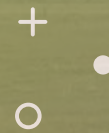


WRV 1.2 PRELIMINARY WATER BUDGET



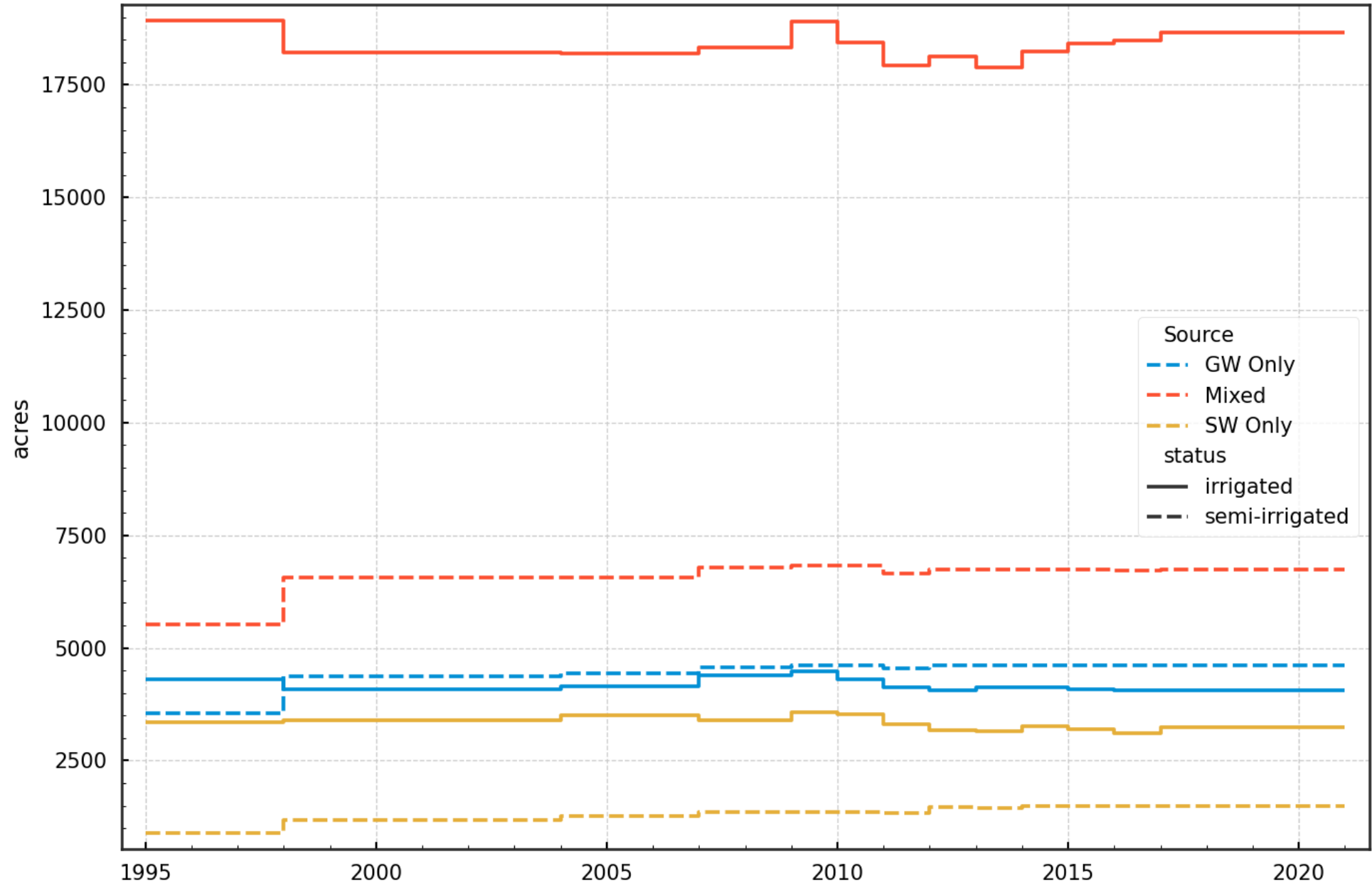
IDAHO DEPARTMENT OF
WATER RESOURCES

Alex Moody
WRV MTAC
October 25, 2023

Updates for WRV 1.2

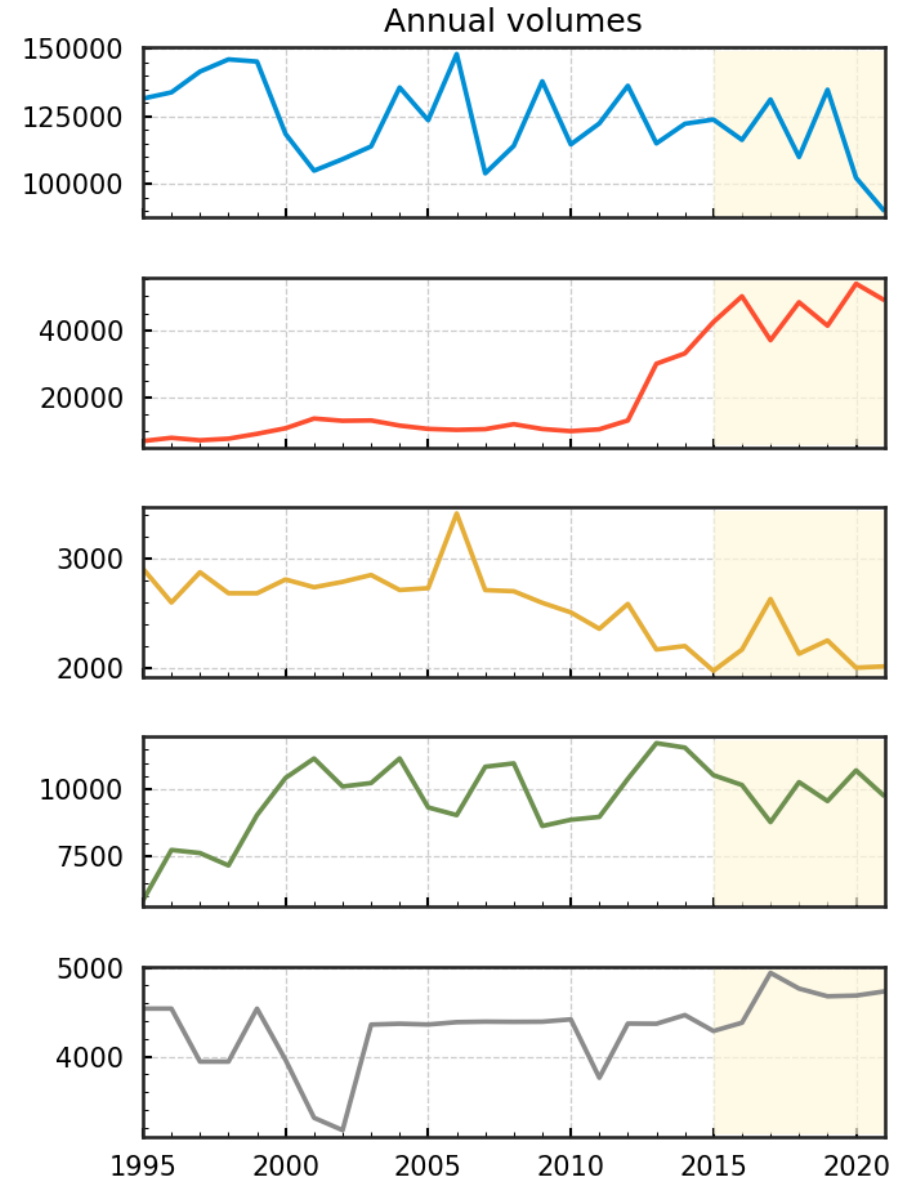
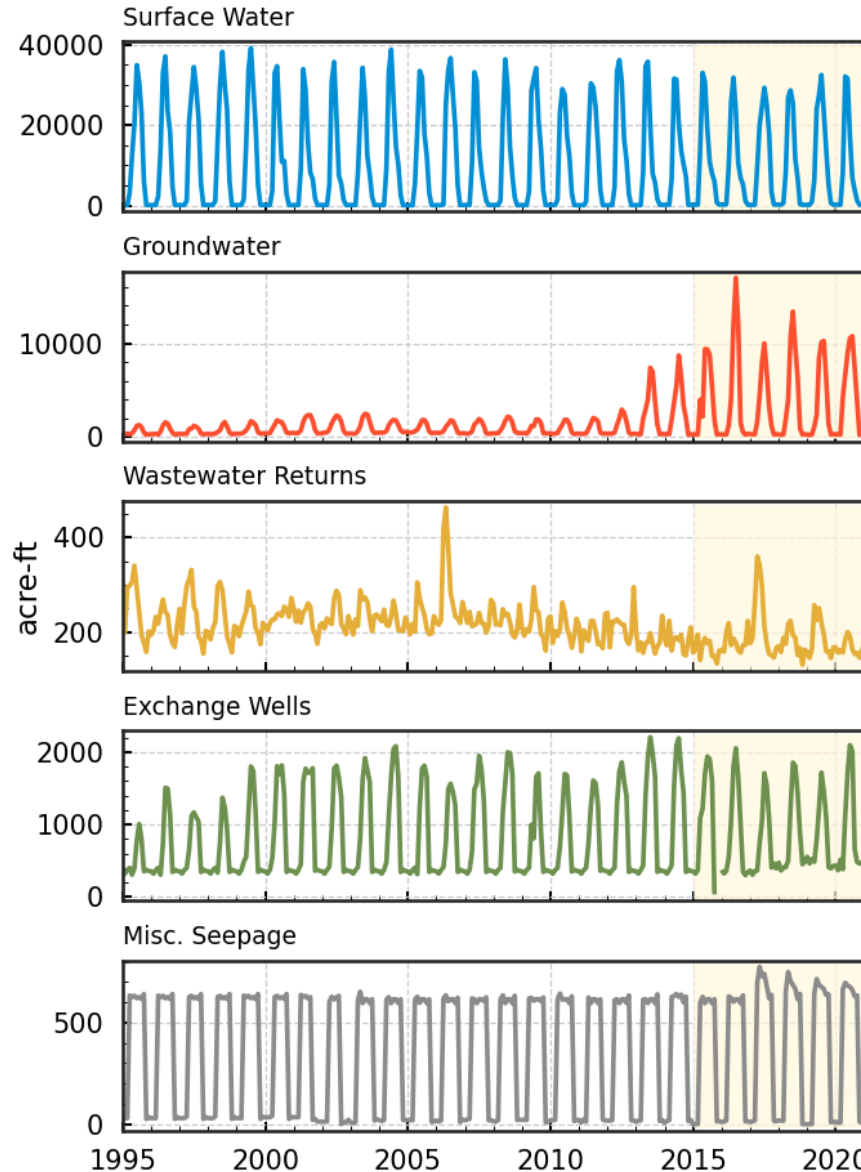
- Extended water budget from 2015 to 2021
- METRIC ET from 2015 to 2021, all years
- 6 new irrigated lands datasets
 - 2012, 2013, 2014, 2015, 2016, 2017
- Annual pumping from WMIS records, 2013 through 2021
- Watermaster delivery records
- Added soil moisture reservoir to estimated pumping and incidental recharge estimates

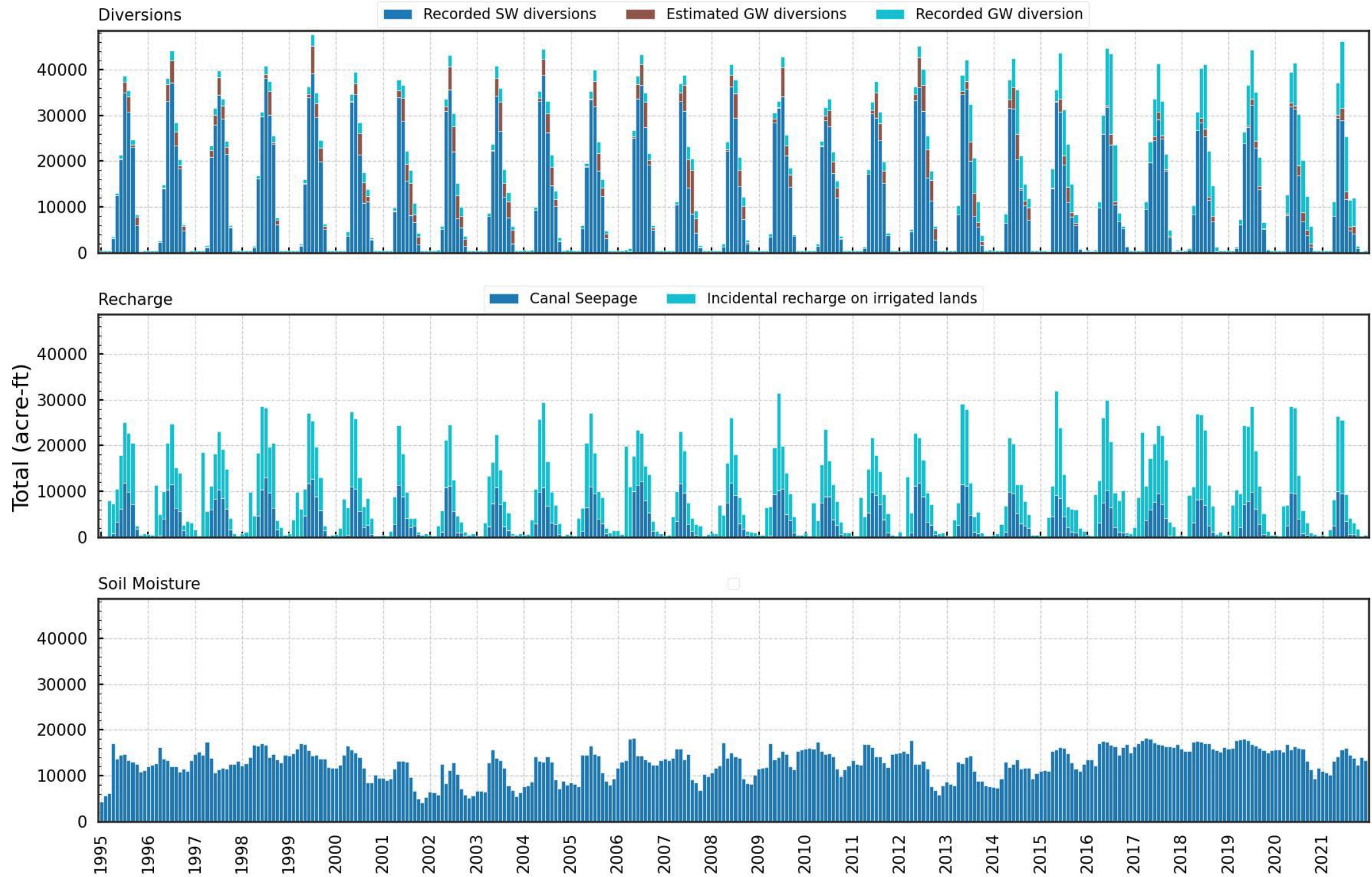
Irrigated & semi-irrigated acres by water source



Diversion and Flow Records

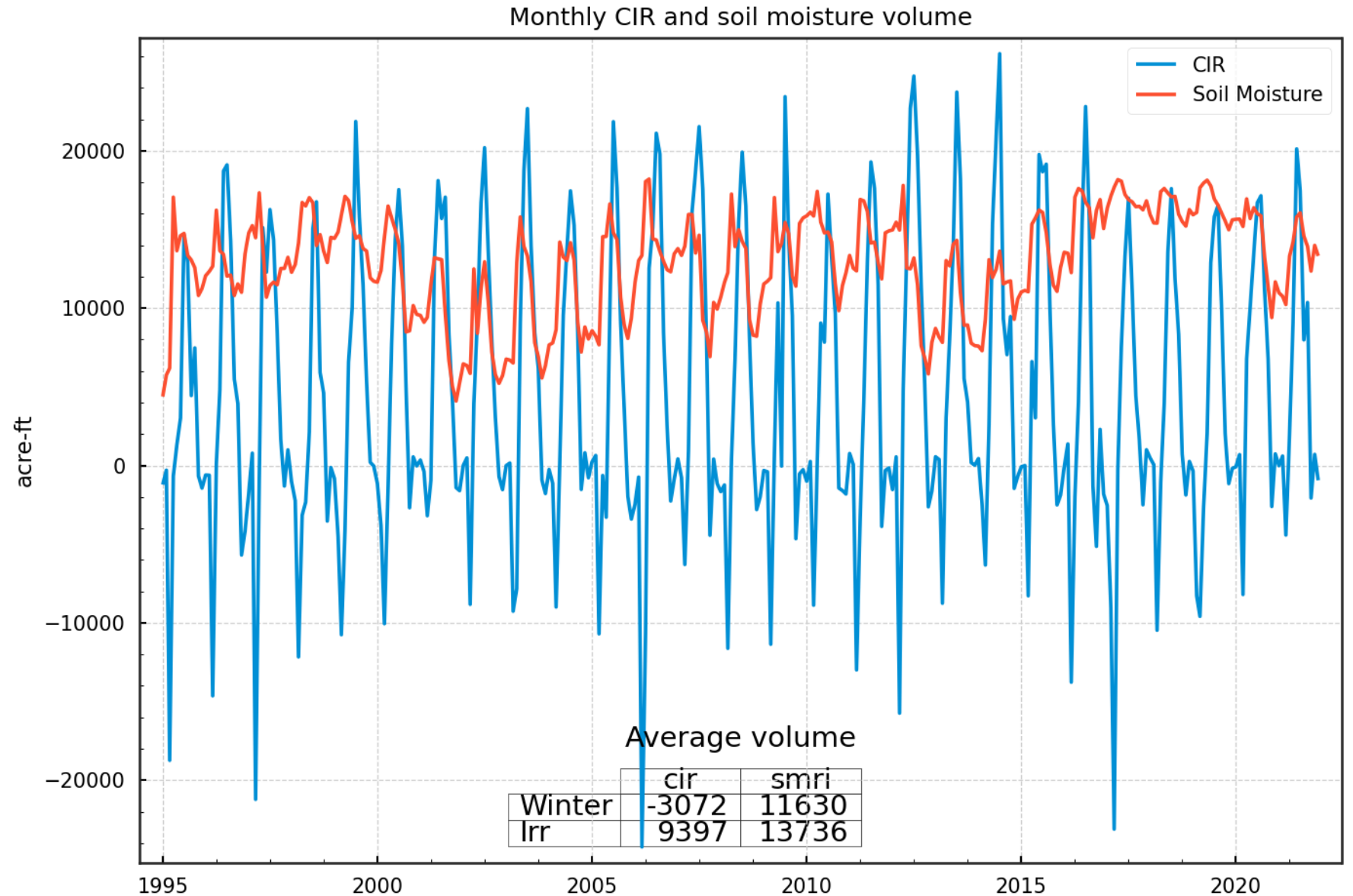
- Groundwater includes annual pumping values from WMIS starting in 2013
- Slight increase in miscellaneous seepage from Brockway Reports (Valley Club, Dry Lot, Seaman's)



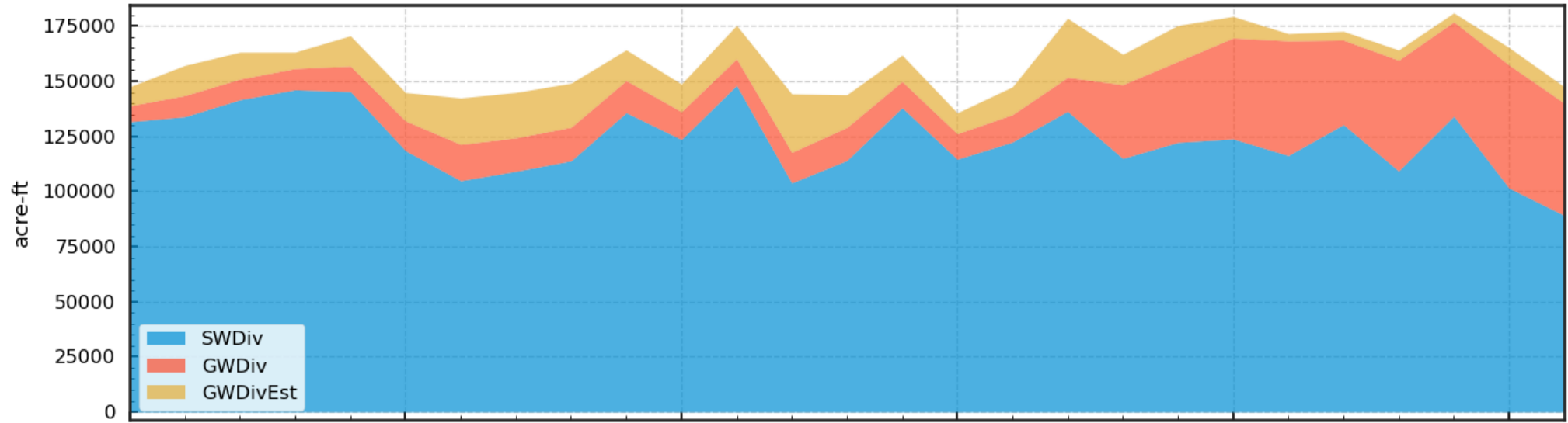


Soil Moisture

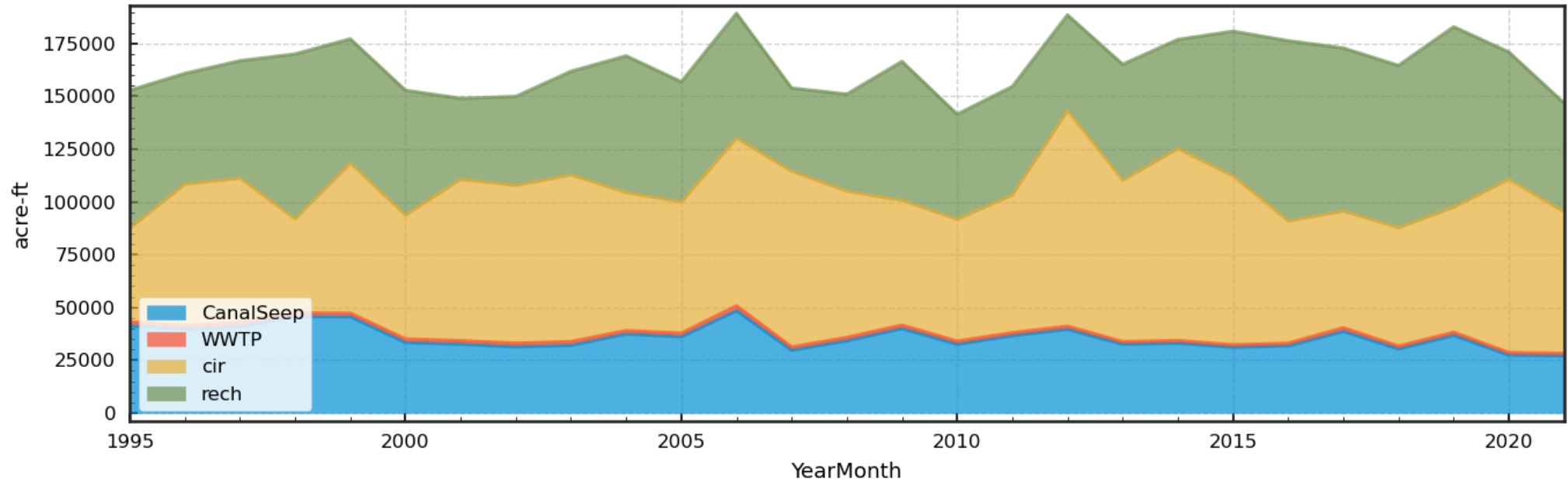
- Excess winter precip fills soil moisture
- Soil moisture meets most demand in early/late irrigation season.



Annual diversions (stacked)

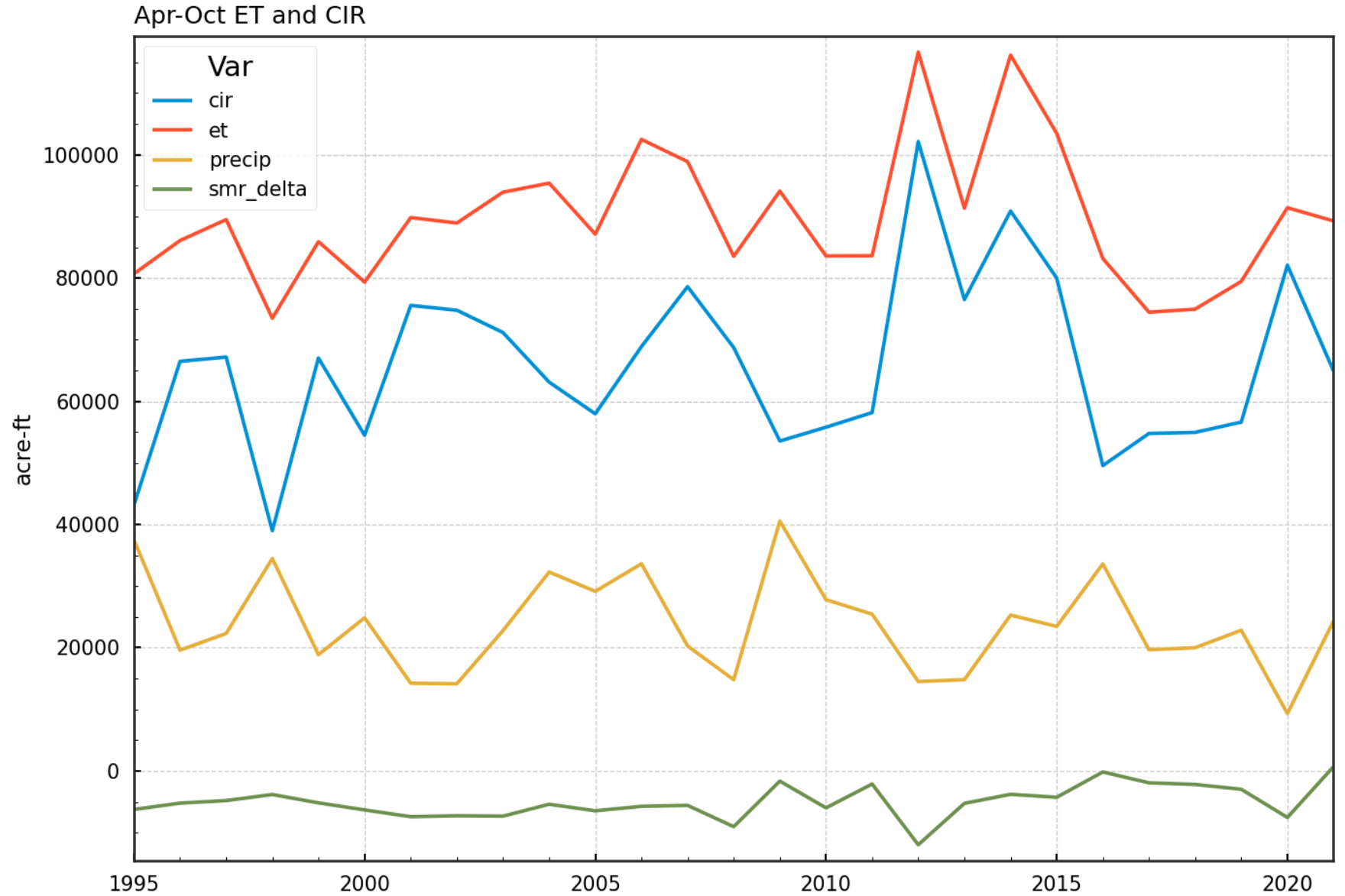


Fate of diversions (stacked)



Irrigation season averages

- ET
 - 89,500 acre-feet
- Precip
 - 23,700 acre-feet
- CIR
 - 65,800 acre-feet
- Soil Moisture Change
 - -5,000 acre-feet

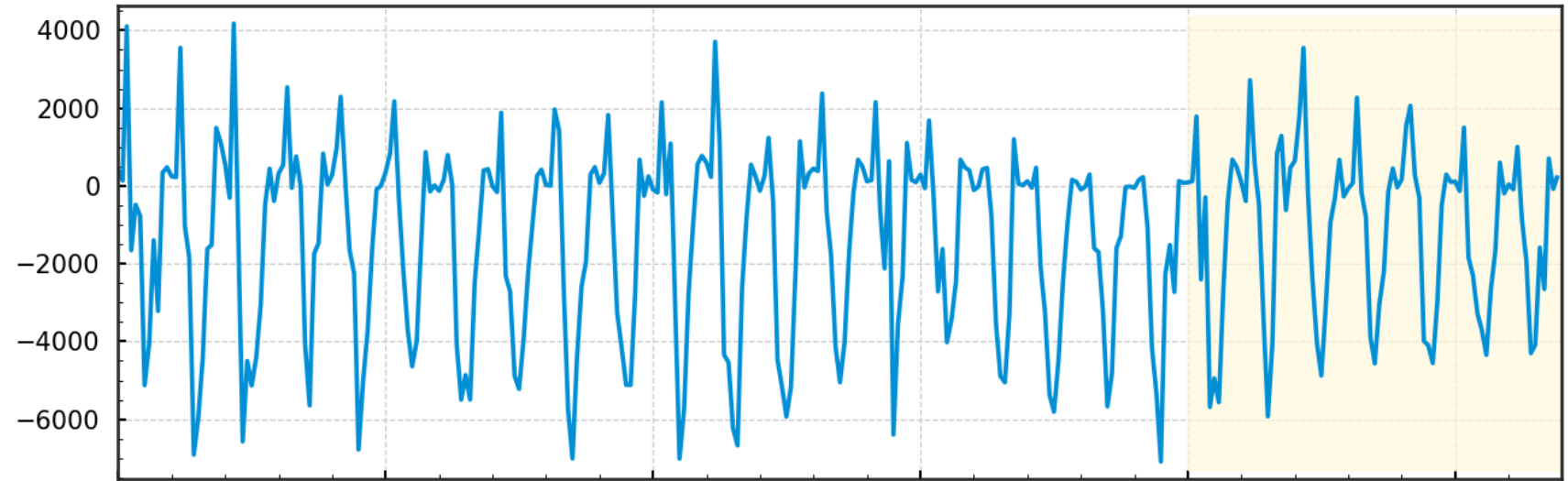


Non-irrigated recharge

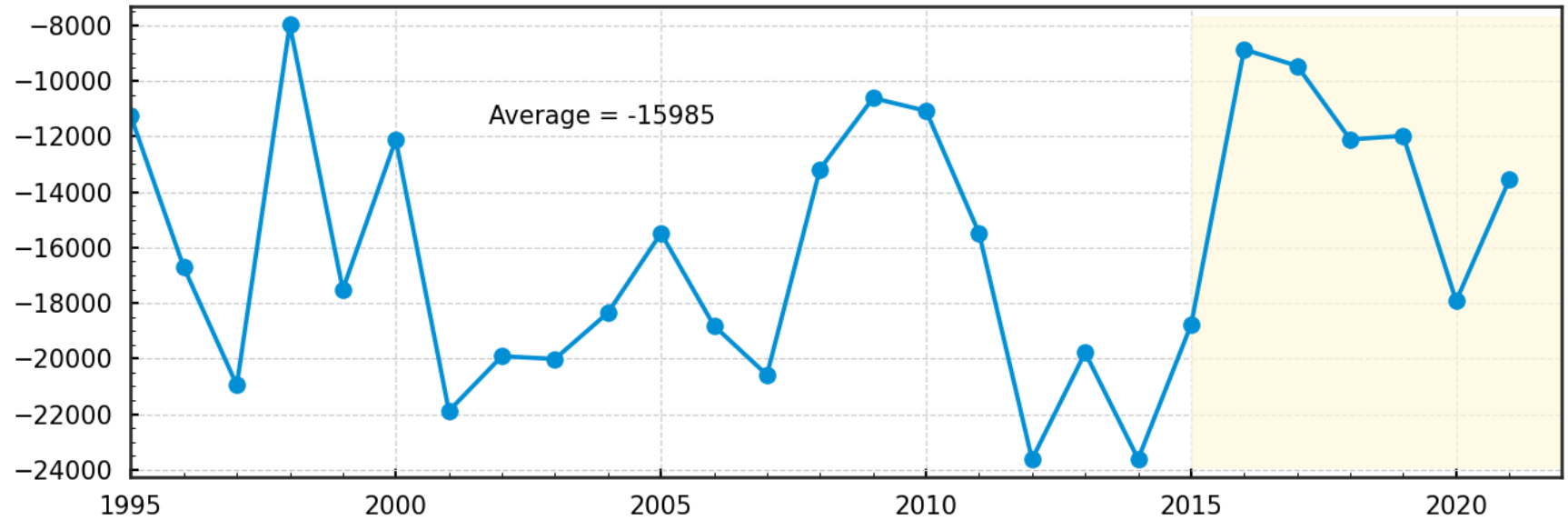
- Negative values are net aquifer discharge to wetlands and riparian consumptive use of groundwater

acre-ft

Monthly Non-Irrigated Recharge



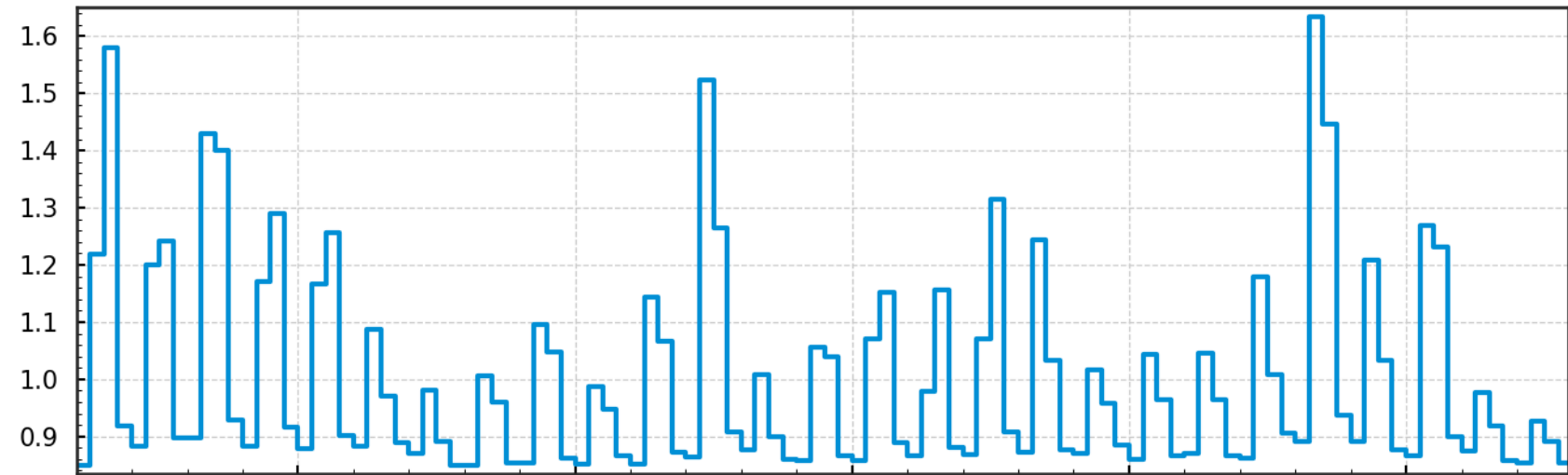
Annual Non-Irrigated Recharge



Tributary Underflow

- 90,600 af annually
- Scale factors
 - Low: 0.01 for Adams, Cold Springs, Greenhorn, Ohio, Slaughterhouse, Townshead
 - High: 69 for Upper BWR
- Moving average for seasonal indexing = 24 days
- Reduction factor = 5

Seasonal Multiplier WRV1.1



Tributary Underflow

