

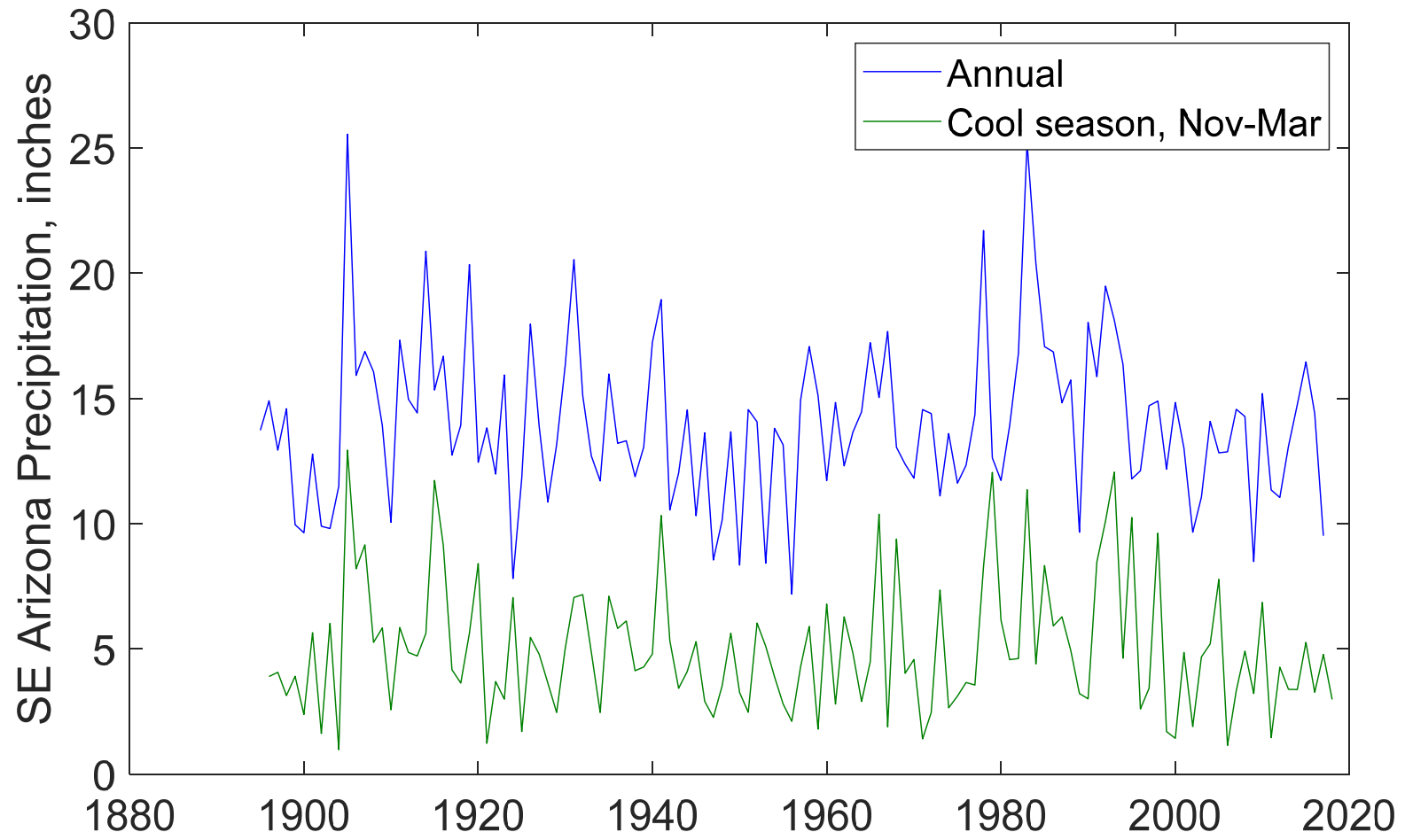
2018 San Pedro Low Flow Update For August 2018 Meeting USPP Tech Comm

Data sources:

- Stream gauge data from USGS website
- Daily average flow from Charleston Gauge (data since April 2018 flow data is provisional)
- USDA-ARS precipitation and runoff data available at: <https://www.tucson.ars.ag.gov/dap/>
- Precipitation data from NOAA, Climate at a Glance, Website

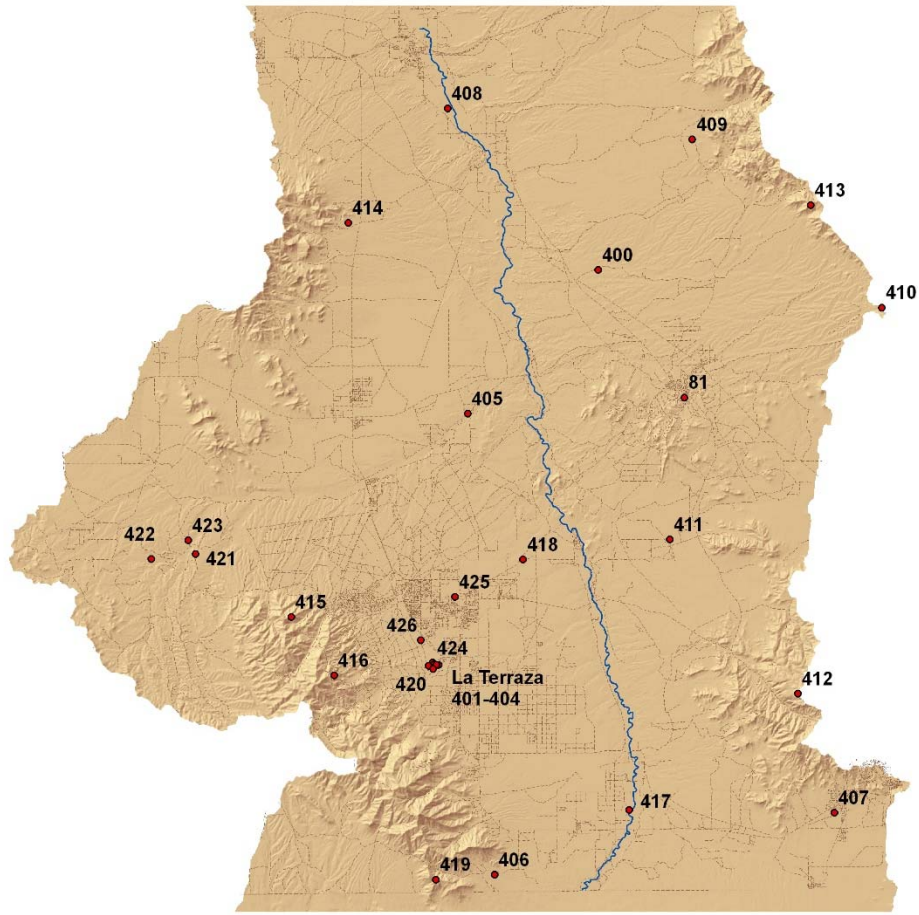
Presenter: Russ Scott, USDA-ARS russ.scott@ars.usda.gov

Regional Precipitation



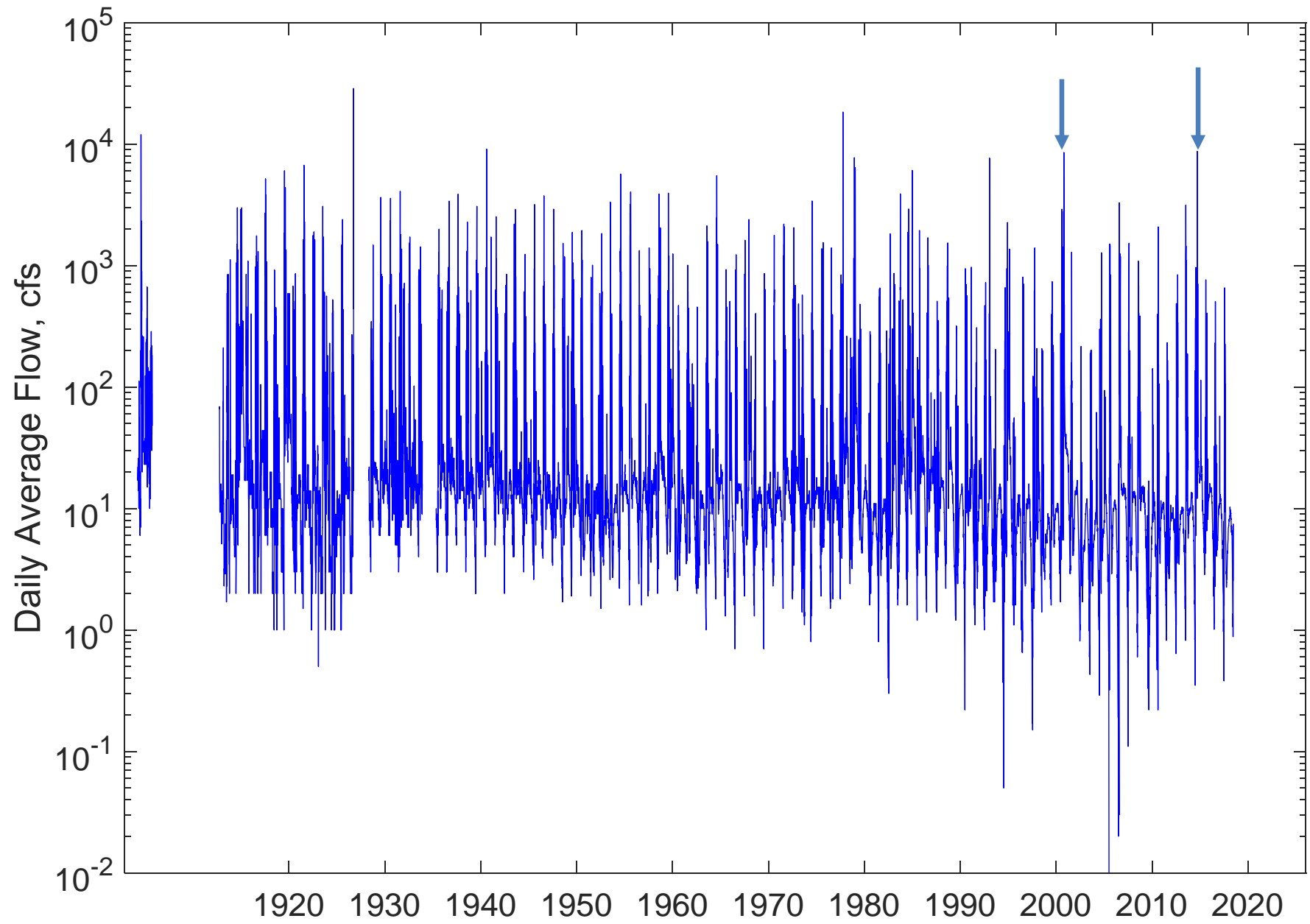
USPB Rain gauges operated by ARS for the USPP, Available since 2007

<https://www.tucson.ars.ag.gov/dap/>

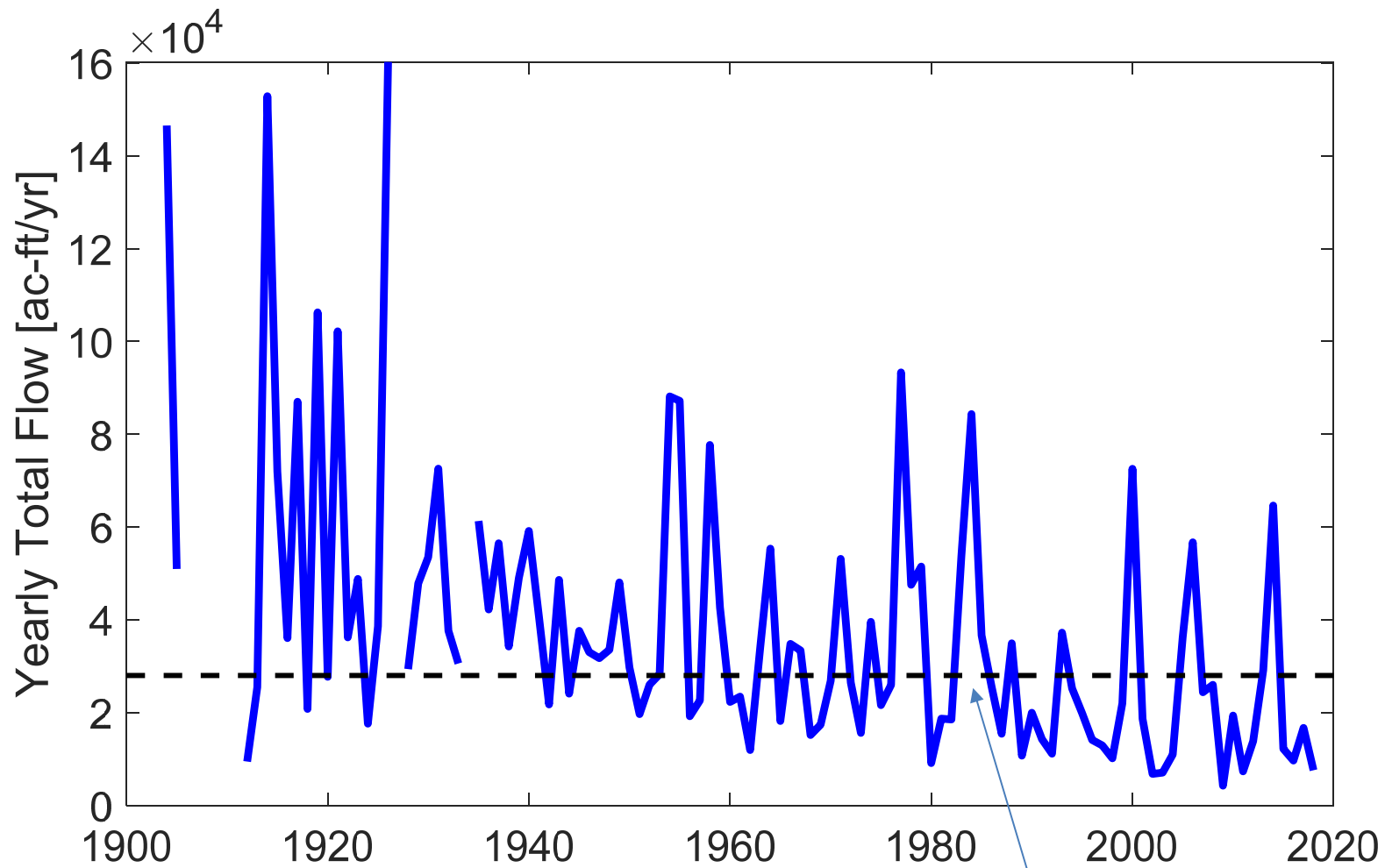


Year	Gage 405 Total (in.)	Gage 412 Total (in.)	Gage 419 Total (in.)	Gage 425 Total (in.)
2007	10.125	21.710	18.440	2.815
2008	12.255	13.240	22.140	10.665
2009	6.675	11.380	11.155	6.045
2010	16.215	17.545	16.650	12.860
2011	13.595	12.875	14.270	8.395
2012	12.210	10.055	13.360	8.960
2013	10.675	19.835	16.790	11.395
2014	17.475	20.305	20.175	19.240
2015	13.110	19.145	19.295	14.175
2016	10.820	15.410	16.810	9.650
2017	7.555	8.990	13.250	8.955

Charleston Gauge Daily Flows: Time series example

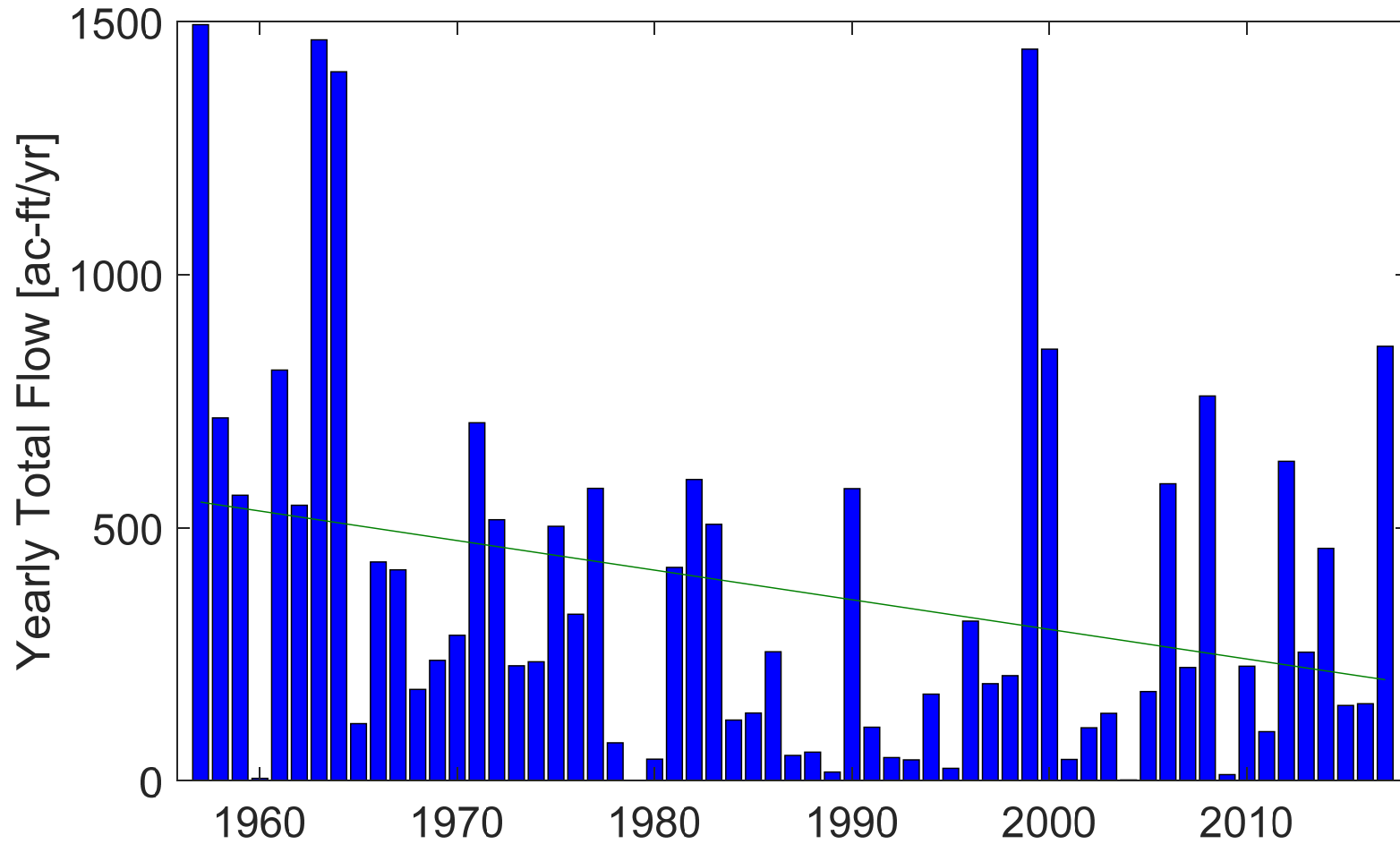


Charleston Gauge Annual Flows



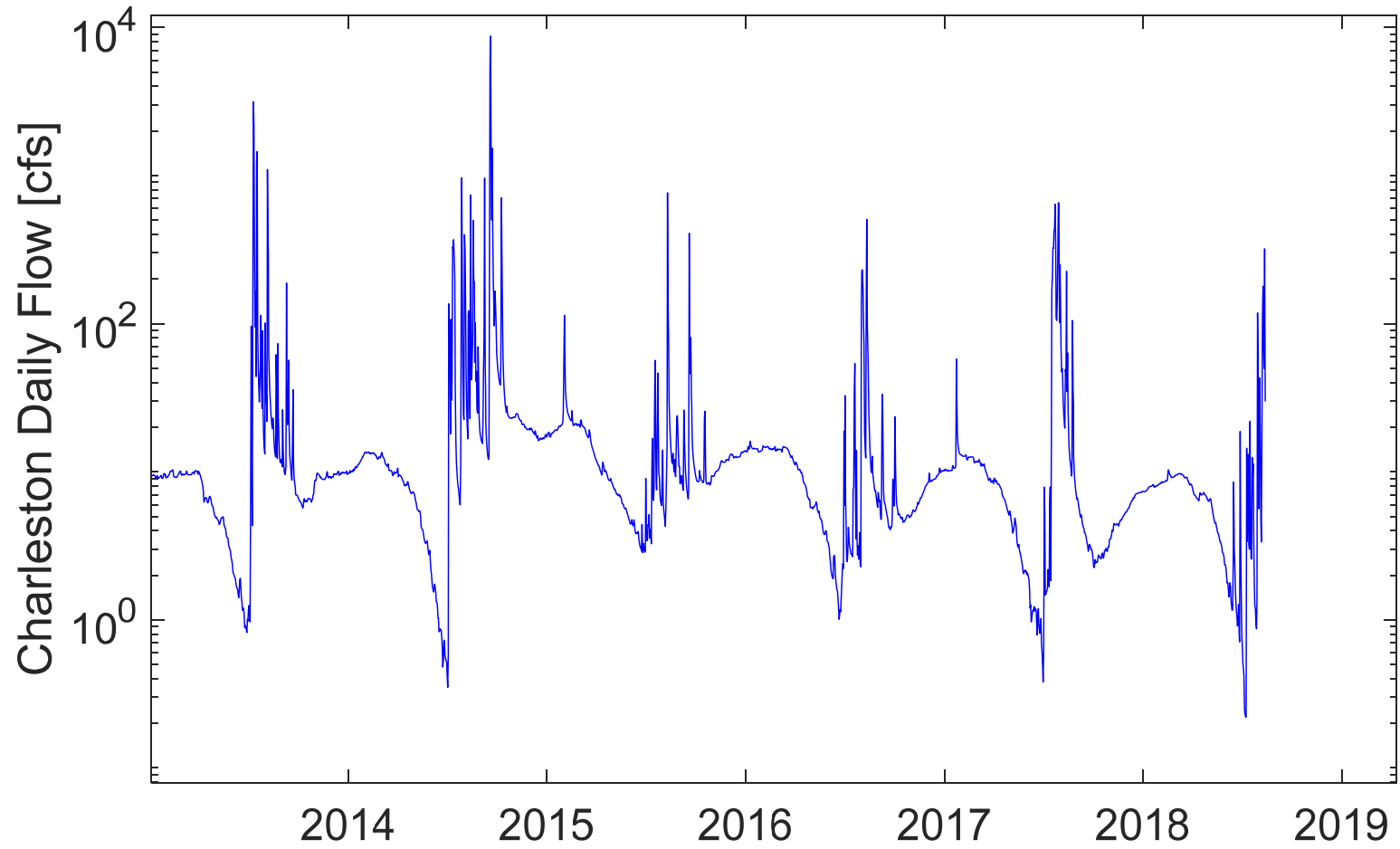
BLM SPRNCA's Claim
Based on 1954-1988 Median
Source: ADWR 2012 Report

Walnut Gulch Flume 1 Annual Flow

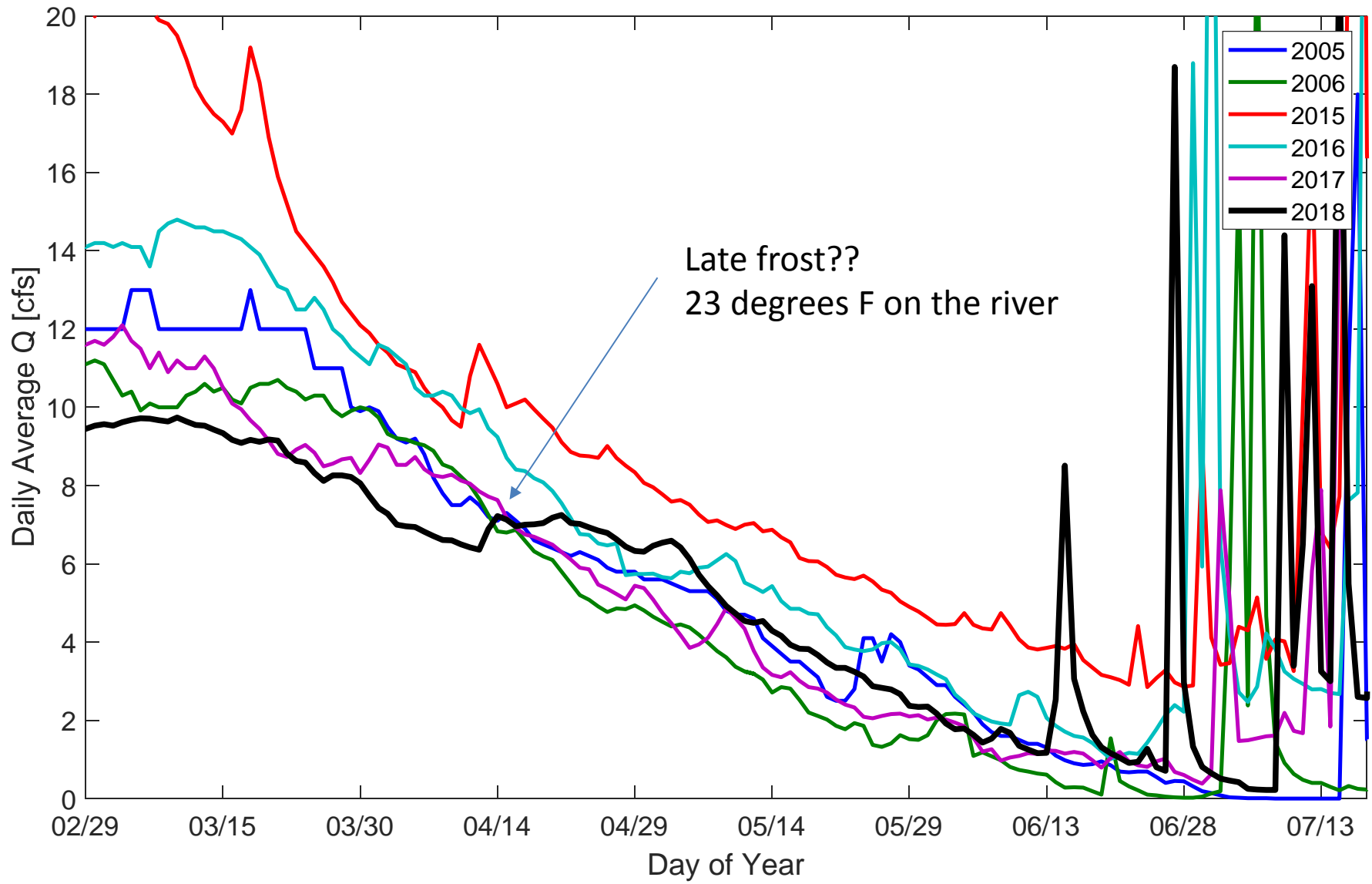


Annual flows at Charleston and Walnut Gulch are weakly correlated, $R^2 = 0.08$

Charleston Gauge Daily Flows: last 6 years

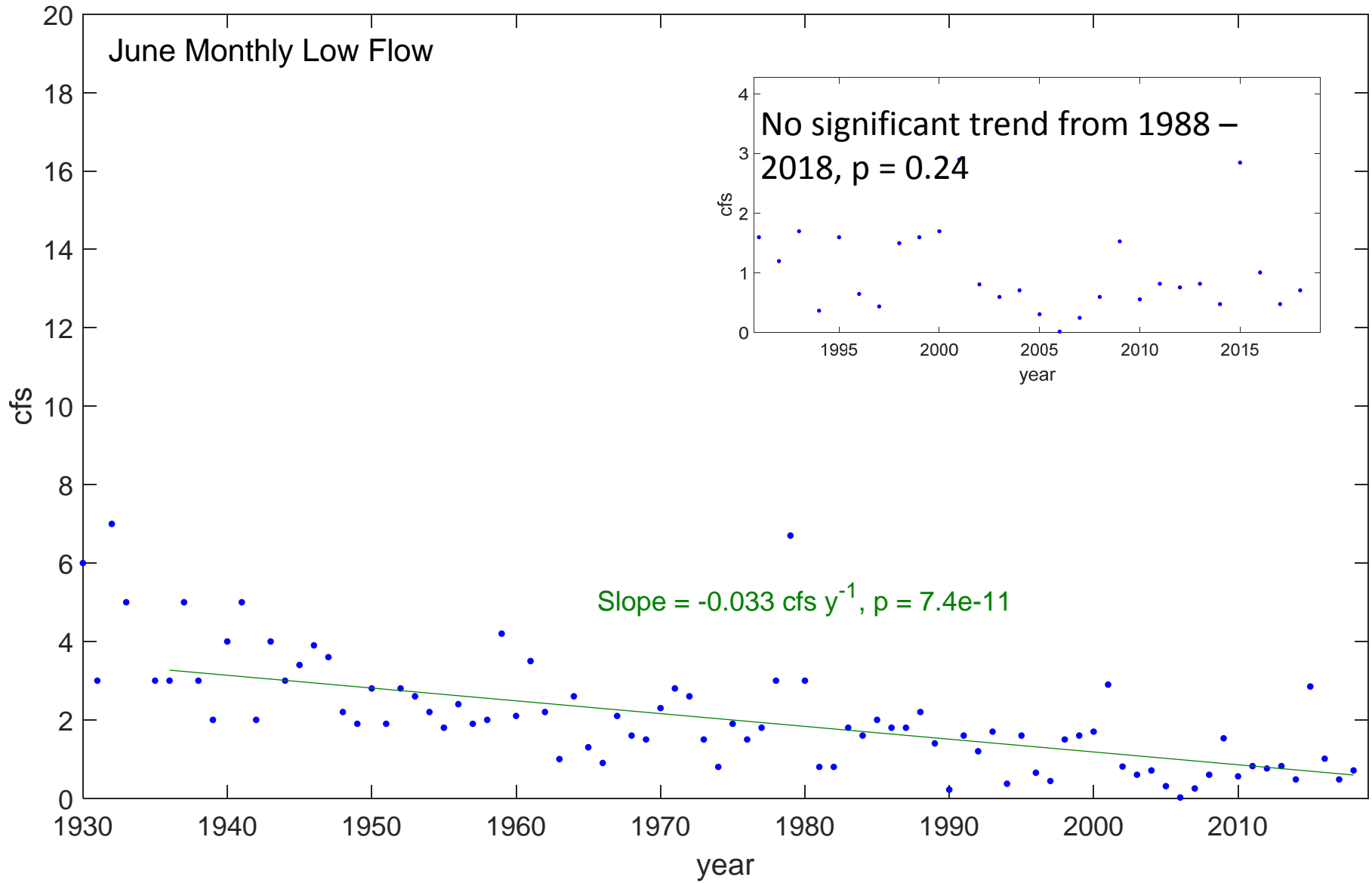


Charleston Gauge Springtime Behavior



2005, only year where Q=0

Charleston Monthly Low Flow, High ET



Charleston Monthly Low Flow, Low ET

