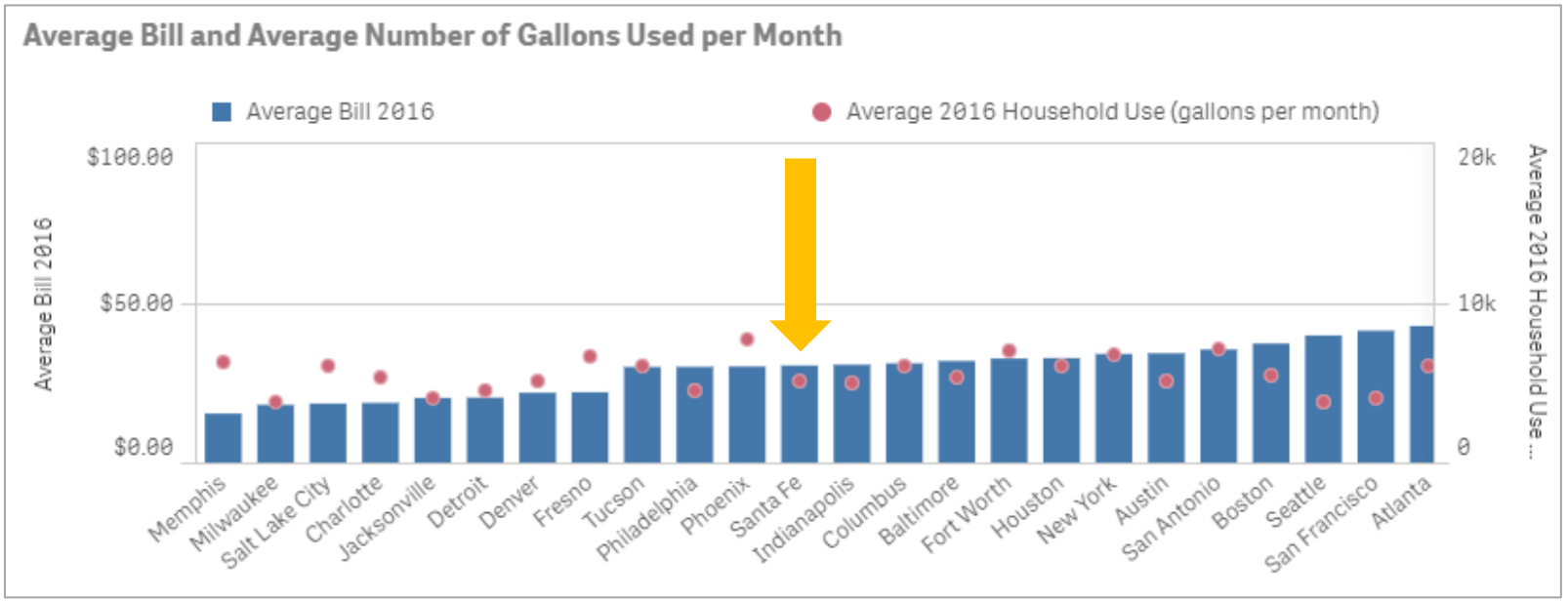

Total San Juan Chama Storage
Reservoir Storage (AF)
20,000
15,000
10,000
5,000
0
14077
11891
2021
2020
2019
* In Heron, El Vado, Abiquiu, and Elephant Butte (2008-2014 only).
Does not include SJC water stored by exchange in SF River reservoirs.
1-Jan
1-Feb
1-Mar
1-Apr
1-May
1-Jun
1-Jul
1-Aug
1-Sep
1-Oct
1-Nov
1-Dec

4. Miscellaneous – The most expensive water in the Country?

- There is a myth out there that Santa Fe has the most expensive water in the country. This is likely a result of a 2016 **RATE** study by Circle of Blue that included a 600 gallons per meter per day scenario (150 gallons per person and a 4 person household) that was applied to water rates across the country, and in our case would result in hefty monthly water bill of $153.
- Because of our focus on conservation and a tiered rate structure designed to discourage high water use, our average residential use is way below 600 gallons per meter per day. Internal analysis of 2020 bills shows average use of less than 150 gallons per meter per day, and as a result, in 2020 92% of City of Santa Fe Water residential customers paid less than $105 per month for water.



- The difference between potential and actual is supported by a **BILL** specific study also by Circle of Blue that shows our average bill lands in the middle of the other water utilities evaluated. The figure below is from that study which is found here: https://www.circleofblue.org/2016/water-management/pricing/infographic-average-u-s-household-water-use-bills-2015-16/



- So if someone tells you that our water is the most expensive in the country, you can explain that while our rates are designed to discourage high use, what people actually pay for water is very comparable to other water utilities across the country.