

Atascadero Basin GSP Development

Section 6 – Water Budgets



Paul Sorensen and Nate Page
GSI Water Solutions, Inc.
&
Mike Cornelius
GEI Consultants, Inc.

July 1, 2020

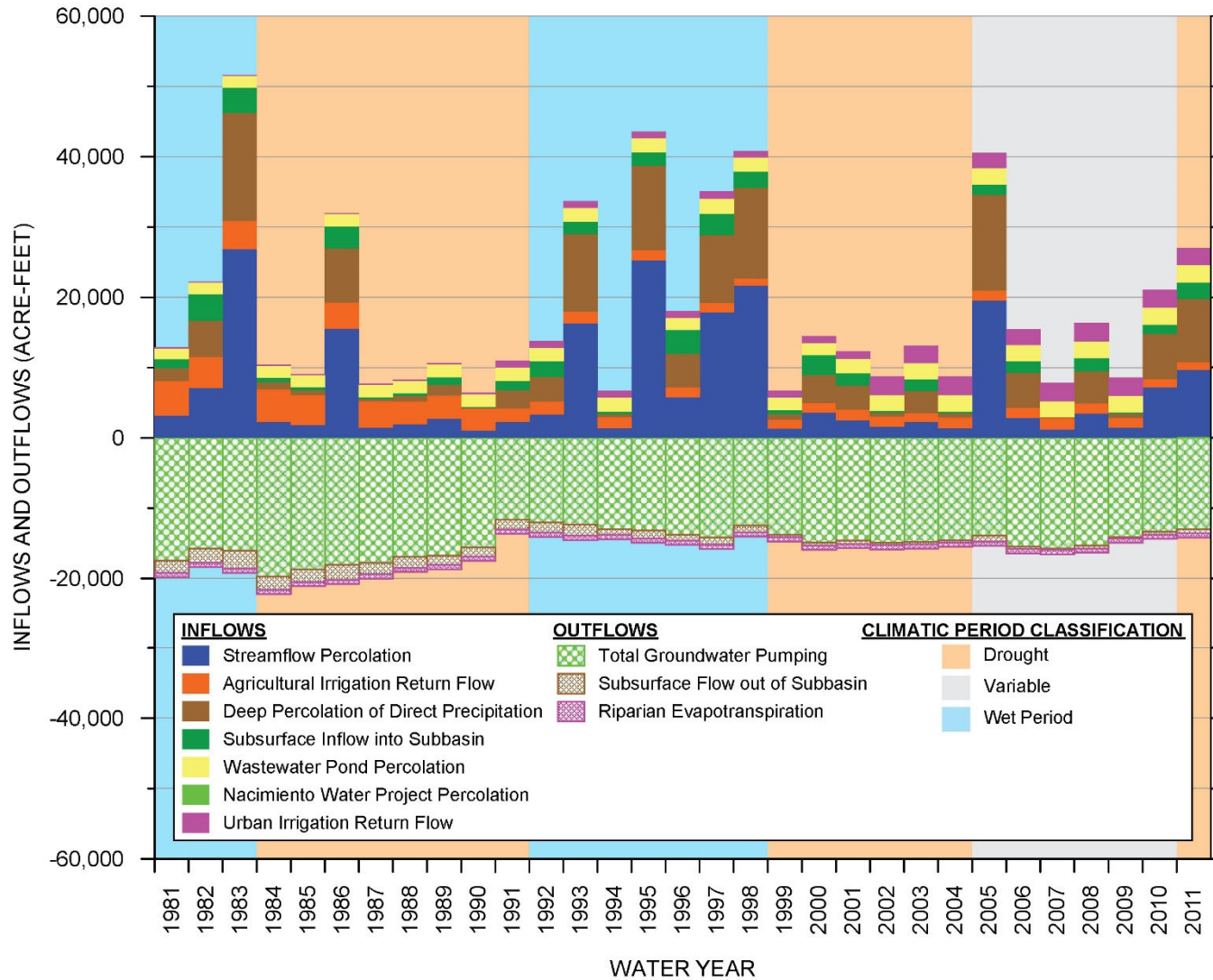


Section 6 – Water Budgets

- Surface and groundwater budgets (satisfies SGMA GSP Regulations §354.18)
- Water budgets include:
 - Inventory all inflows (recharge) and outflows (discharge)
 - Estimate groundwater storage surplus/deficit
 - Estimate basin yield
- Three water budgets:
 - Historical (1981-2011) – describes past conditions, very informative
 - Current (2012-2016) – relatively uninformative for planning purposes except as an indication of future drought impacts
 - Future (2020-2070) – most informative water budget, used for GSP planning purposes
- Water budget years identical to Paso Basin water budget years to maintain consistency with use of the Paso Basin model

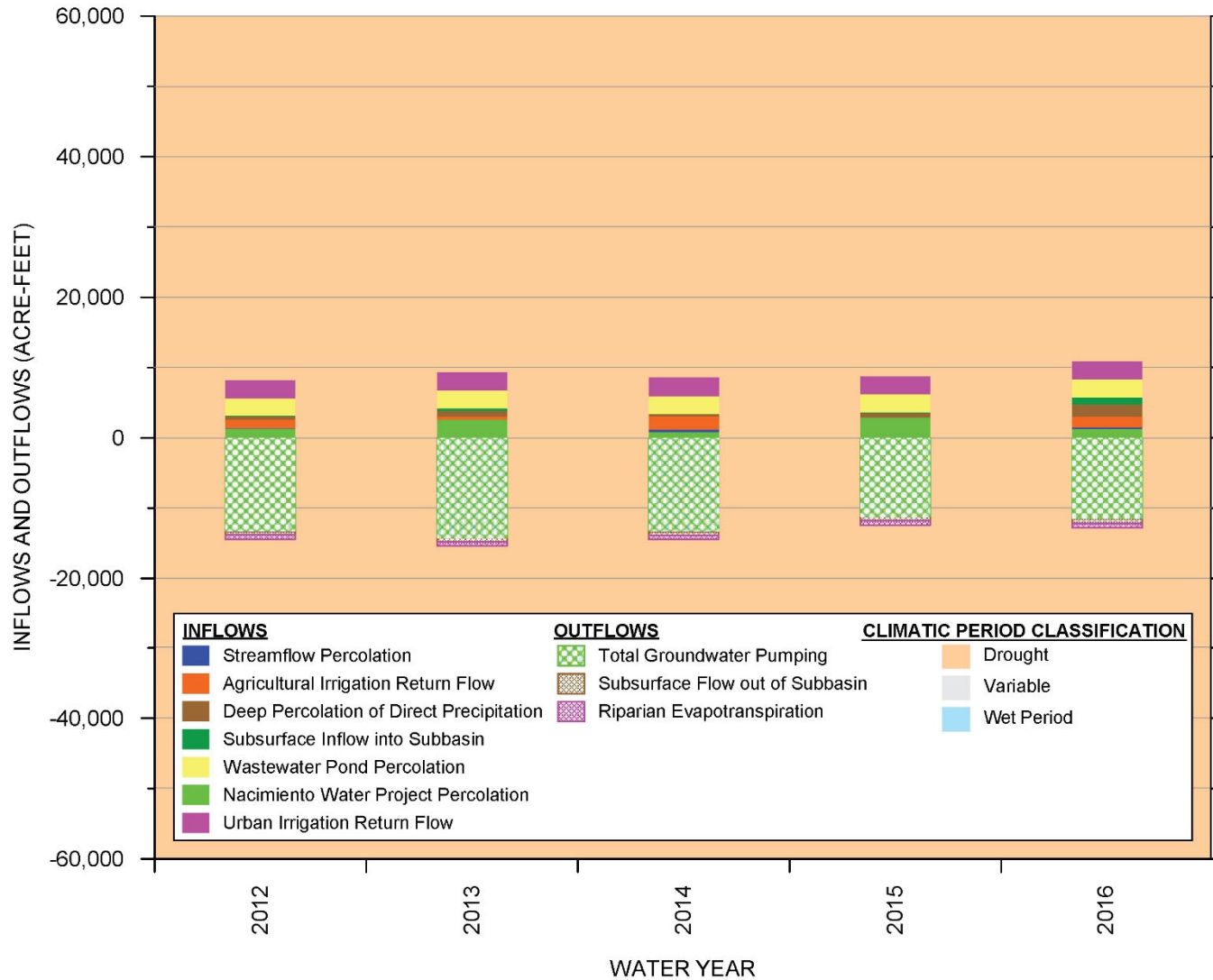
Historical Water Budget Summary

Atascadero Subbasin Historical Groundwater Water Budget (1981-2011)

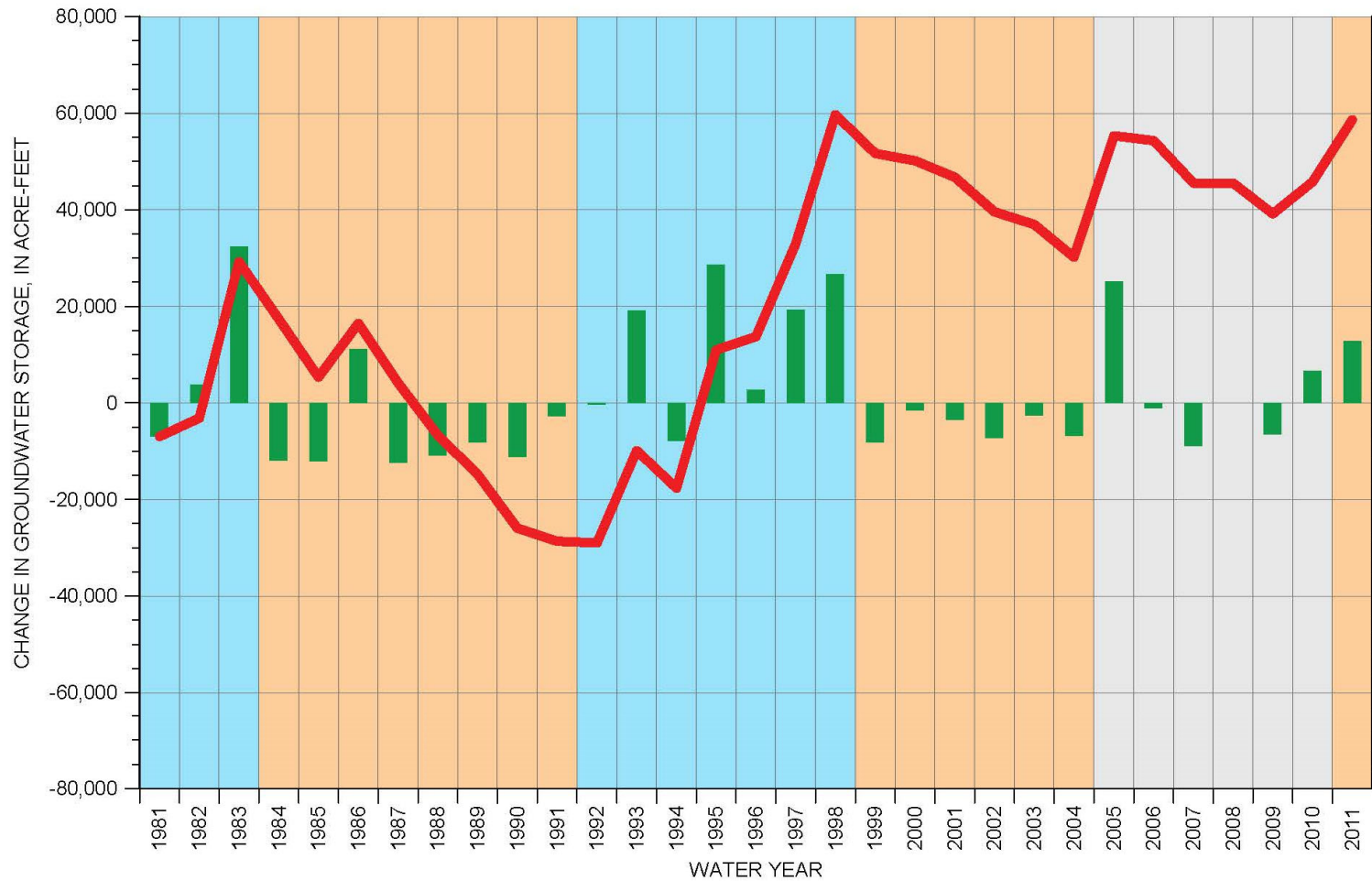


Current Water Budget Summary

Atascadero Subbasin Current Groundwater Water Budget (2012-2016)



Historical Cumulative Change in Storage



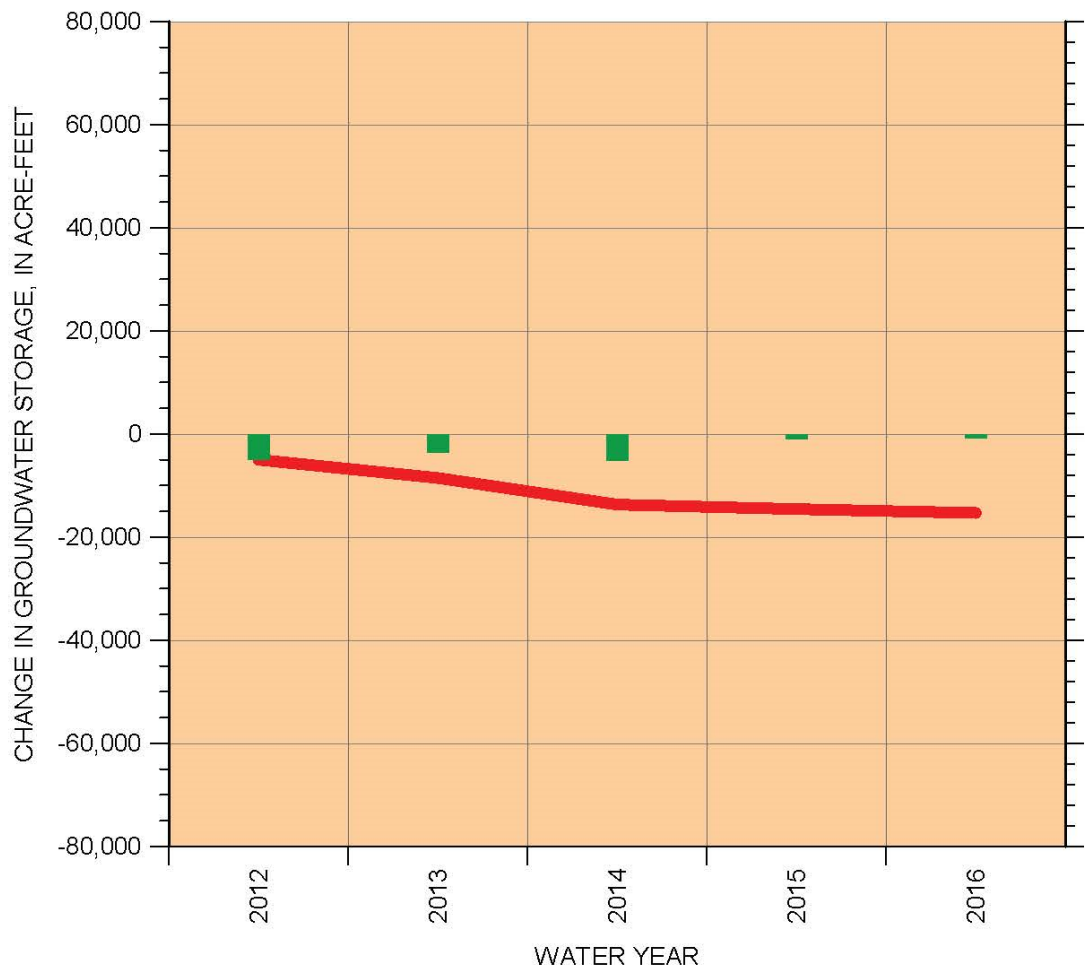
EXPLANATION

— Cumulative Change in Groundwater Storage
 █ Annual Change in Groundwater Storage

CLIMATE PERIOD CLASSIFICATION

Drought
 Variable
 Wet Period

Current Cumulative Change in Storage



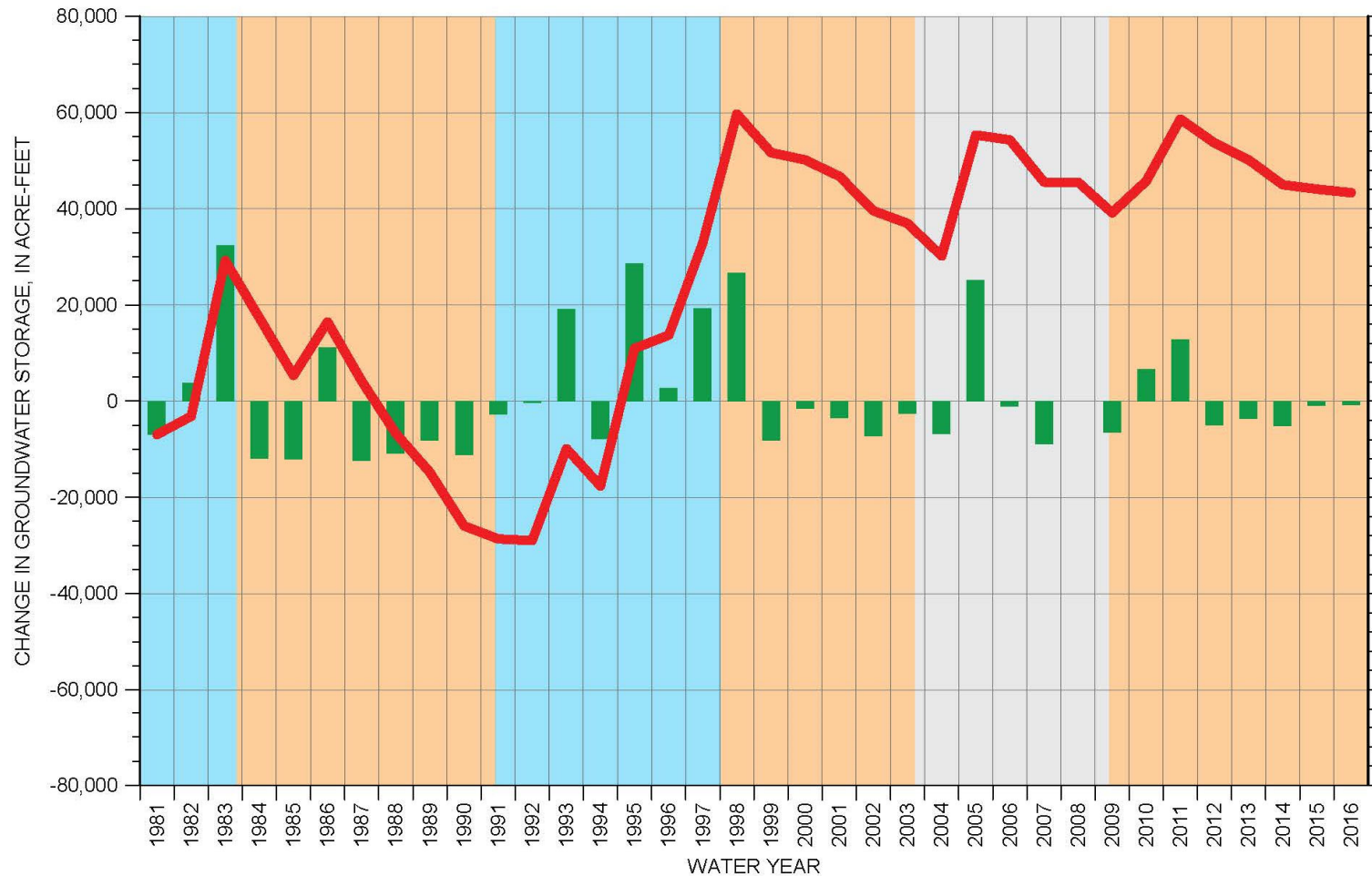
EXPLANATION

— Cumulative Change in Groundwater Storage ■ Annual Change in Groundwater Storage

CLIMATE PERIOD CLASSIFICATION

Dry Average/Alternating Wet

Cumulative Change in Storage Period of Record (1981-2016)



EXPLANATION

— Cumulative Change in Groundwater Storage
 ■ Annual Change in Groundwater Storage

CLIMATE PERIOD CLASSIFICATION

Drought
 Variable
 Wet Period

Summary of Water Budgets

- Estimated groundwater budgets

Groundwater Budget	Groundwater Storage	Basin Yield
Historical (1981-2011)	+ 1,900 AFY	16,900 AFY
Current (2012-2016)	- 3,100 AFY	9,600 AFY
Future (2020-2070)	TBD	TBD

- Key terms
 - Groundwater Storage (long-term GW outflow - GW inflow)
 - Basin Yield (total pumping + change in storage)

Questions?

