

December 2019 Public Works Report

Capital Improvement Projects

Erie Parkway Bridge Replacement

The Bridge project has been completed on time and under budget, thanks to Mayor Carroll and Trustee Woog for attending the Grand Opening!



Lynn R Morgan Water Treatment Facility (WTF) Expansion

Construction of the WTF expansion continues ahead of schedule and within budget. Garney Construction is finalizing concrete pours for the new pre-treatment basins and continues wrapping up the concrete pours, leak testing and starting work on the membrane system inside the WTF.



Lynn R. Morgan Water Treatment Facility (WTF)

Annual Daily Average Flow:

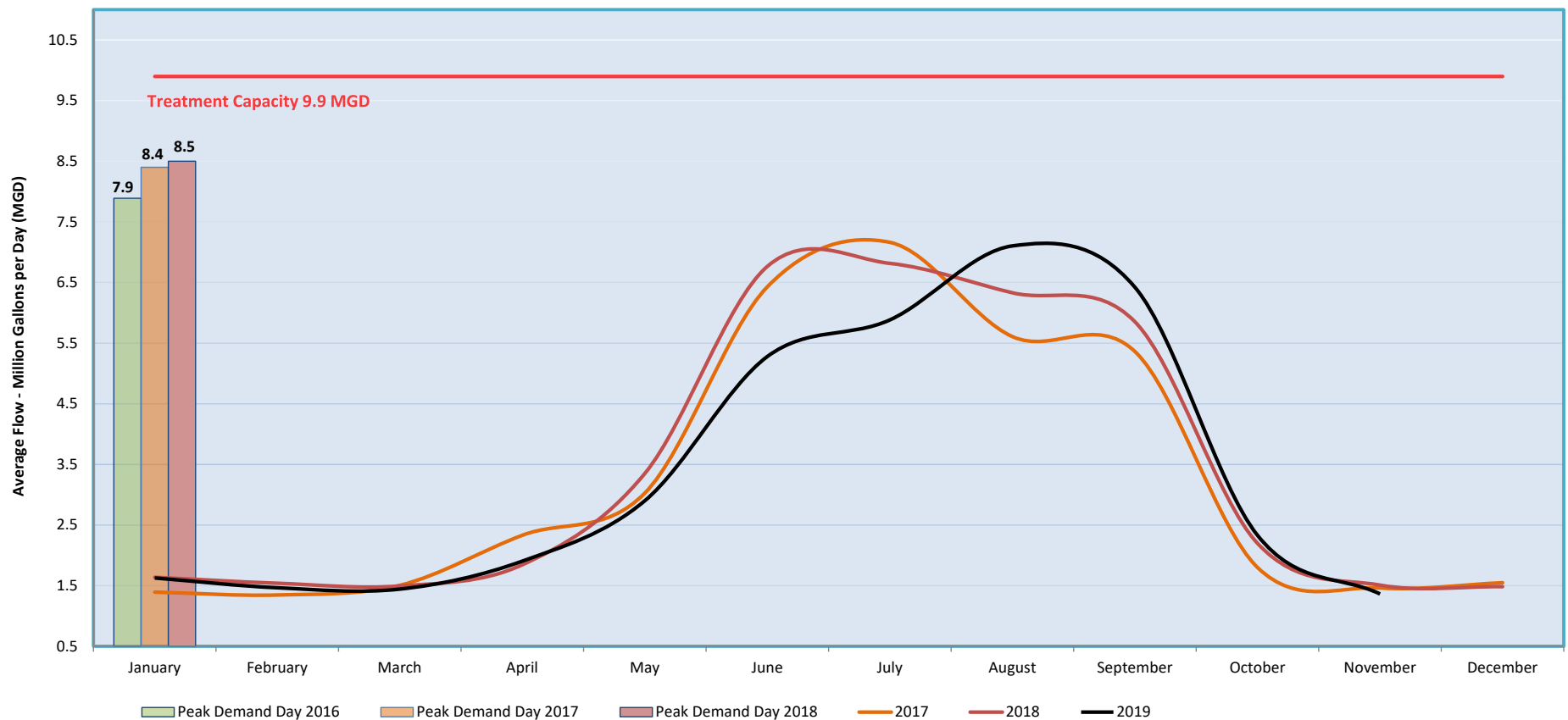
2016 - 3.3 (Million Gallons) MG

2017 – 3.4 MG

2018 – 3.4 MG

July 2017 maintains the record for the highest monthly average flows at 7.16 MG, while February 2017 had the lowest flows at 1.35 MG. Notably November 2019 came in just above at 1.36 MG. Summer demands greatly affect the annual average due to outdoor irrigation. The daily peak demand (customer meter totals) of 8.45 MGD was in July of 2018. This year's water demands have been unusual, in that demands are arrived much later in the summer than usual and continued later into fall. However now are returning to normal winter demands.

Average Monthly Production



Annual Daily Gallons Per Capita per Day (GPCD):

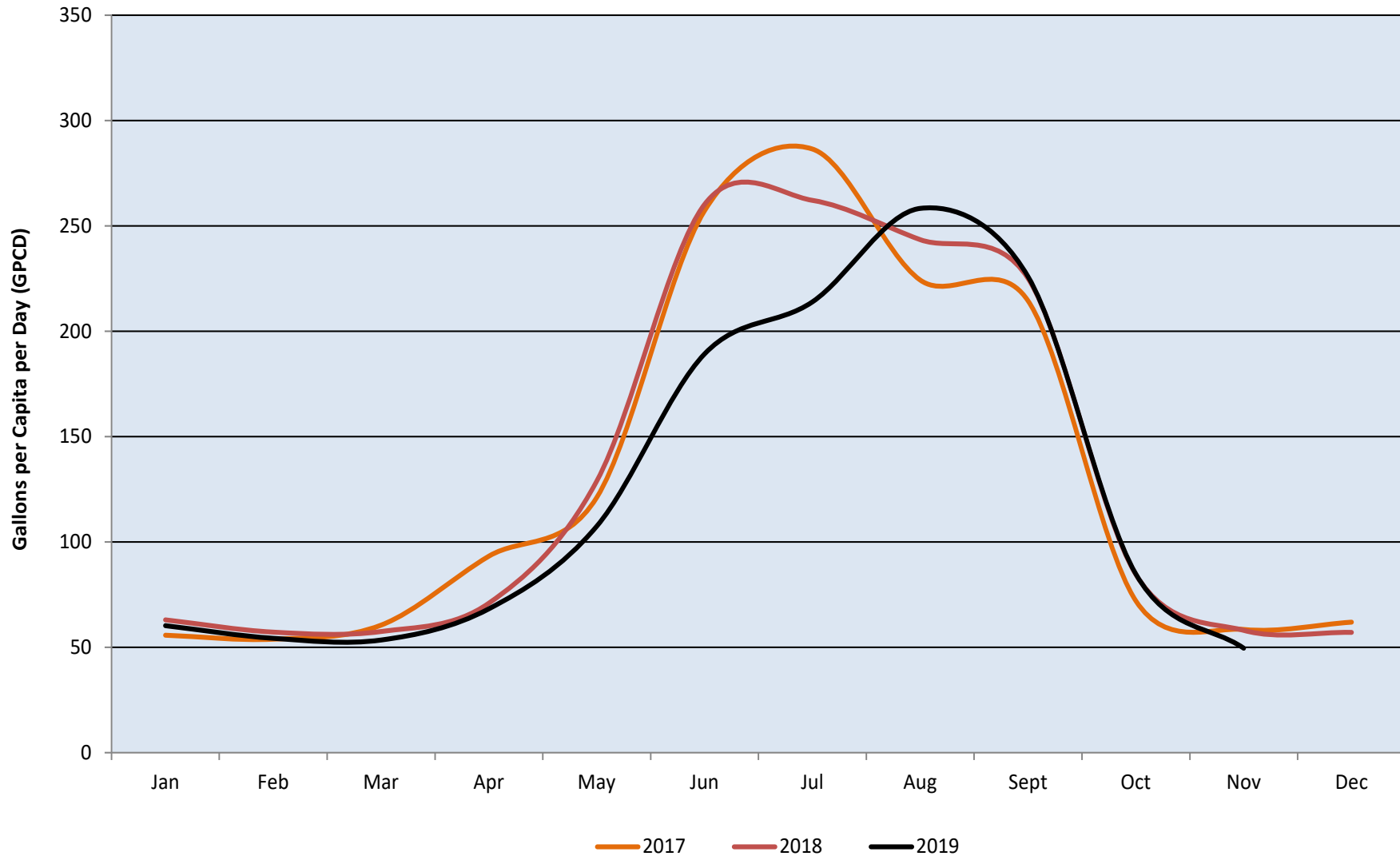
2016 - 131 GPCD

2017 – 130 GPCD

2018 – 131 GPCD

July 2017 had the highest average daily usage at 287 gallons GPCD. November 2019 had the lowest usage at 50 GPCD. This likely reflects an abrupt end to fall and overall lower water using fixtures coming with new development. 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:

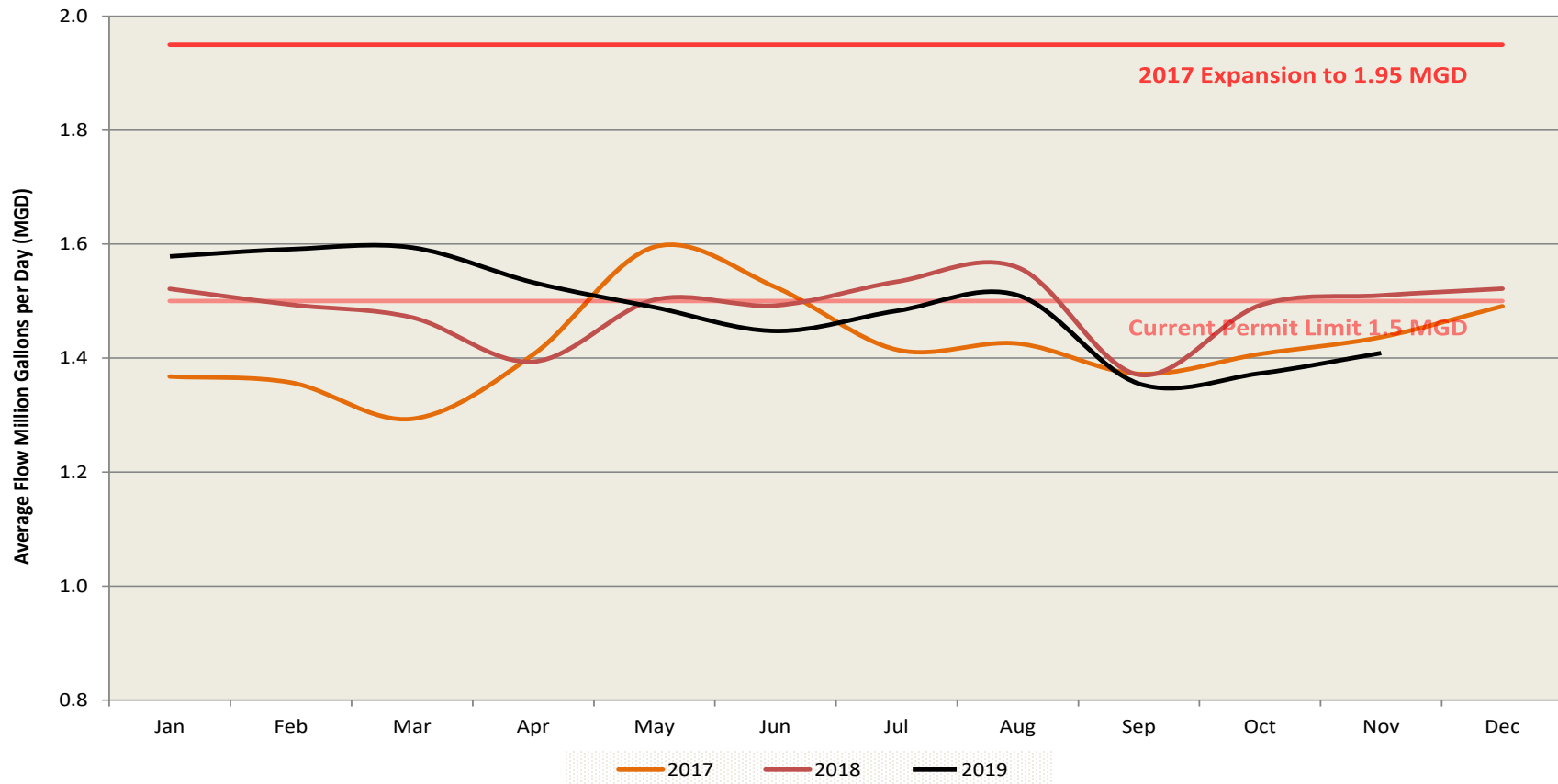
2016 - 1.30 MG

2017 – 1.42 MG

2018 - 1.50 MG

March 2017 had the lowest average flow of 1.29 million gallons per day (MGD). May 2017 set a high average monthly flow of 1.60 MGD, triggered by snowmelt and subsequent inflow into the collection system, likely through low lying manhole lids. CDPHE is indicating that they will not be renewing our permit until as late as 2023 or 2024, we continue to press the State to expedite this review so that our permit is in line with our approved expansions as well as correcting some incorrect permit limits. Design of the next plant expansion continues with HDR Engineering. We anticipate construction with Archer Western Construction in late 2019 or early 2020 and lasting through 2021.

Average Monthly Flows



Annual Daily Gallons Per Capita per Day (GPCD):

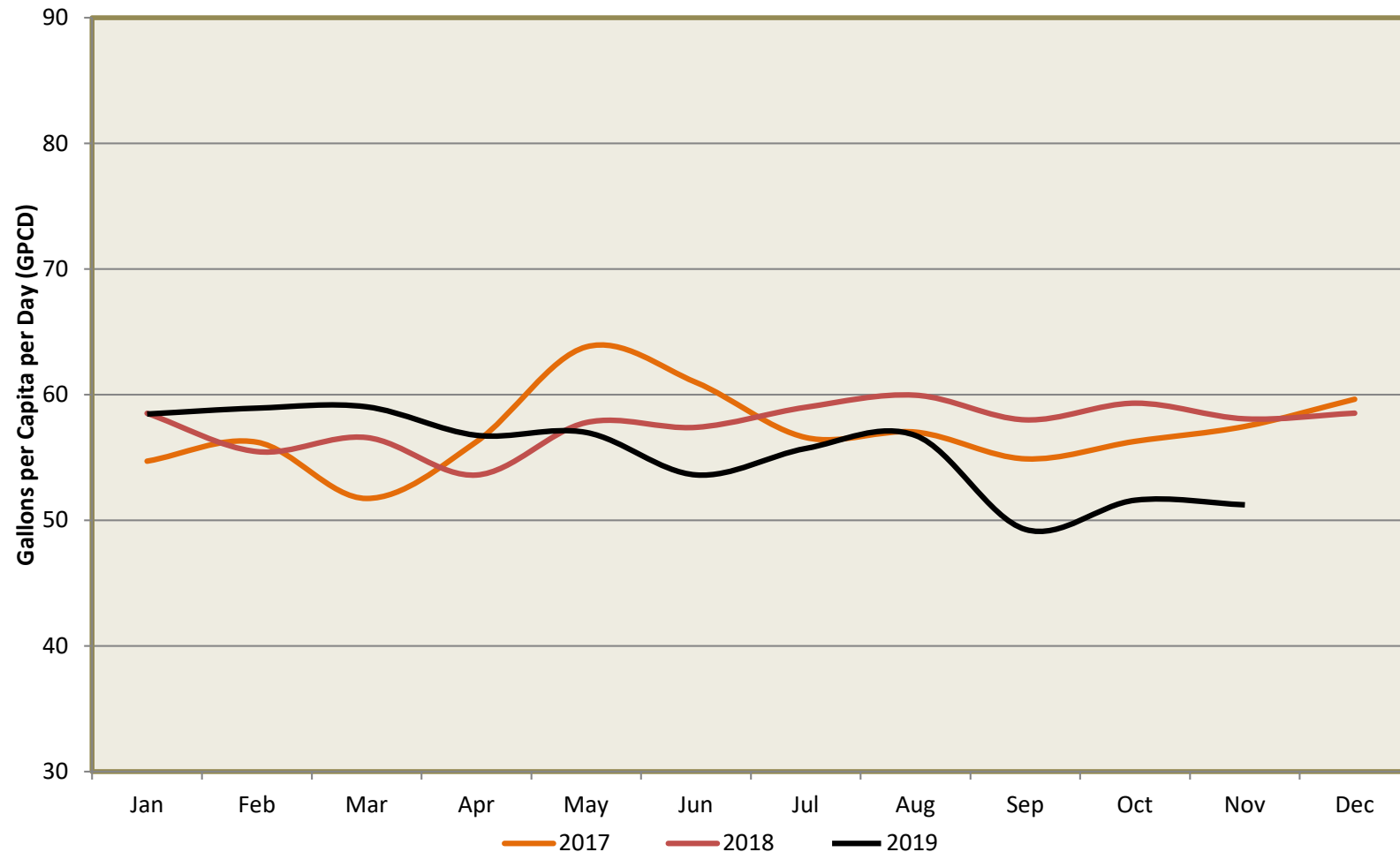
2016 - 57 GPCD

2017- 57 GPCD

2018 - 58 GPCD

This graph depicts customer indoor water usage. May 2017 had the highest usage at 64 GPCD, primarily due to snow melt seeping into manholes after a particularly wet snow and subsequent warm weather. 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.

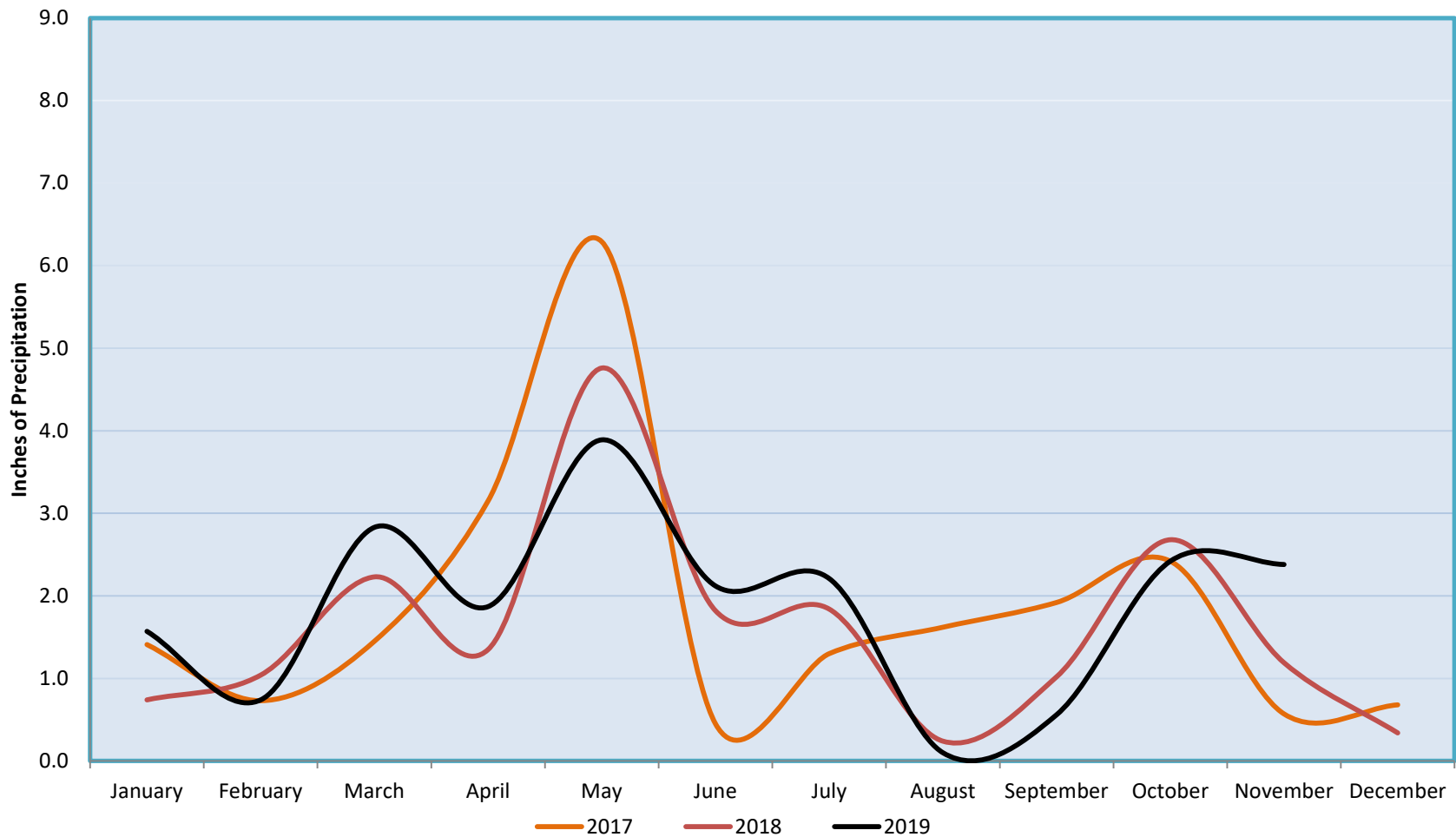
Average Daily Usage Per Capita



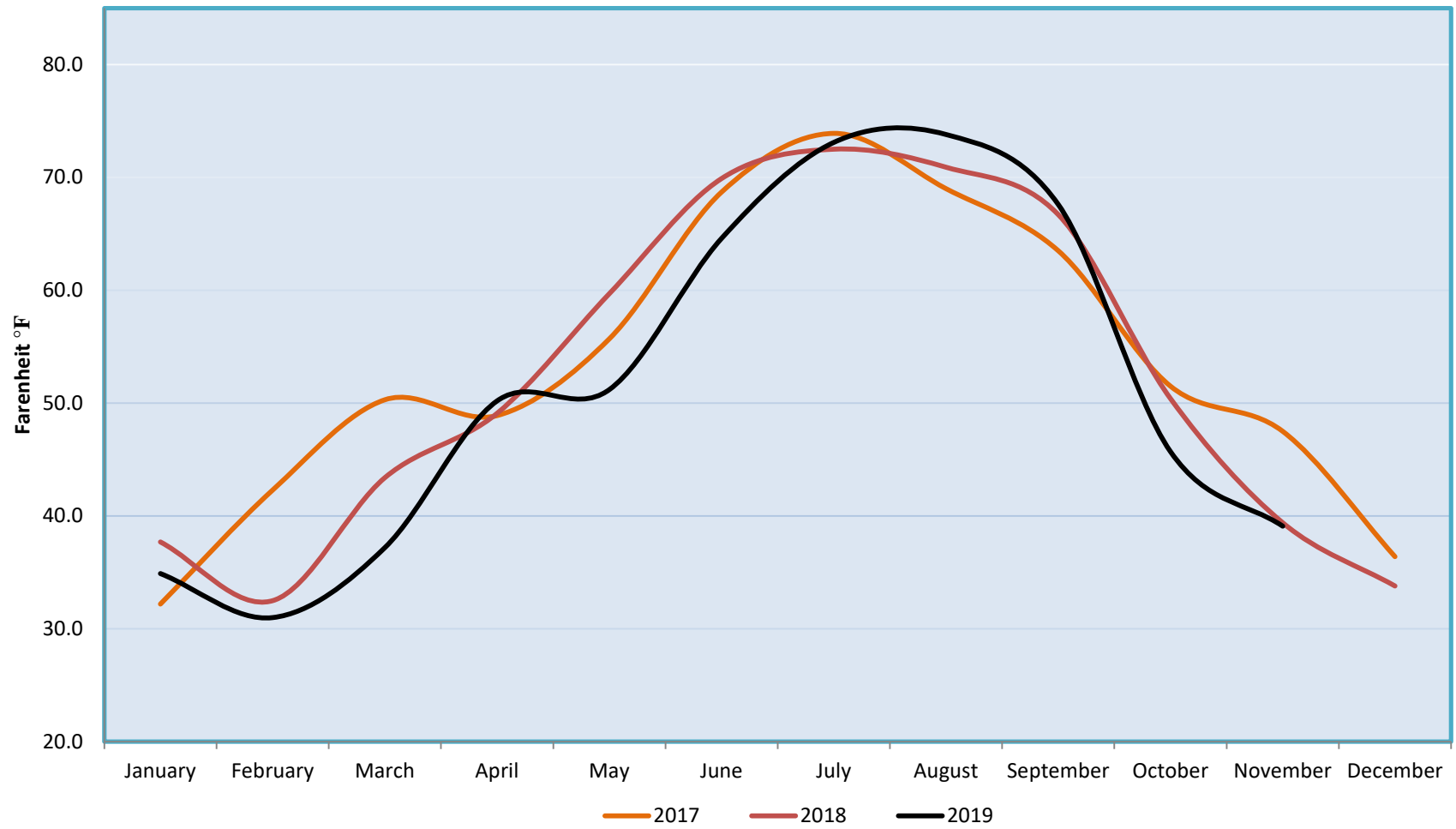
Monthly Data for Boulder – National Oceanic and Atmospheric Administration (NOAA) & Natural Resource Conservation Service (NRCS)

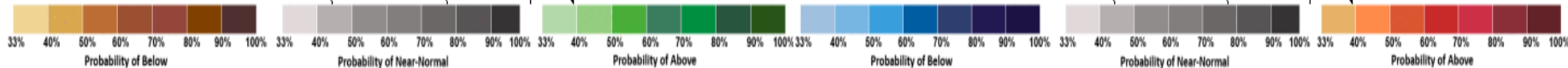
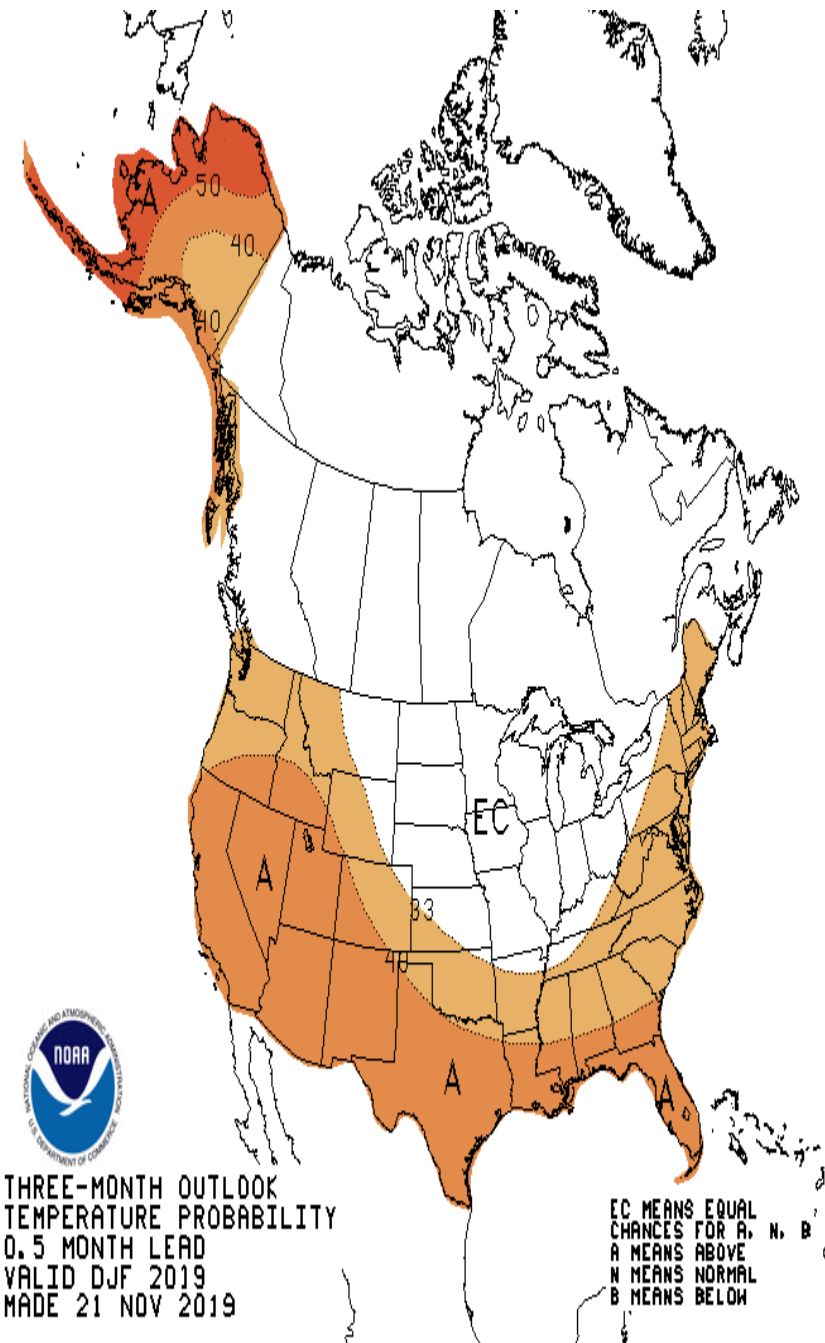
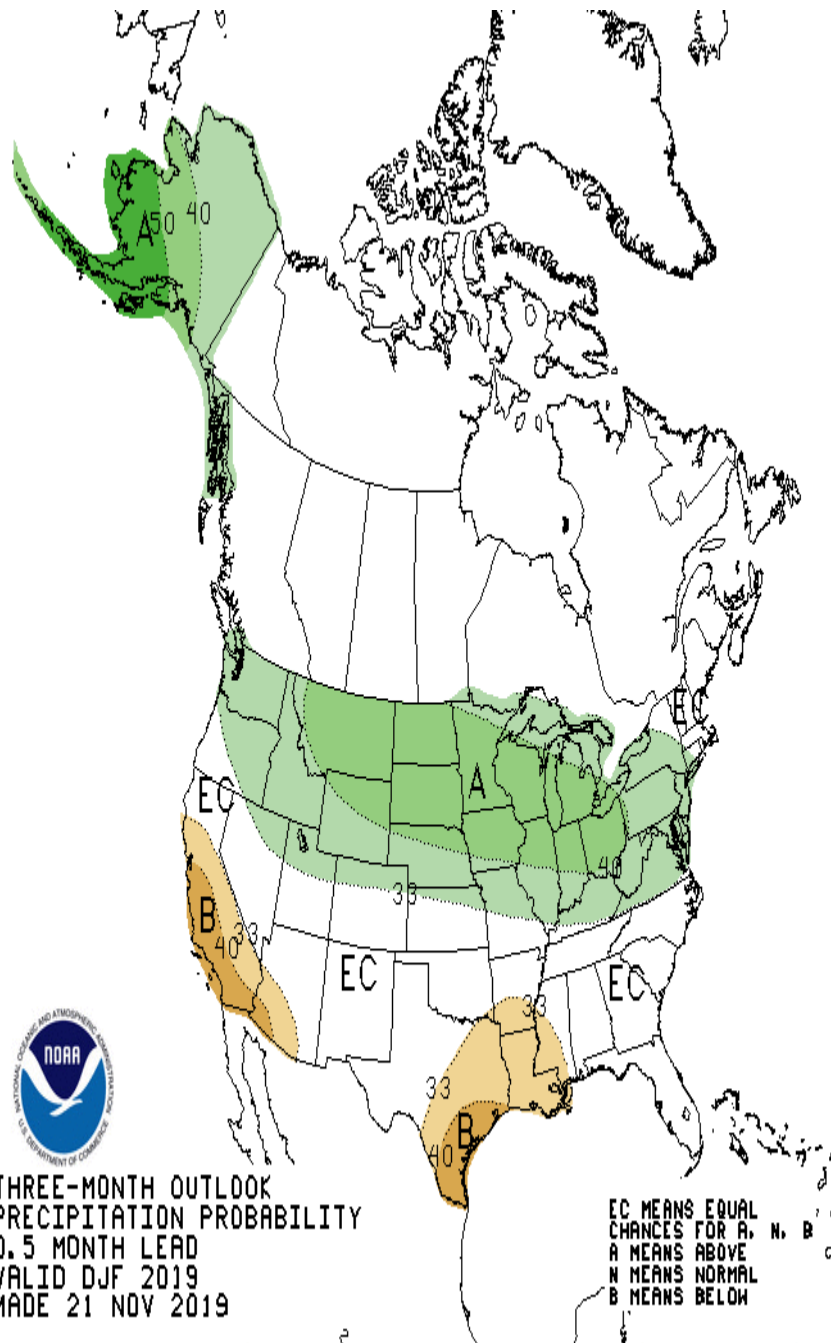
NOAA is predicting equal chance of above or below normal precipitation and 33% chance of above normal temperatures, through early December. Now that we are back into winter we will report on snow conditions and pick up on reporting drought conditions as we near run off in the spring.

Precipitation



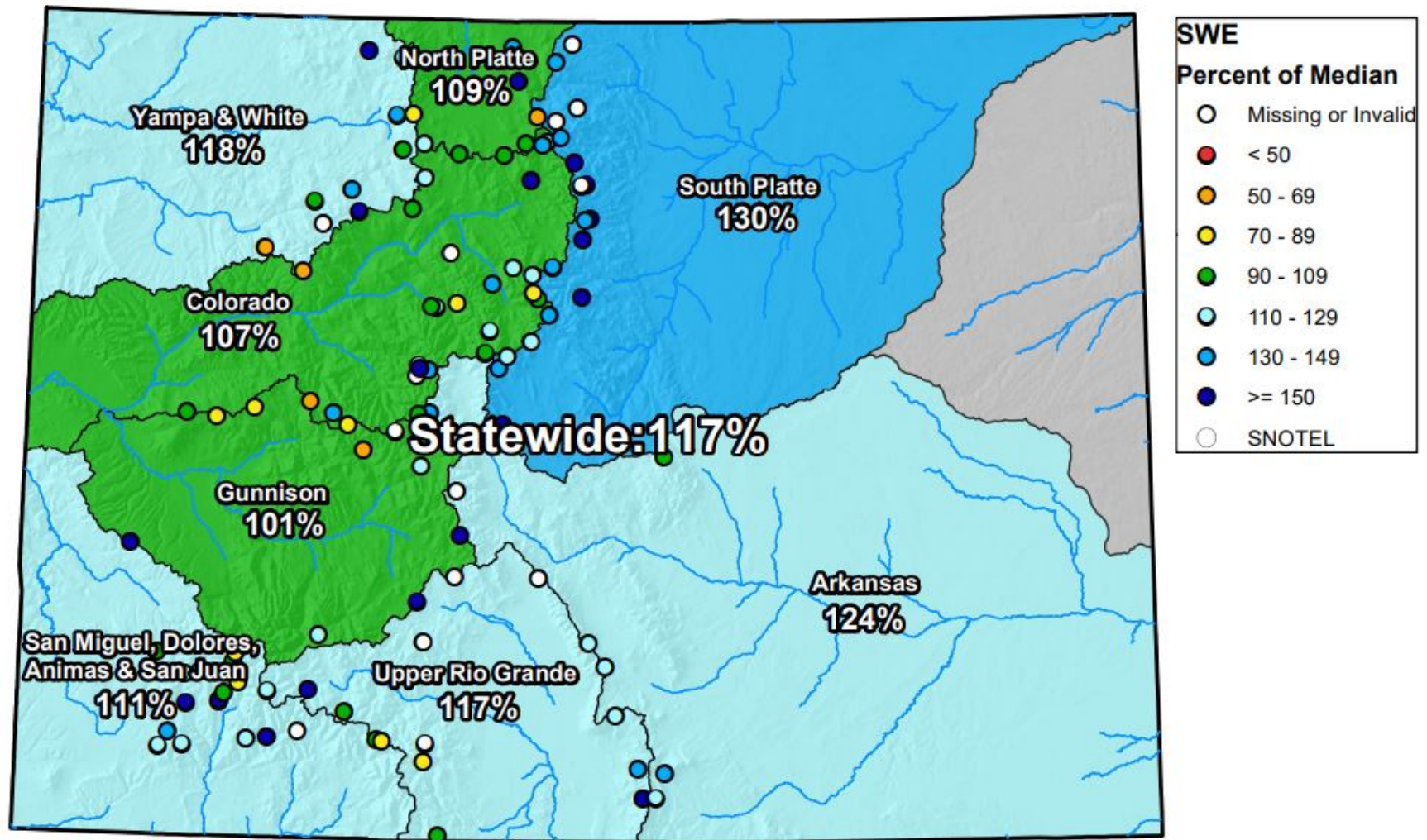
Mean Temperature





Colorado SNOTEL Snow Water Equivalent (SWE) Update Map with Site Data

Current as of Dec 02, 2019



0 25 50 100 150 200 Miles



United States Department of Agriculture

Natural Resources Conservation Service

Miscellaneous

Public Works has had some recent success in obtaining grant funding from a variety of agencies. Below is a list of recent grants awarded or paid, as well as list of grants in the application stage:

Grants Awarded

CWCB – Boulder Creek Wells	\$200K (Water)
CWCB – Drought and Conservation Plans	\$ 60K (Water)
Boulder County – Sustainability Matching Grant	\$ 15K (Water)
CDOT – Signal at WC7 and Erie Parkway	\$480 (General)
Colorado Water Resources & Power Development Authority – Hydroturbine Design	\$ 15K (Water)
Total	\$770K

Grants in Application Status

DOLA - Boulder Creek Wells Design and Construct	\$785,955 (Water)
DOLA – Hydroturbine Construction	\$766,704 (Water)
RCAC – EV Chargers Installation	\$ 63,000 (General)
Total	\$1,615,659