

Lynn R. Morgan Water Treatment Facility

Annual Daily Average Flow:

2014 - 2.6 million gallons (MG)

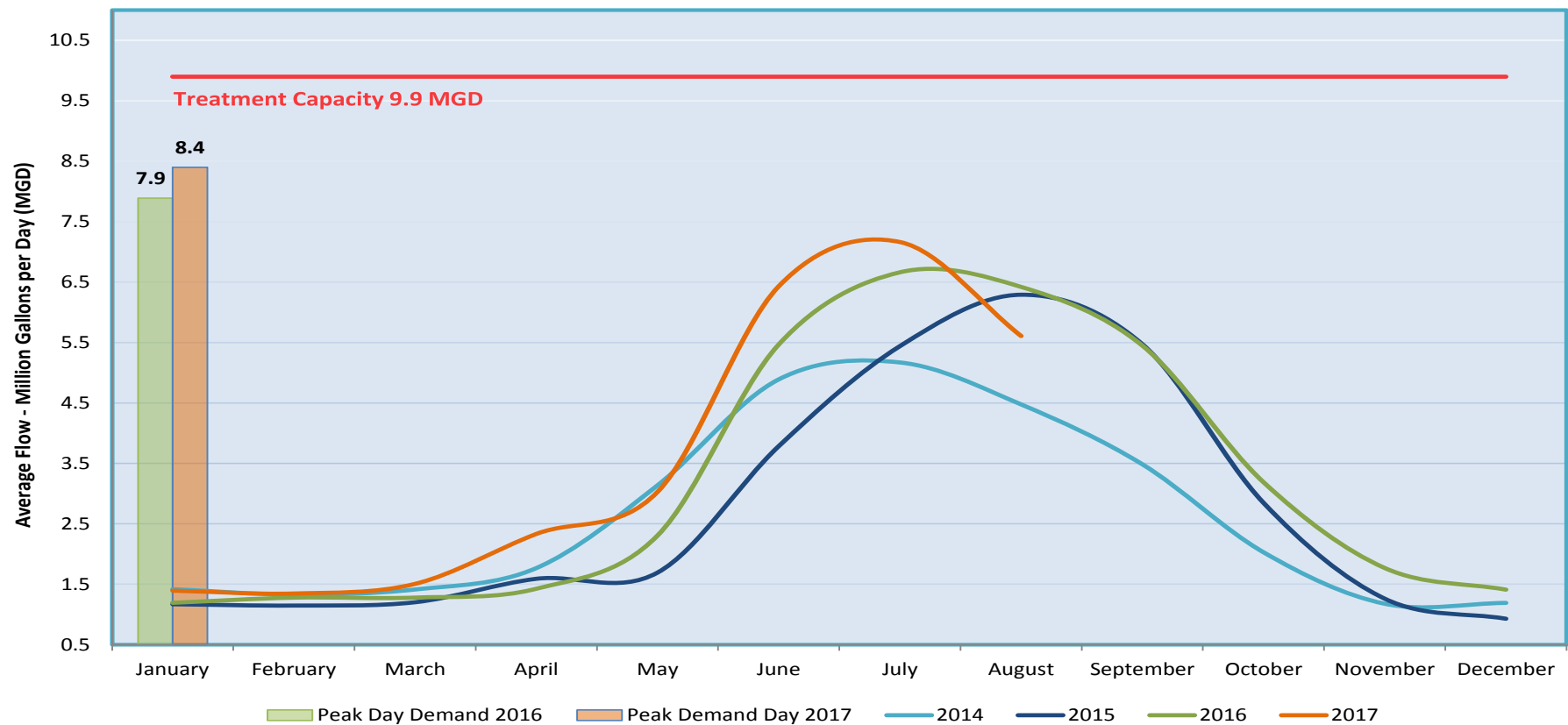
2015 - 2.7 MG

2016 - 3.3 MG

July 2017 maintains the record for the highest monthly average flows at 7.16 MG, while December 2015 had the lowest flows at 0.93 MG. Summer demands greatly affect the annual average due to outdoor irrigation. Water storage tanks in the distribution system play a key role in supplying peak overnight irrigation demands, and are refilled in the day when demands decrease. A notable shift on this chart is in May 2015, where we saw very high precipitation. Water use in 2014 was markedly lower, in conjunction with more consistent precipitation than in the summers of 2015 and 2016.

The daily peak demand (customer meter totals) continued to be in July of this year. This equates to a 0.5 MG increase in peak demand over last year. Staff is currently discussing options with design engineers to increase plant capacity ahead of the next expansion project, which is anticipated to be designed in 2018 and constructed in 2019.

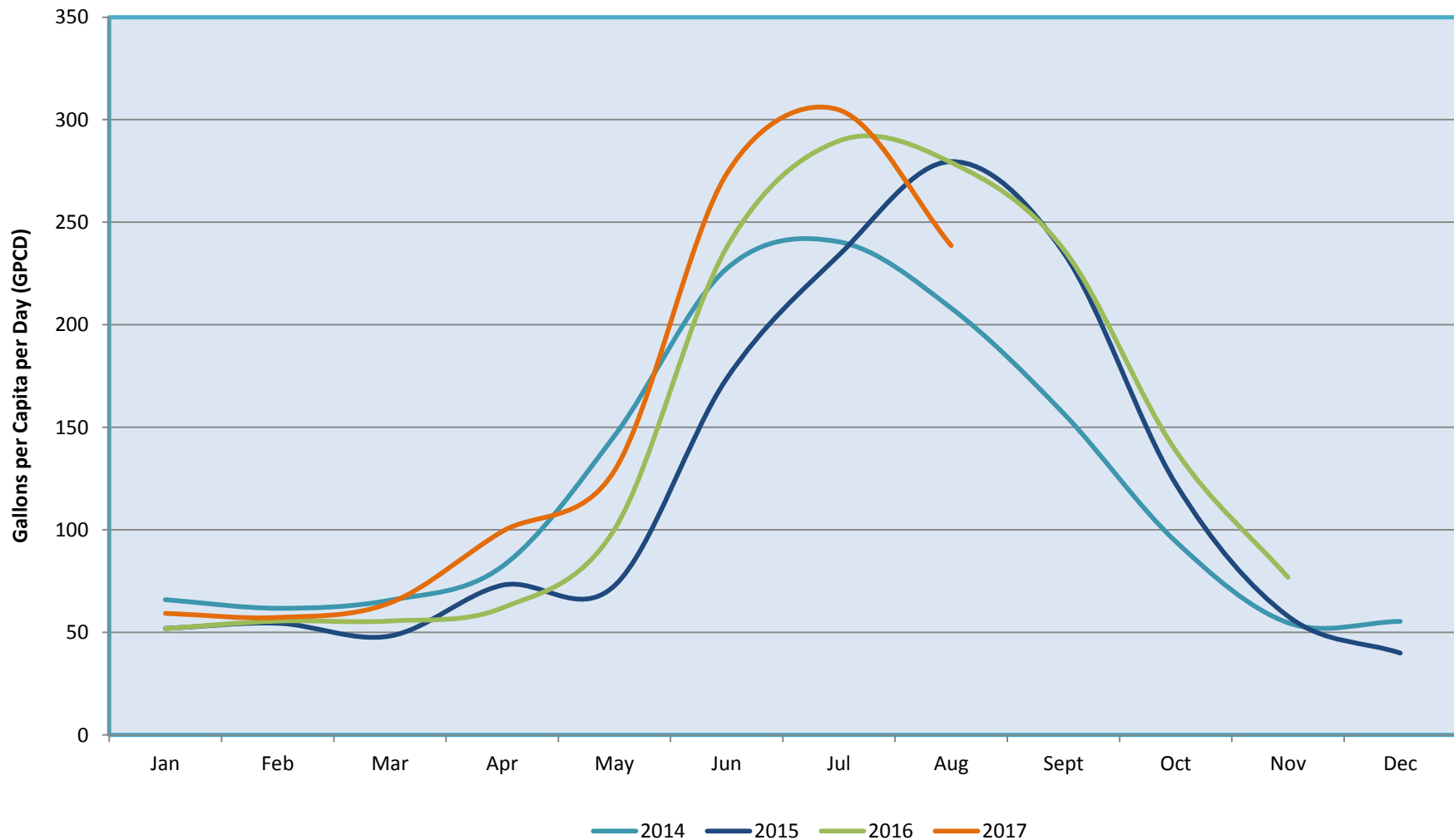
Average Monthly Production



Annual Daily Gallons Per Capita per Day (GPCD): **2014** – 122 GPCD **2015** - 120 GPCD **2016** - 144 GPCD.

July 2017 had the highest average daily usage at 305 gallons per capita per day (GPCD) an increase over the previous record set in July 2016 of 290 GPCD. December 2015 had the lowest usage at 40 GPCD. Reducing summer irrigation and increasing reuse water availability will reduce reliance on treated water supplies in the future.

Average Daily Usage Per Capita

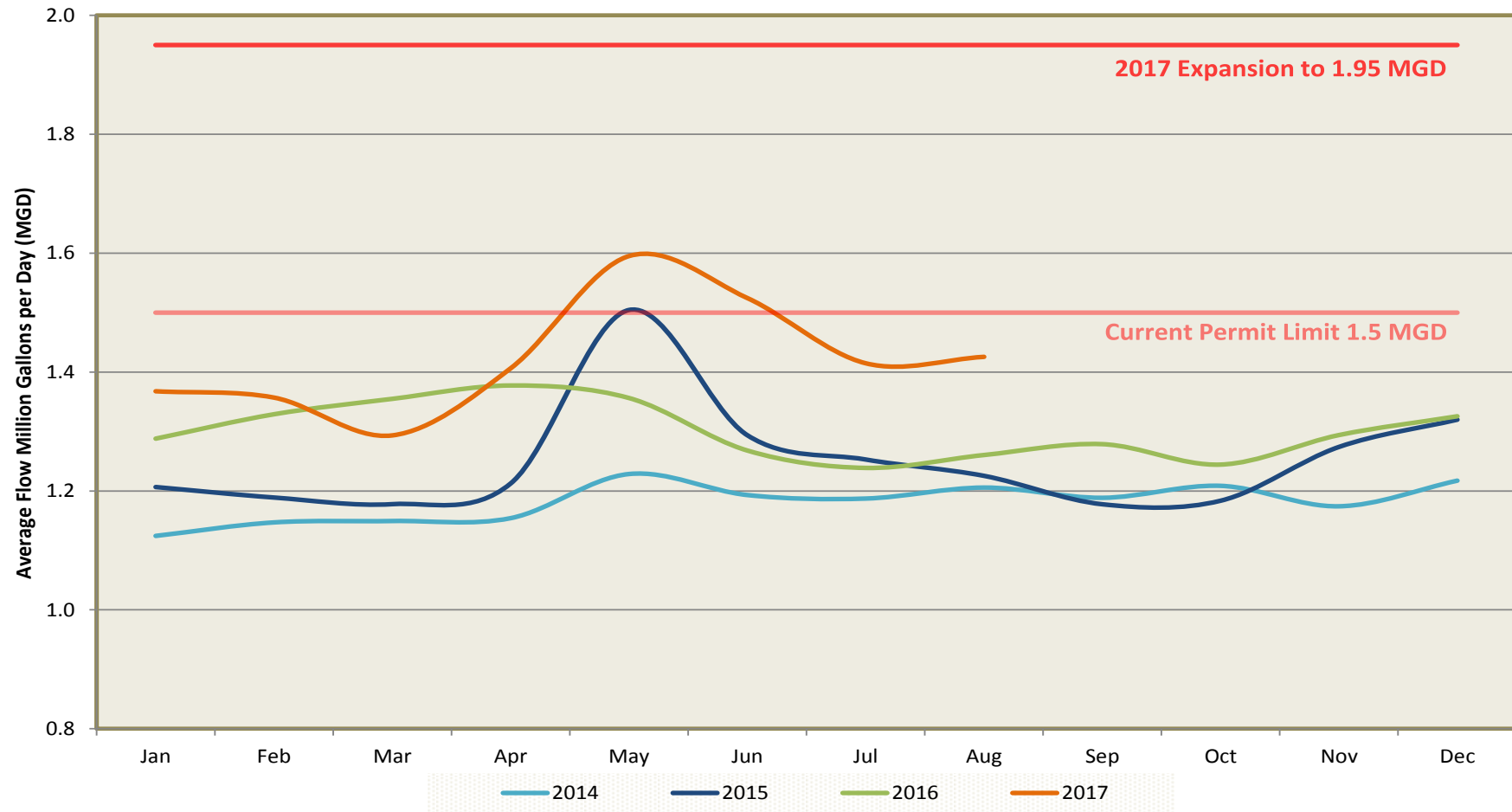


North Water Reclamation Facility

Annual Daily average flow: **2014** - 1.3 million gallons **2015** - 1.3 million gallons **2016** - 1.5 million gallons

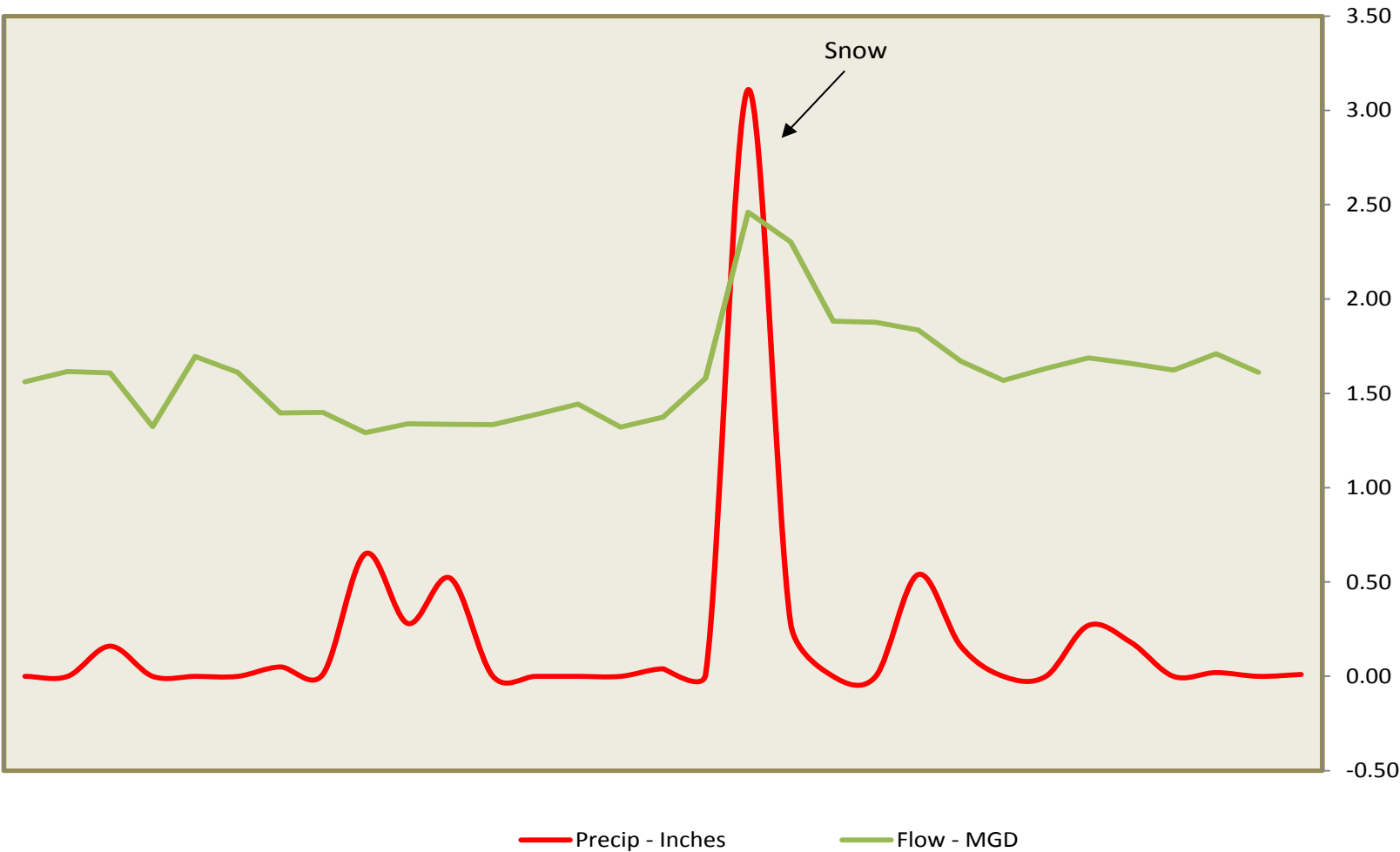
January 2014 had the lowest average flow of 1.12 million gallons. May 2017 set a high average monthly flow of 1.60 million gallons per day, triggered by snowmelt and subsequent inflow into the collection system. Daily inflows in August have stabilized with regular precipitation. The recent plant expansion was substantially complete as of July 27. Staff is working with the design engineer and a consultant to review the various changes that will come with our application for a new permit with a higher flow limit of 1.95 MGD.

Average Monthly Flows



A question was raised regarding the exceedance in May of the permitted flow limit at the August 22 Board meeting. The graph below shows the impact of large snow events on flows to the North Water Reclamation Facility, and relatively low impact of rain events (all other events not noted as snow are rain). Staff in the Engineering Division are currently conducting a study with Merrick & Company engineers to monitor flow in manholes throughout the Town's collection system. This will help us identify which areas are allowing the most inflow after snow events so that we can seal off those manholes better and avoid disruptive flow excursions.

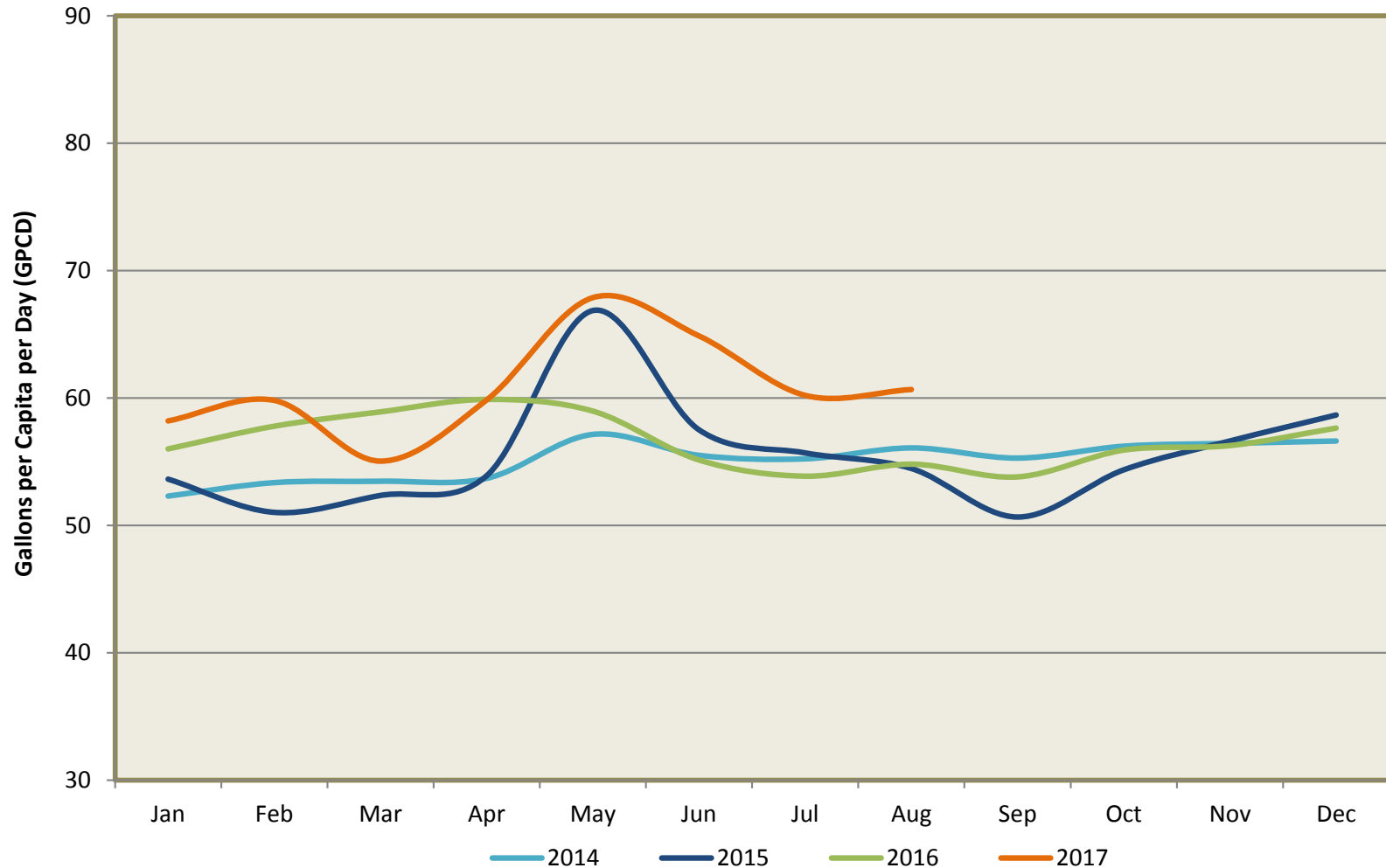
May 2017 Precipitation & Flow



Annual Daily Gallons Per Capita per Day (GPCD): **2014** - 62 GPCD **2015** - 56 GPCD **2016** - 64 GPCD

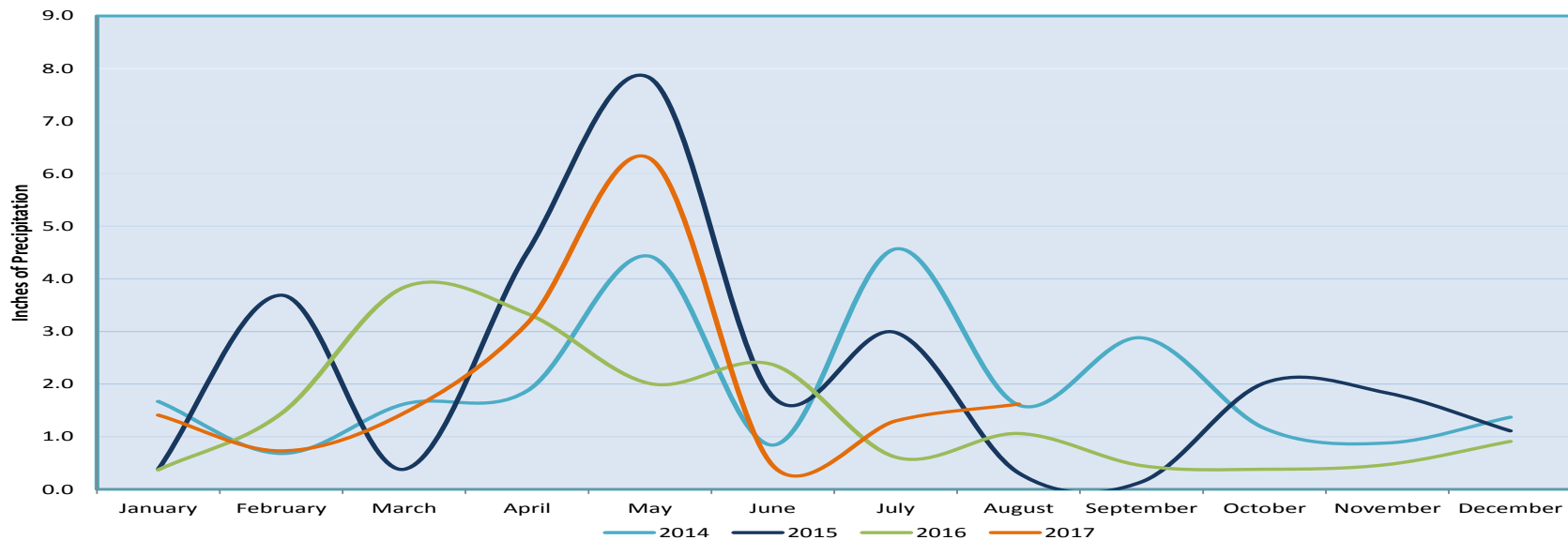
This graph depicts customer indoor water usage. May 2017 had the highest usage at 68 gallons, while February and September 2015 had the lowest usage at 51 gallons. Overall flows into the wastewater treatment plant are trending upward over this period. Increased population appears to be offset by more efficient water use indoors, and possibly new homes with water saving appliances and fixtures. Worth noting again is the effect of precipitation in May of 2015 and 2017. Fall, with relatively little precipitation and dropping groundwater levels, is a good indicator of true daily usage.

Average Daily Usage Per Capita

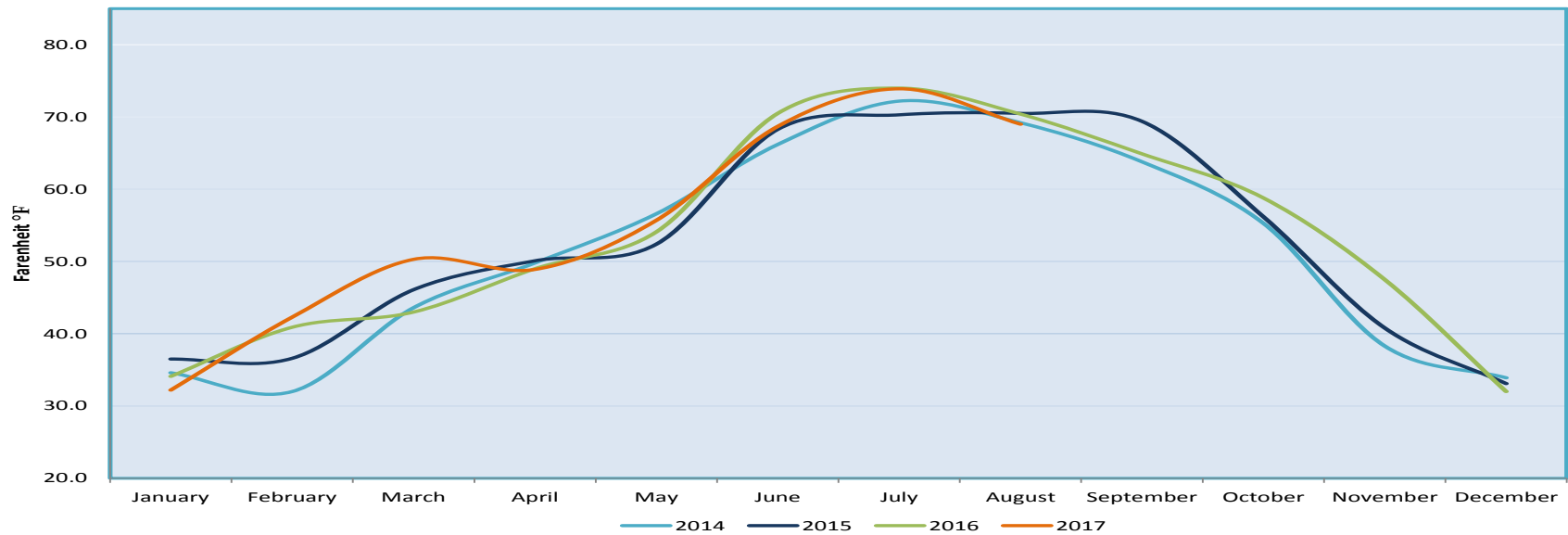


Monthly Data for Boulder – National Oceanic and Atmospheric Administration (NOAA)

Precipitation

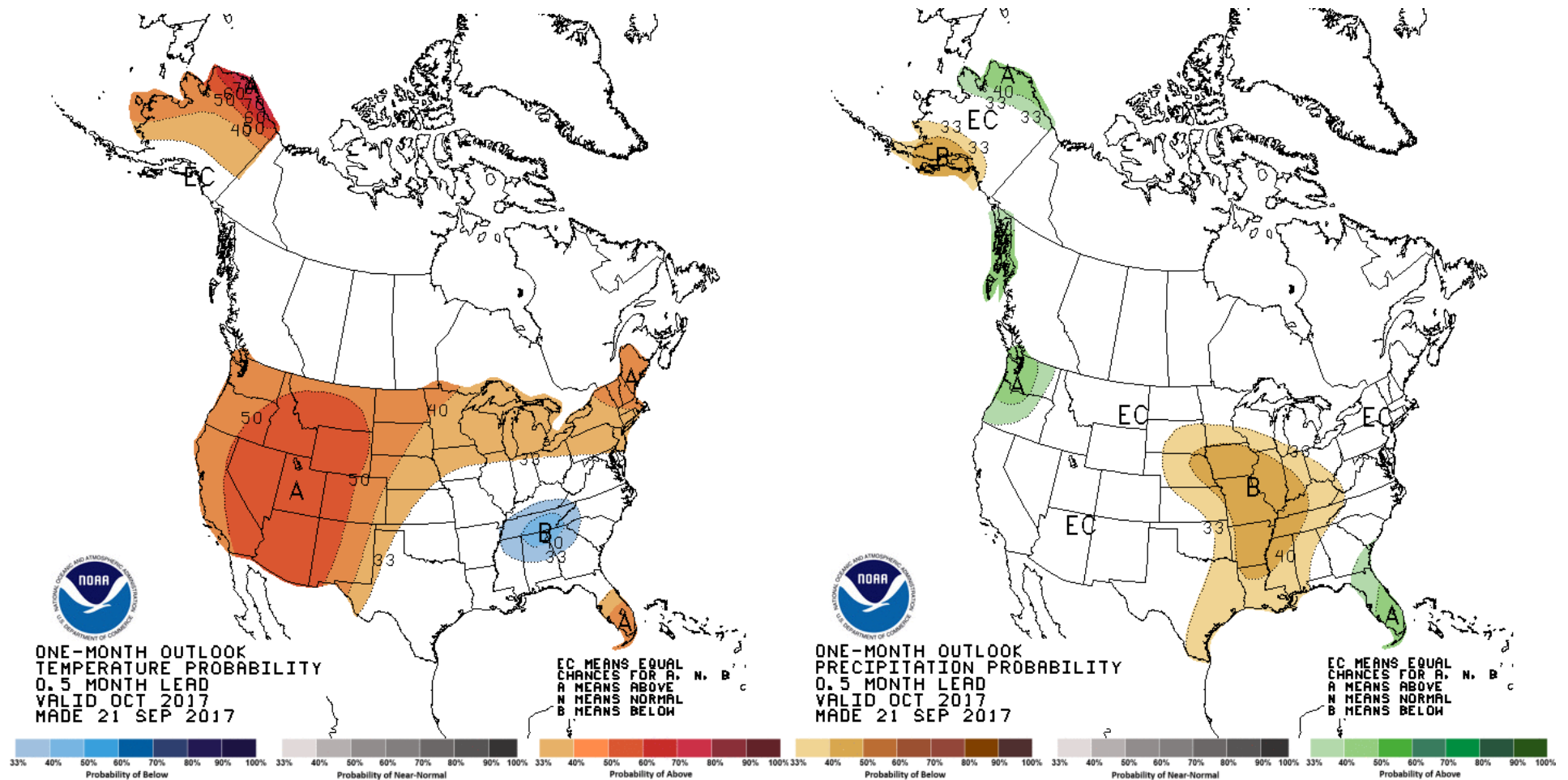


Mean Temperature



1 Month Weather Forecasts – NOAA

NOAA is predicting 40 to 50% chance of above normal temperatures for our area in October, similar to previous predictions. NOAA has backed off predictions of 33% chance of above normal precipitation in October and now shows equal chances of above or below normal precipitation. The drought monitor, as of September 26, shows a return to dryer conditions seen in early summer, primarily in the northwest portion of the state.



U.S. Drought Monitor Colorado

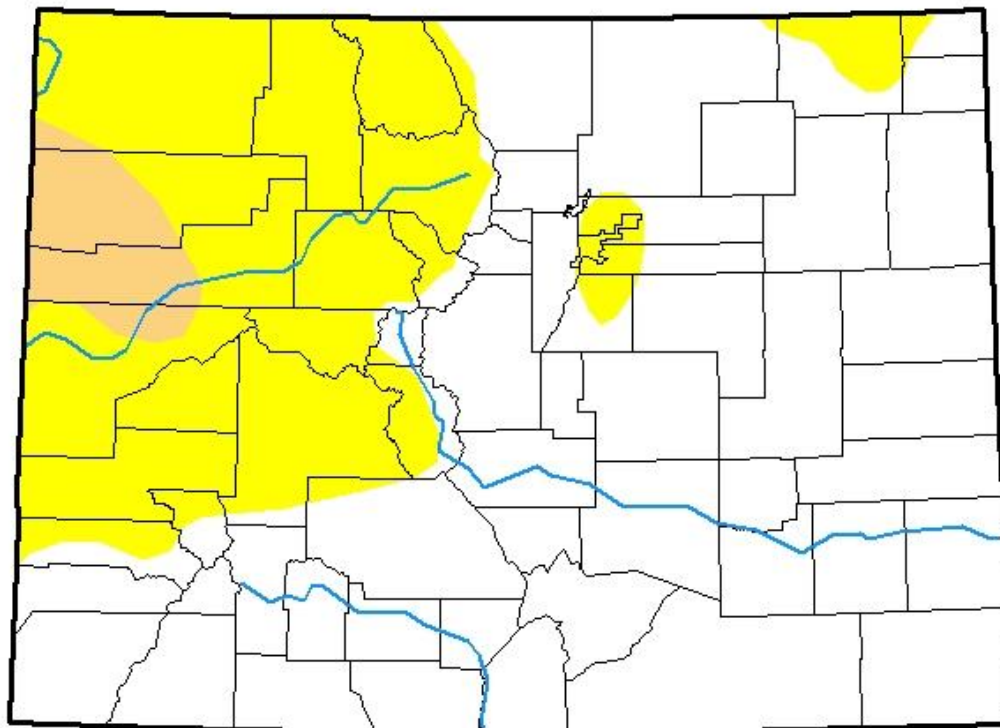
September 26, 2017

(Released Thursday, Sep. 28, 2017)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	67.63	32.37	3.72	0.00	0.00	0.00
Last Week 09-19-2017	64.79	35.21	3.72	0.00	0.00	0.00
3 Months Ago 06-27-2017	93.82	6.18	0.00	0.00	0.00	0.00
Start of Calendar Year 01-03-2017	31.88	68.12	37.21	2.88	0.00	0.00
Start of Water Year 09-27-2016	70.49	29.51	2.45	0.00	0.00	0.00
One Year Ago 09-27-2016	70.49	29.51	2.45	0.00	0.00	0.00



Intensity:



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:

Brad Rippey
U.S. Department of Agriculture



<http://droughtmonitor.unl.edu/>