

Public Works Report

November 2021

Front Range and Denver Regional Landfill Updates (No New Information)

Waste Connections has notified the Town of Erie that Denver Regional Landfill's (DRL) final cover is complete. The landfill is located south of County Road 6 and west of County Road 5. The final closure certification will be complete by the end of the year.

Waste Connections has wrapped up work to bring the southwest edge of the Front Range Landfill (FRL) to its permitted height.

Capital Improvement Projects

Lynn R Morgan Water Treatment Facility (WTF) Expansion & Hydroturbine

This project is essentially complete, we are working with the turbine supplier to resolve some vibration and to provide a two-speed generator due to fluctuating incoming pressure. Fabrication of this equipment is several months out.

North Water Reclamation Facility (NWRf) Expansion

Construction of this \$30+ Million project continues, on budget and within schedule.

Sustainability and Water Conservation

Green Business & HOA (GBHOA) Certification Program

- The GBHOA Certification Program will be a direct recipient and implementer of the goals of the new Energy Action Plan 2.0.

Energy

- The Energy Action Plan has been completed and the 18-month implementation phase has begun. The two goals included in this Plan are increasing community-wide renewable energy adoption and increasing participation in the GBHOA Certification Program.
- Energy performance contracting baseline audits of Town facilities have been completed.
- Two solar contractors are working on specs and quotes for building behind-the-meter solar array to power the WWTP.
- Xcel Energy is finishing up their separation study and report to inform the terms and pricing for selling their streetlights to the Town.
- The Town received a DOLA EIAF grant to provide technical support through a regional cohort for updating the IECC to 2021 as well as create a Net Zero Roadmap for new construction.

Transportation

- Electric vehicle charging stations have offset 2,178 kg of greenhouse gas emissions in their first 5 months of activation. This equates to 56 trees planted and reducing GHG emissions for 10 years.
- Two EV Ride & Drive Showcase events were held and over 100 residents came to learn more about the myths with range anxiety and the effects of cold weather on battery life. More information can be found on the Town's website [here](#).
- The Town has been awarded another RAQC Grant for two more EV Charging Station installations at Coal Creek Park and Schofield Farm.
- Employees, Advisory Board volunteers, and Board of Trustees can now receive half-off charging at any town-owned charging stations.

Environment

Lifetime

Here's how EV charging has helped:



You've avoided
2,178 kg
greenhouse gas emissions



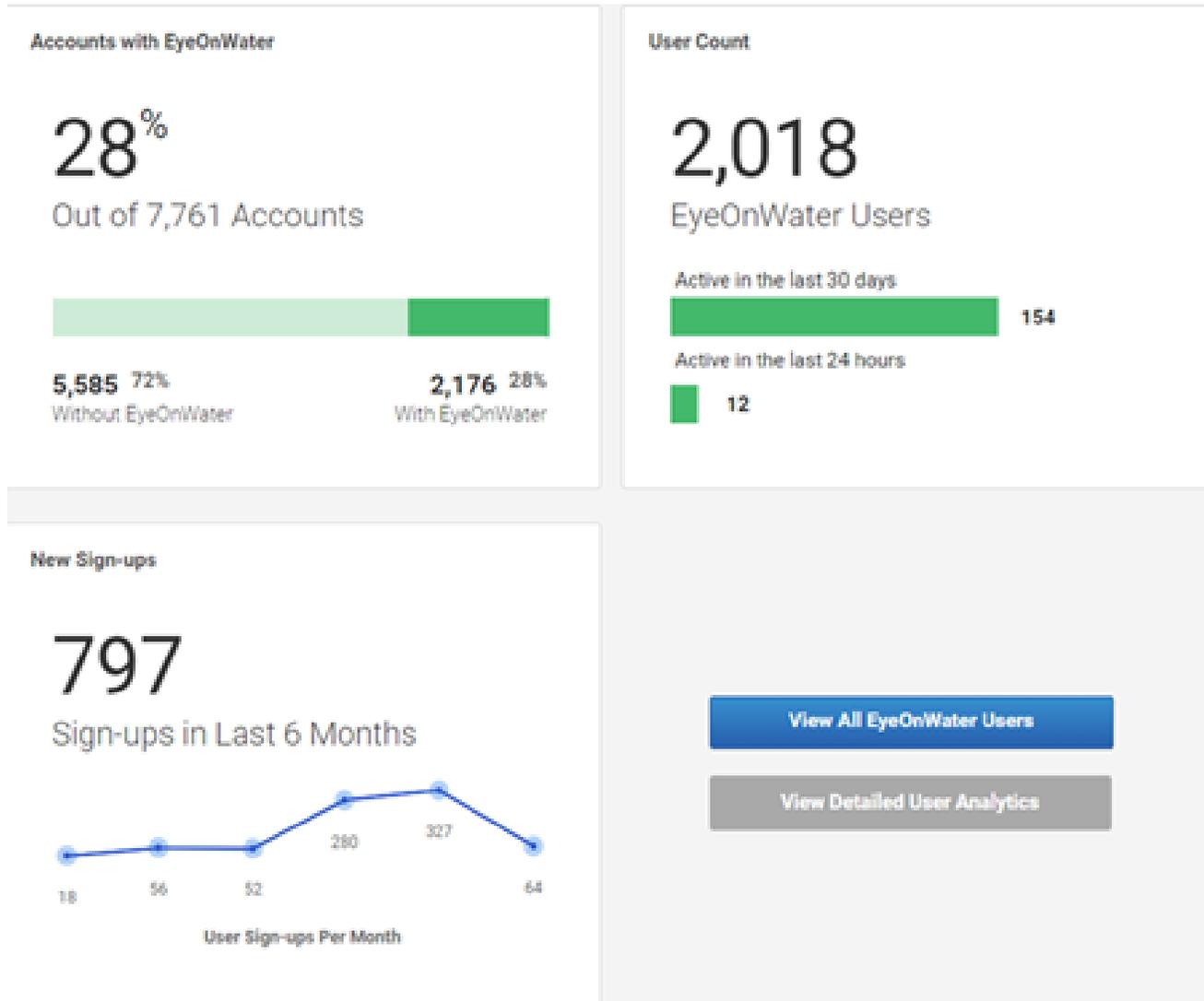
that's like planting
56 trees
and letting them
grow for 10 years

Waste, Recycling, & Composting

- A Town-wide universal Zero Waste Ordinance as well as a policy to ensure Town meetings and permitted Special Events are zero waste is being developed for adoption in 2022.
- The leaf and pumpkin composting events had over 1,000 cars participate and more waste diversion than ever. Yard waste drop-off is now available year-round at the Recycling Center.

Water Efficiency

- EyeOnWater signups and monitoring continues to rise and we are now at 28% and counting. We began 2021 with only 16% of residents signed up.
- Outdoor irrigation programs and rebates will be live in January and excitement for the turf replacement pilot continues to grow.

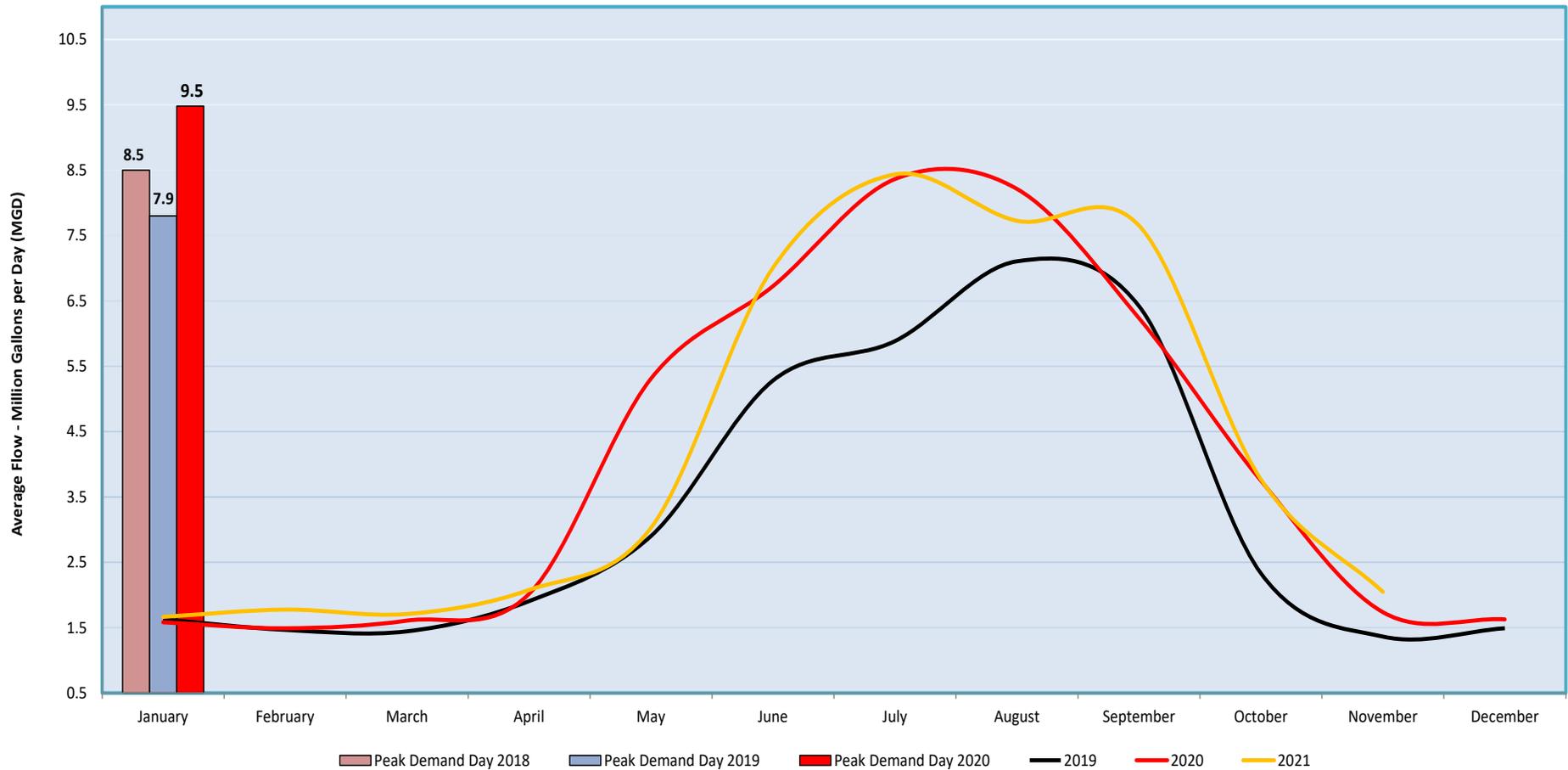


Lynn R. Morgan Water Treatment Facility (WTF)

Annual Daily Average Flow: **2018** – 3.4 MG **2019** – 3.3 MG **2020** – 4.1 MG

July 2021 maintains the record for the highest monthly average flows at 10 MG, while November 2019 had the lowest flows at 1.36 MG. Warm and dry conditions this year have extended the summer irrigation season.

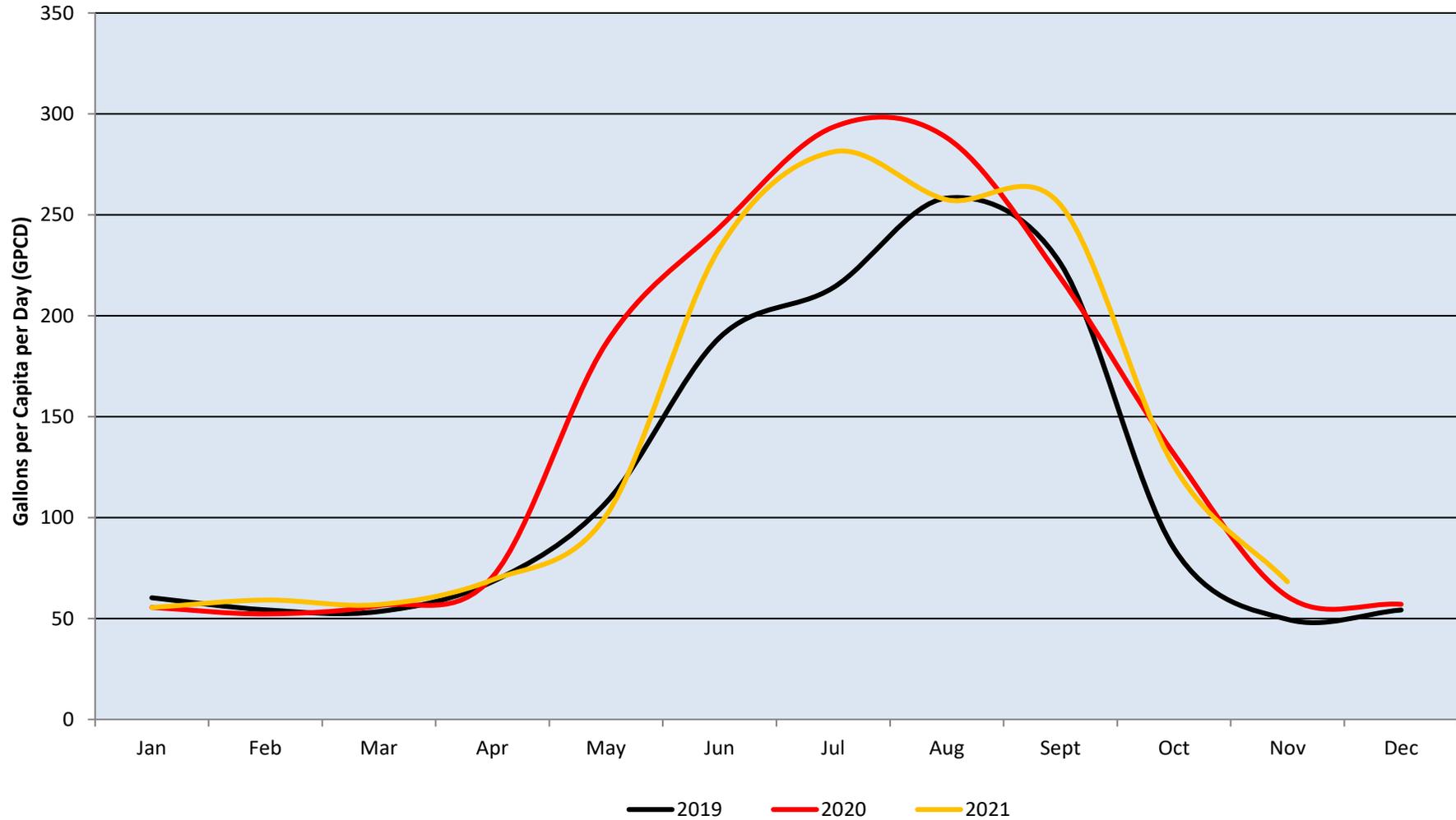
Average Monthly Production



Annual Daily Gallons Per Capita per Day (GPCD): **2018** – 131 GPCD **2019** – 118 GPCD **2020** – 143 GPCD

July 2020 had the highest average daily usage at 294 gallons GPCD. November 2019 had the lowest usage at 50 GPCD. Indoor demands during winter remain relatively stable. Average daily usage took a big jump in 2020 and 2021 due to COVID and drought. Reducing summer irrigation and increasing reuse water availability will reduce reliance on treated water supplies in the future.

Average Daily Usage Per Capita



North Water Reclamation Facility

Annual Daily Average Flow:

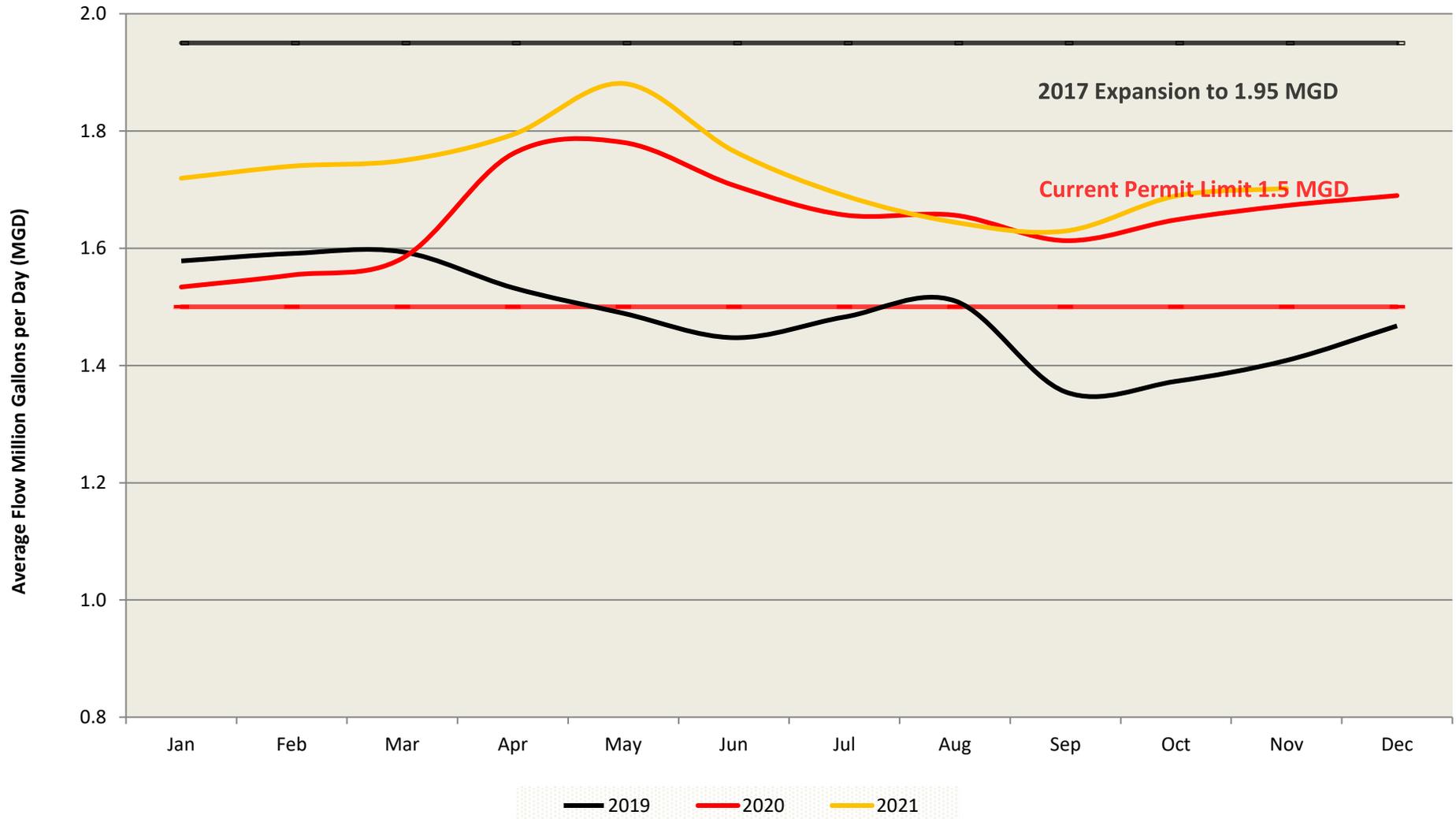
2018 – 1.49 MG

2019 - 1.49 MG

2020 - 1.66 MG

September 2019 had the lowest average flow of 1.36 million gallons per day (MGD). May 2021 set a high average monthly flow of 1.88 MGD. We recently heard from CDPHE that they plan to issue our new discharge permit for public comment at the end of the year.

Average Monthly Flows



Annual Daily Gallons Per Capita per Day (GPCD):

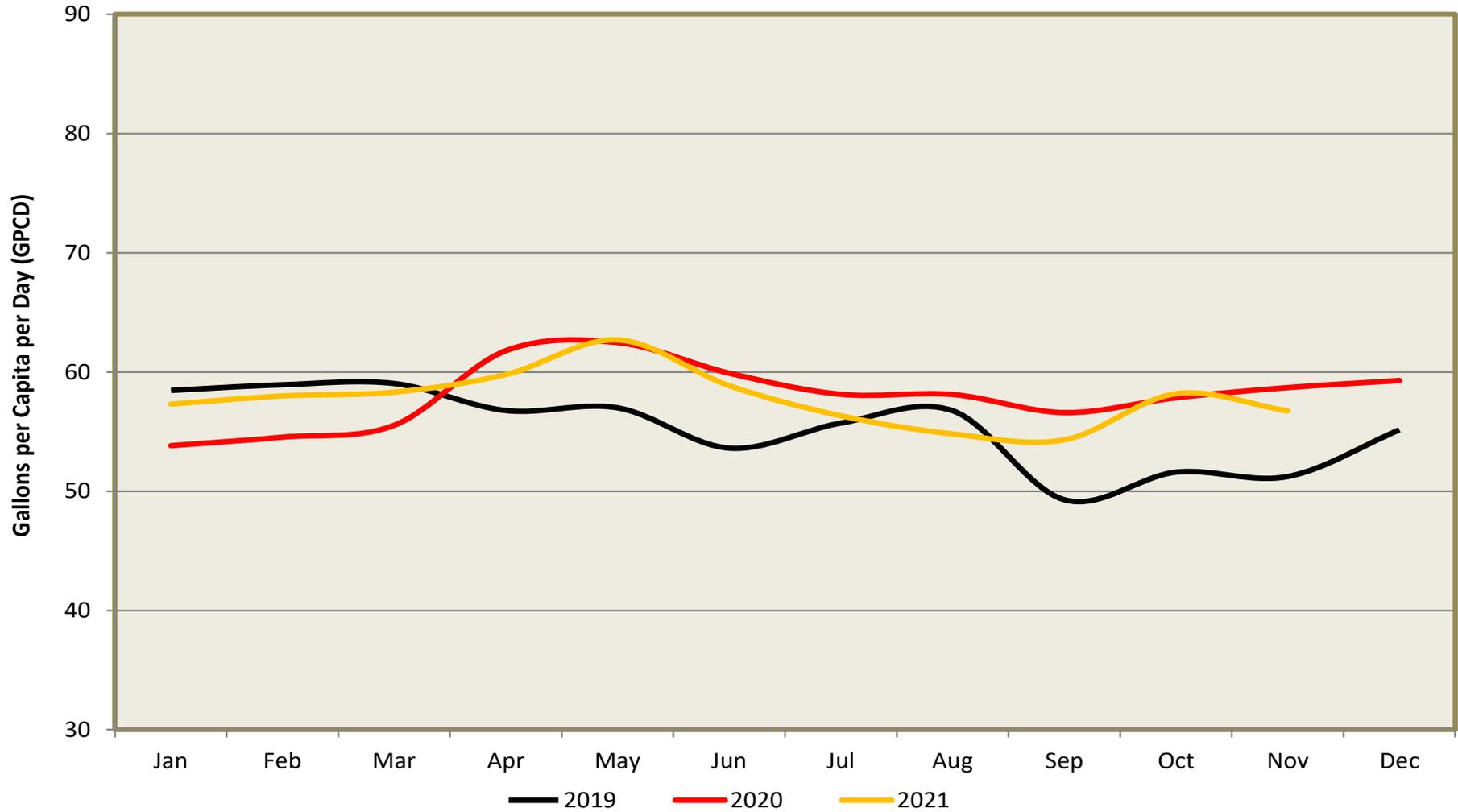
2018 - 58 GPCD

2019 - 55 GPCD

2020 - 58 GPCD

This graph depicts customer indoor water usage. May 2021 had the highest usage at 63 GPCD. September 2019 had the lowest usage at 49 GPCD. Fall, with relatively little precipitation and dropping groundwater levels, is a good indicator of true daily flows.

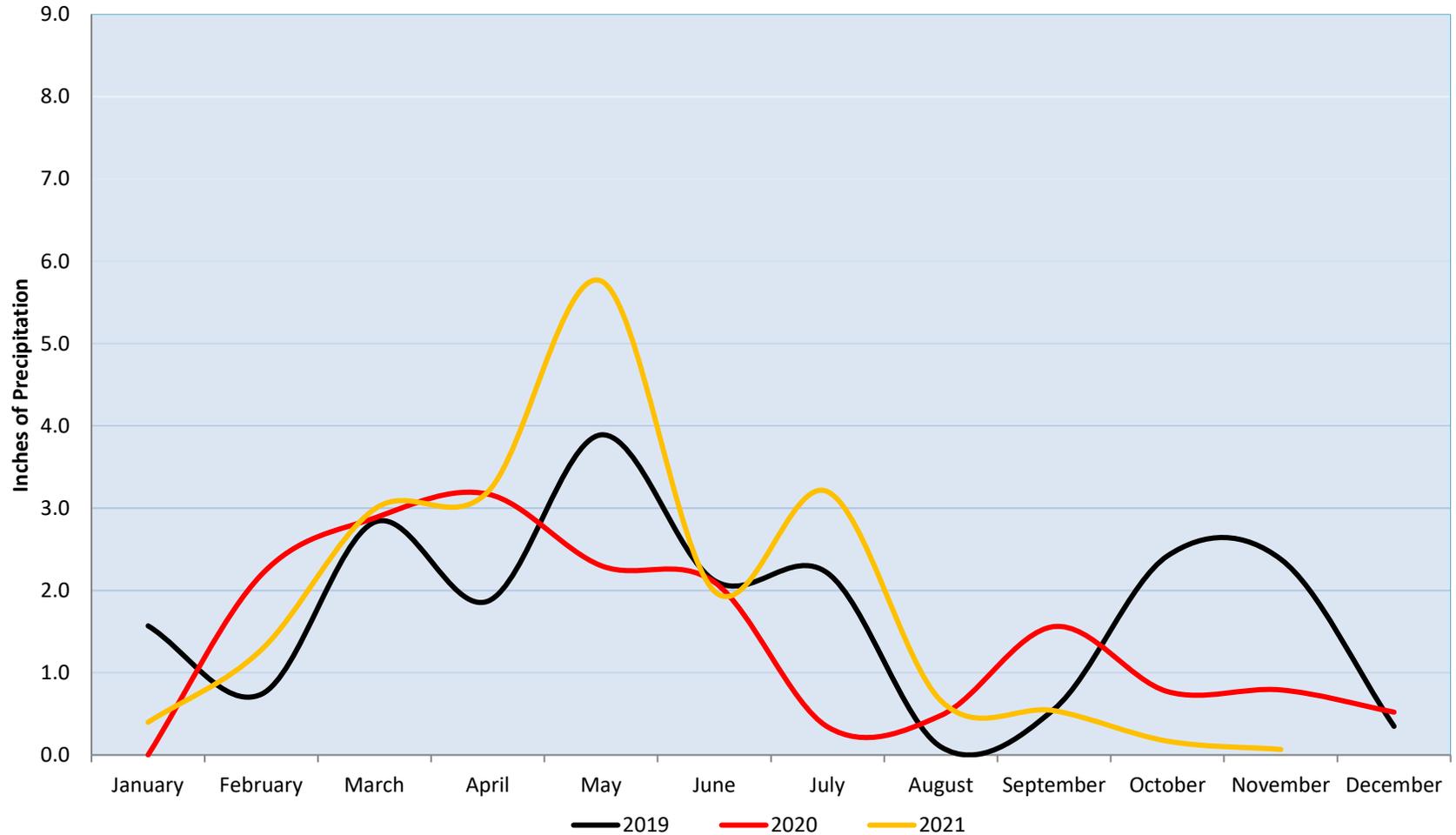
Average Daily Usage Per Capita



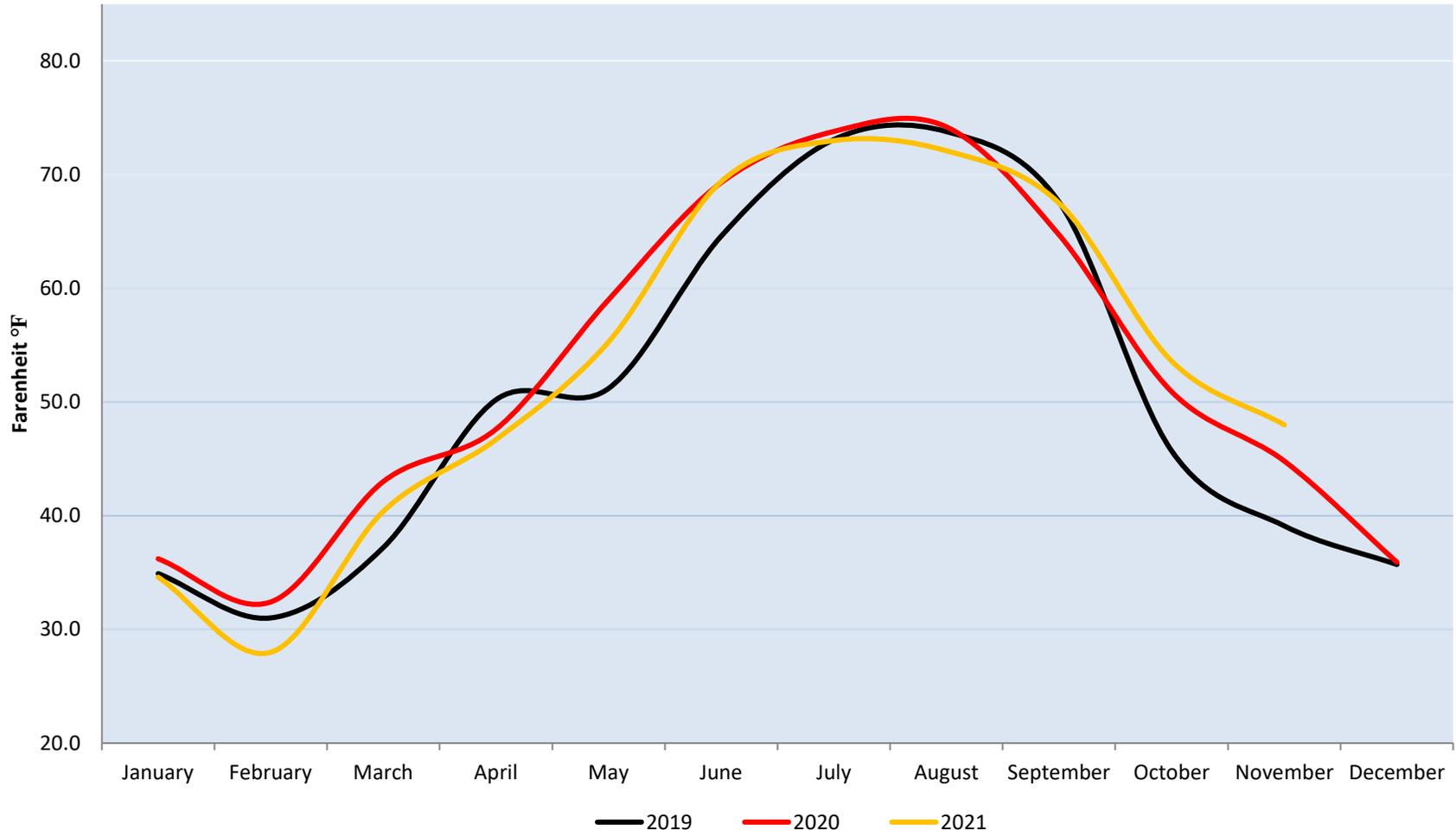
Monthly Data for Boulder – National Oceanic and Atmospheric Administration (NOAA) & Natural Resource Conservation Service (NRCS)

NOAA is predicting 33 – 40% above normal precipitation and 70 – 80 % chance of above normal temperatures into early December. As you may expect, drought conditions are somewhat worsening due to the very low precipitation LEVELS.

Precipitation



Mean Temperature



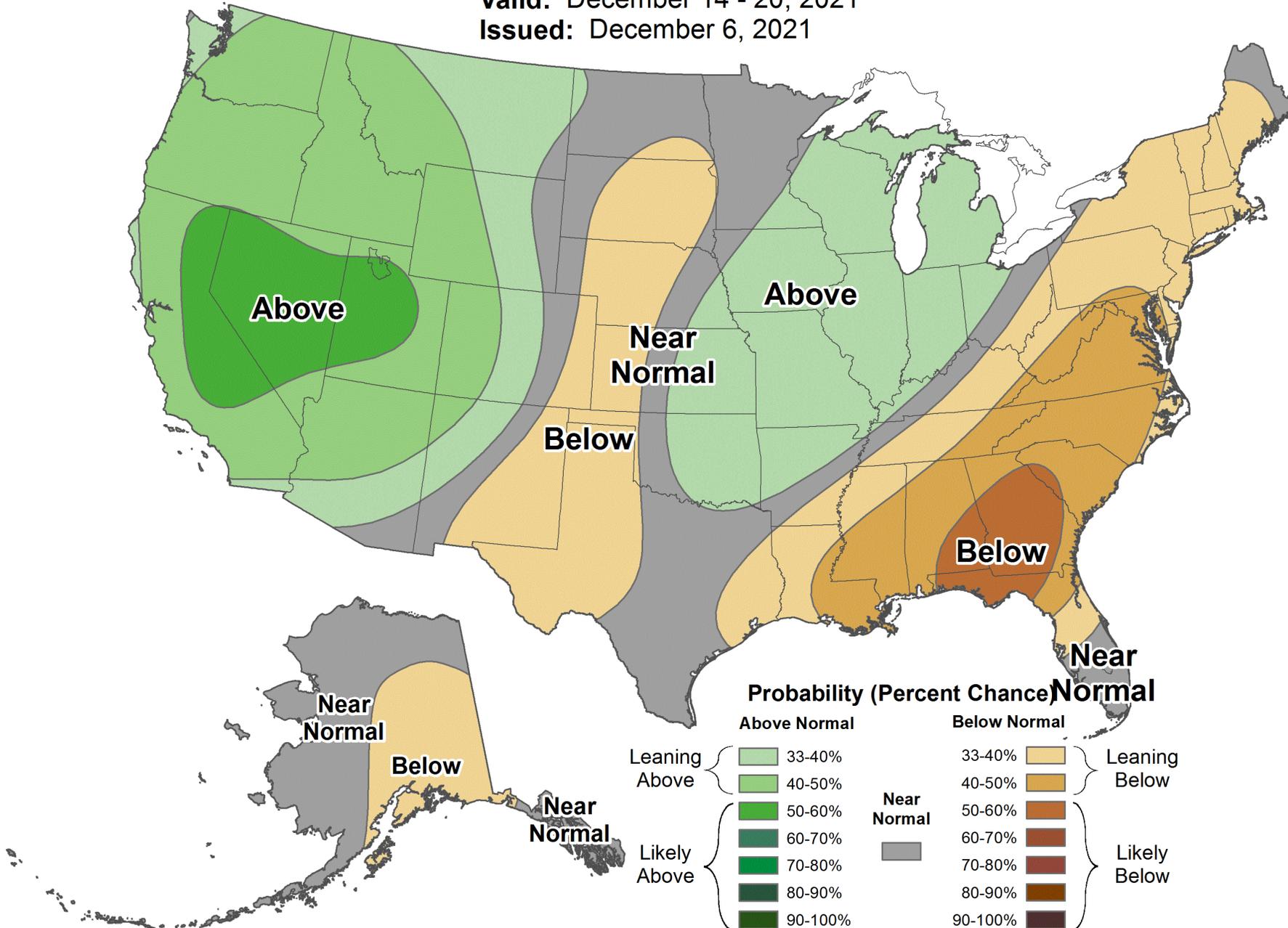


8-14 Day Precipitation Outlook



Valid: December 14 - 20, 2021

Issued: December 6, 2021



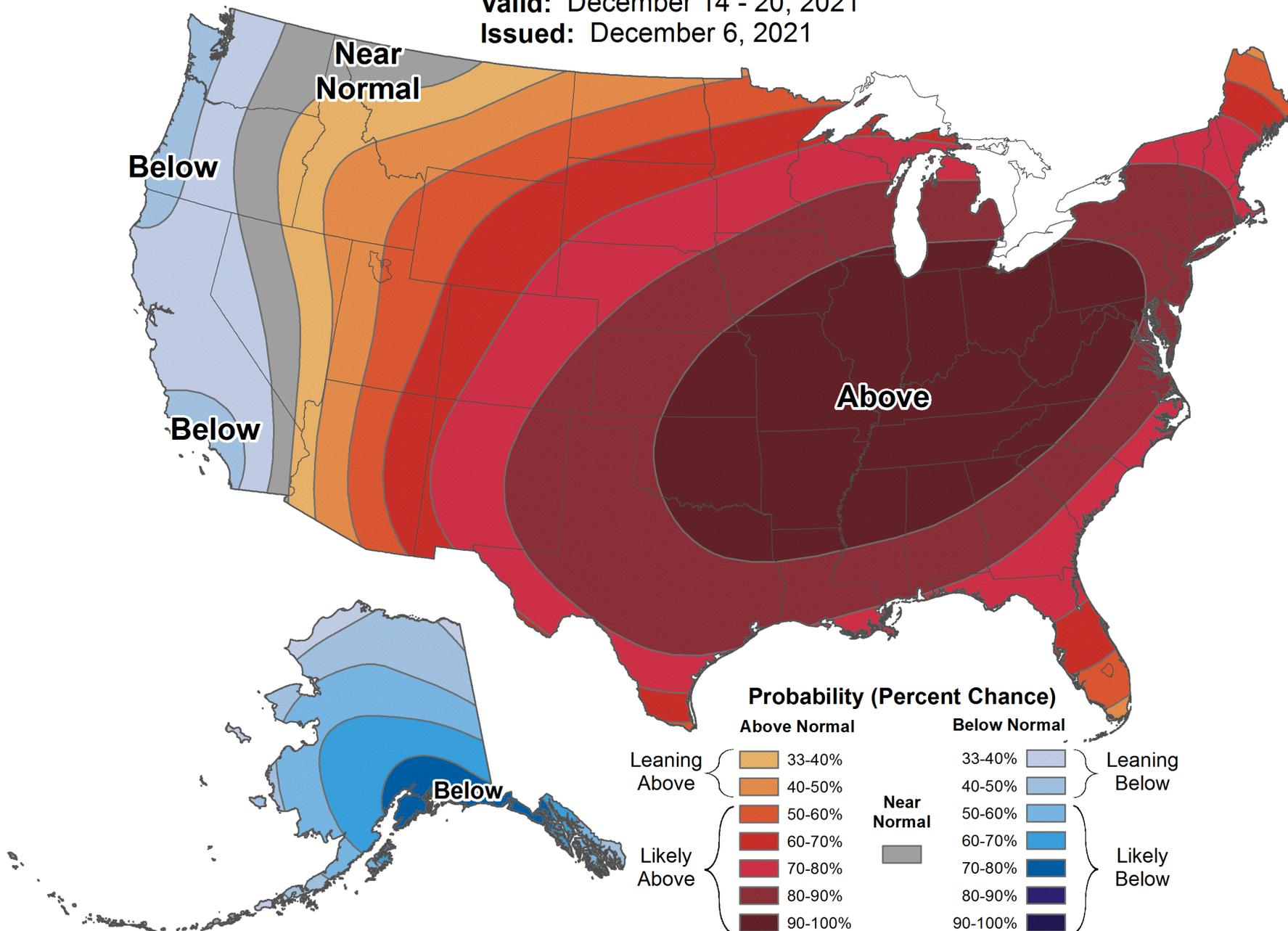


8-14 Day Temperature Outlook



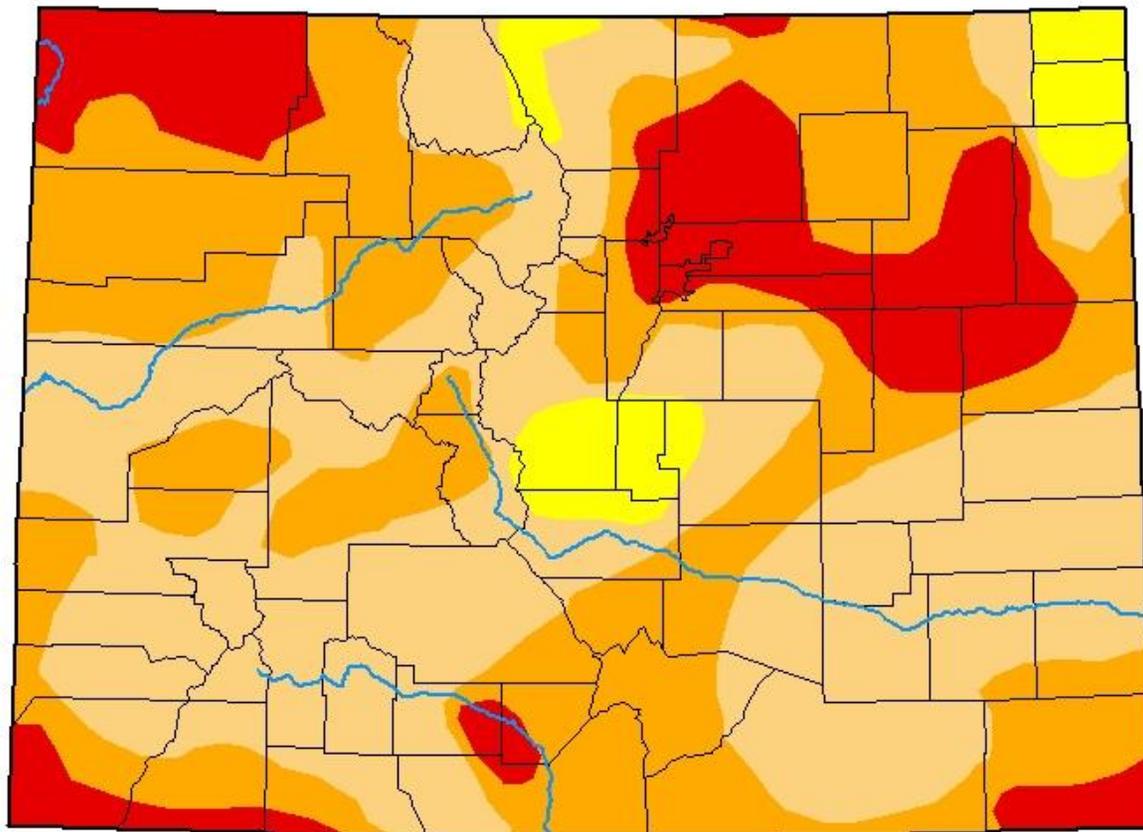
Valid: December 14 - 20, 2021

Issued: December 6, 2021



U.S. Drought Monitor Colorado

November 30, 2021
(Released Thursday, Dec. 2, 2021)
Valid 7 a.m. EST



Intensity:

-  None
-  D0 Abnormally Dry
-  D1 Moderate Drought
-  D2 Severe Drought
-  D3 Extreme Drought
-  D4 Exceptional Drought

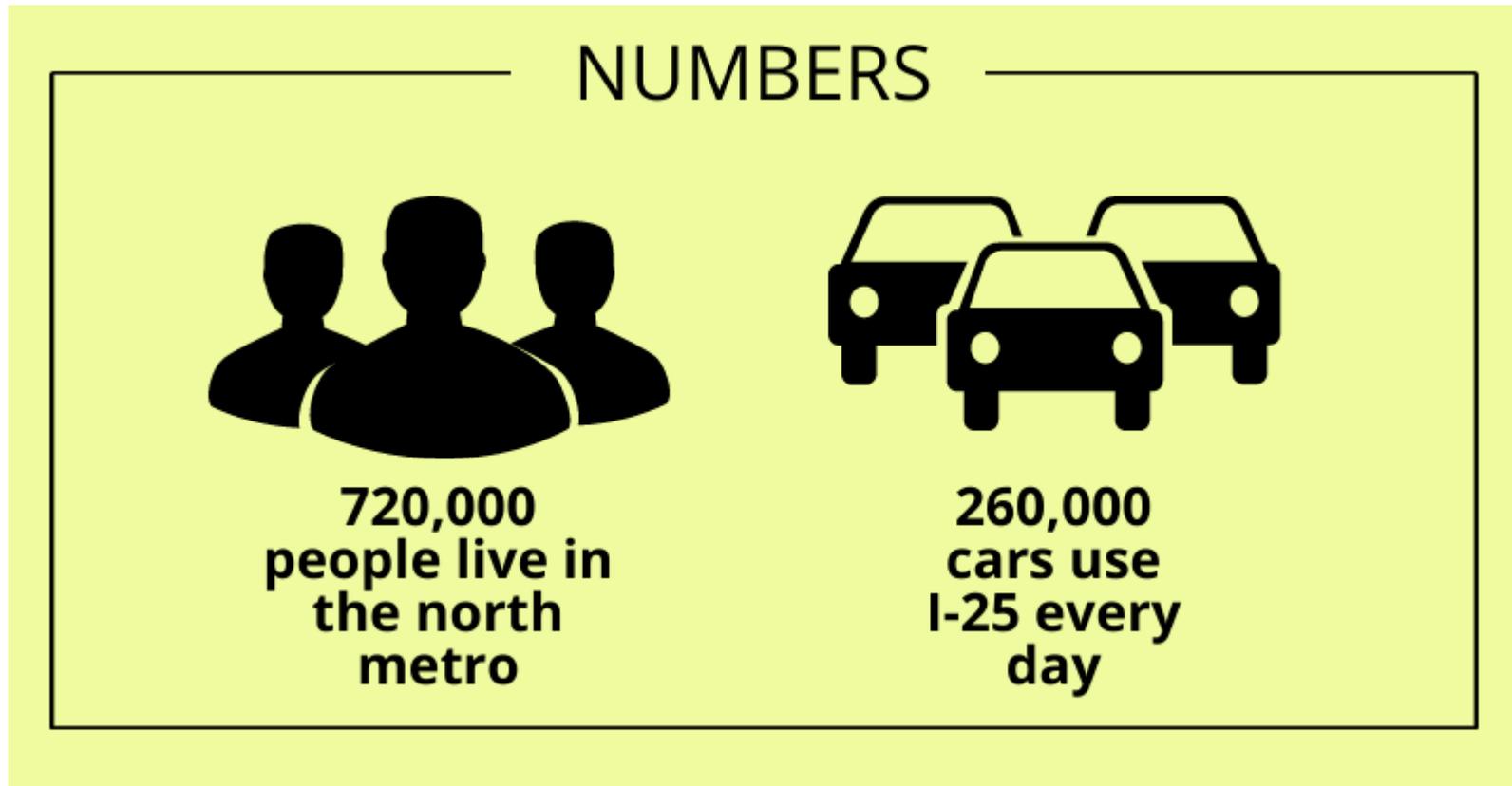
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

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NCEI/NOAA



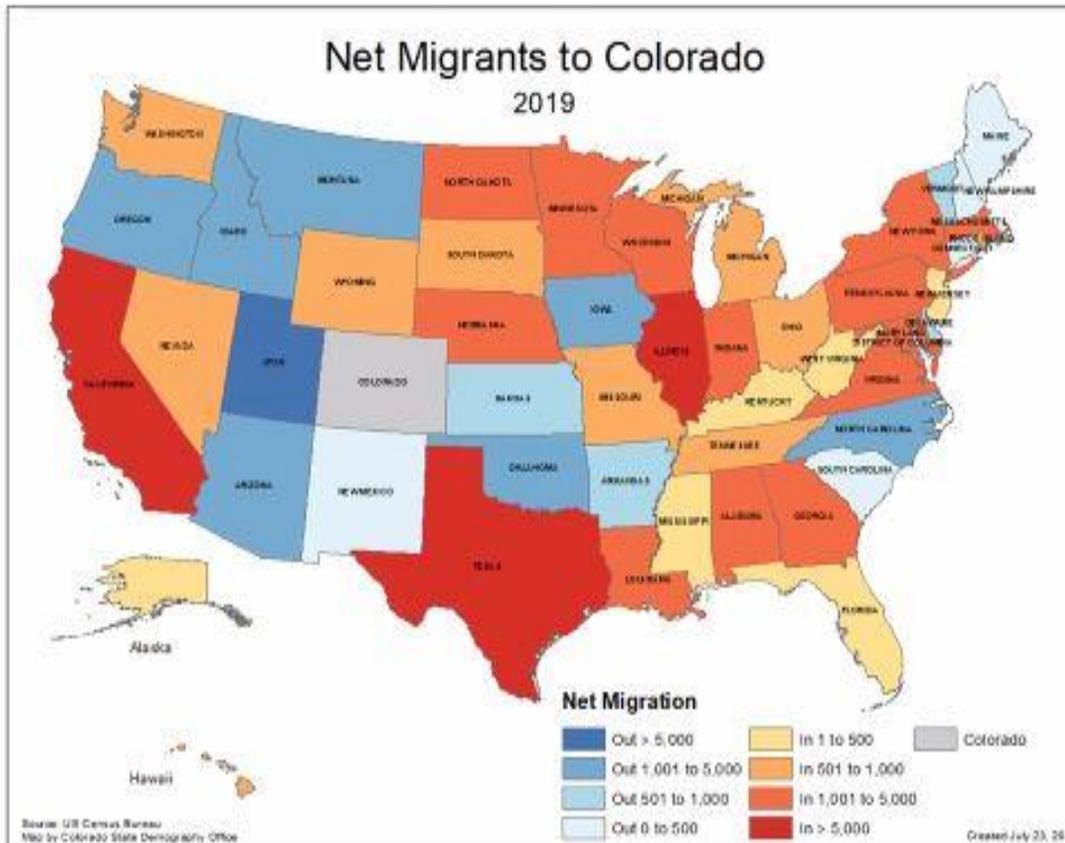
droughtmonitor.unl.edu



Transportation and Transit (see additional attached letters and summaries)

Please see the attached graphics below from CDOT related to incoming residents and commuting trends. :

State to State Migration



Migration Statistics

- In migration from states: 223,000-240,000
- Out migration to states: 183,000-203,000
- Net migration among states: 30,000-44,500

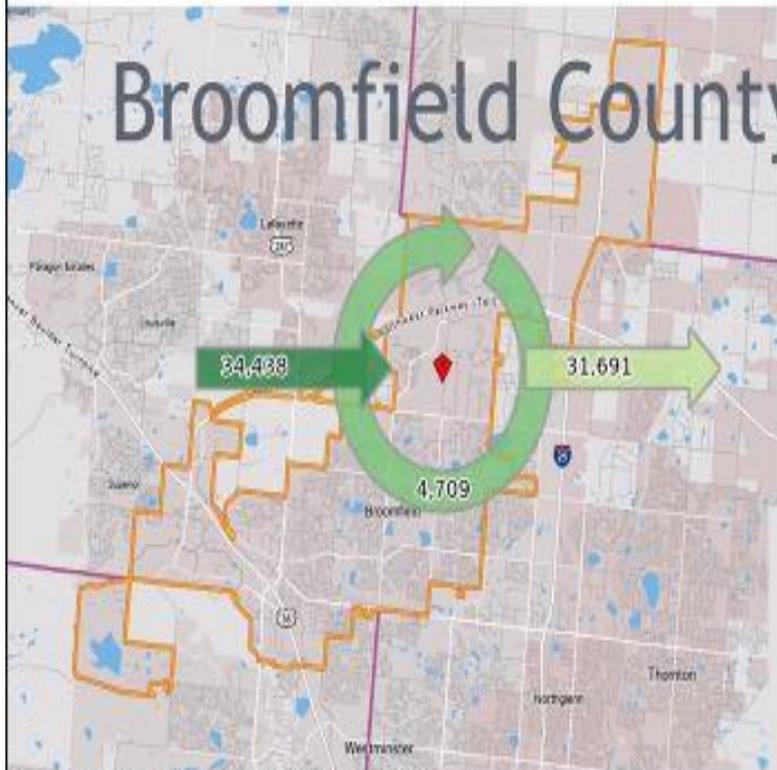
2019 State to State Migration					
In	#	Out	#	Net	#
Texas	32,295	Texas	18,189	California	14,265
California	29,350	California	15,085	Texas	14,106
Florida	14,124	Arizona	14,684	Illinois	6,698
Arizona	10,616	Florida	13,656	Georgia	4,081
Illinois	10,153	Oklahoma	9,020	Massachusetts	3,959

Source: U.S. Census Bureau, 2019 American Community Survey 1-Year Estimates



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Broomfield County



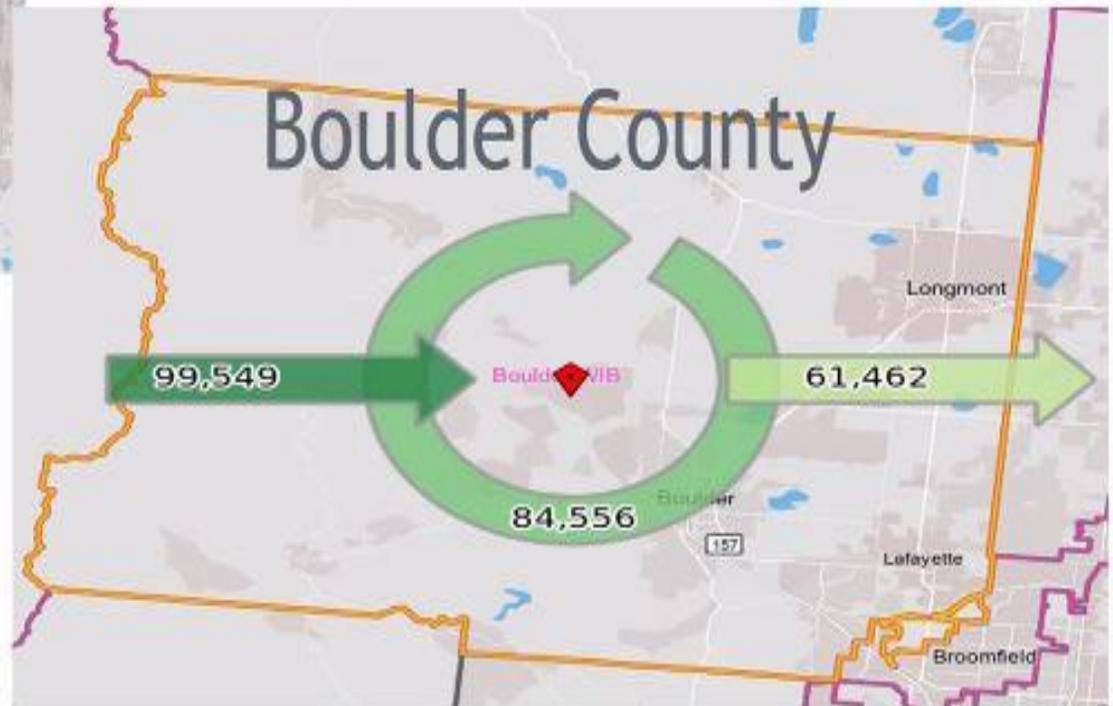
Inflow/Outflow Job Counts (All Jobs)

	2019	
	Count	Share
Employed in the Selection Area	39,147	100.0%
Employed in the Selection Area but Living Outside	34,438	88.0%
Employed and Living in the Selection Area	4,709	12.0%
Living in the Selection Area	36,400	100.0%
Living in the Selection Area but Employed Outside	31,691	87.1%
Living and Employed in the Selection Area	4,709	12.9%

Inflow/Outflow Job Counts (All Jobs)

	2019	
	Count	Share
Employed in the Selection Area	184,105	100.0%
Employed in the Selection Area but Living Outside	99,549	54.1%
Employed and Living in the Selection Area	84,556	45.9%
Living in the Selection Area	146,018	100.0%
Living in the Selection Area but Employed Outside	61,462	42.1%
Living and Employed in the Selection Area	84,556	57.9%

Boulder County



2020 1-year ACS Experimental data CO

Means of Transportation to Work Table XK2000801	United States		Colorado	
	Estimate	Share of Total	Estimate	Share of Total
Total:	150,162,128		2,913,520	
Car, truck, or van - drove alone	103,547,795	69%	1,904,329	65%
Car, truck, or van - carpooled	11,838,359	8%	209,641	7%
Public transportation (excluding taxicab)	4,829,686	3%	54,192	2%
Taxicab, motorcycle, bicycle, walked, or other means	6,197,896	4%	136,088	5%
Worked from home	23,748,392	16%	609,270	21%



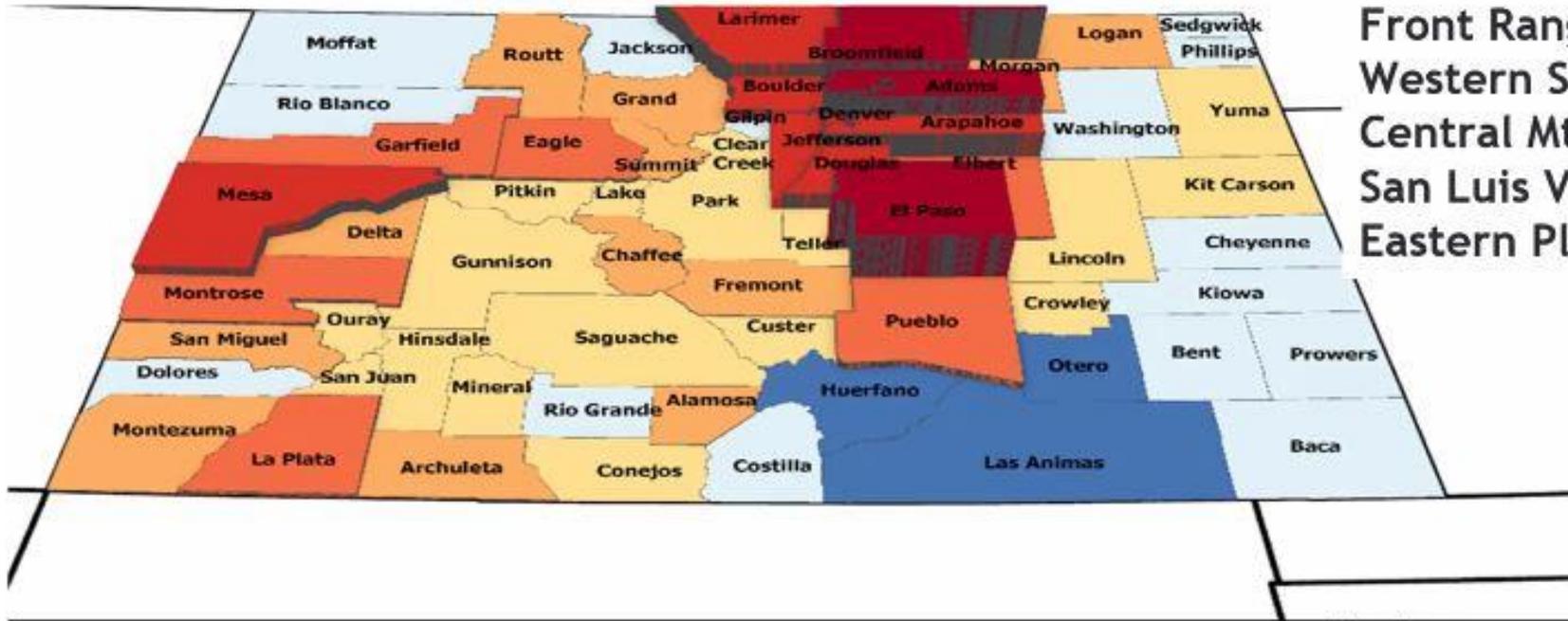
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Source: U.S. Census Bureau, 2020 American Community Survey 1-Year Estimates
<https://www.census.gov/programs-surveys/acs/data/experimental-data/1-year.html>

Population Forecast 2050

7.5 million

Change 2020-2050
 State: 1.8 million
 Front Range: 1.6M
 Western Slope: 190K
 Central Mtns: 1K
 San Luis Valley: -2K
 Eastern Plains: 7K



Projected Population Change
2020 - 2050



Demography Office, October 16, 2020



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