

WHEELER RIDGE-MARICOPA WATER STORAGE DISTRICT GSP CHAPTER UPDATE

KERN COUNTY SUBBASIN MANAGEMENT AREA

10 APRIL 2019



PRESENTATION OUTLINE

- GSP Chapter Progress Update
- Basin-wide Coordination Update
 - Sustainability Criteria
 - Water Budgets (Historical, Current, Projected)
- Draft Local Projected Water Budget Results
- Next Steps

KEY SGMA REQUIREMENTS – GROUNDWATER SUSTAINABILITY PLAN (GSP)

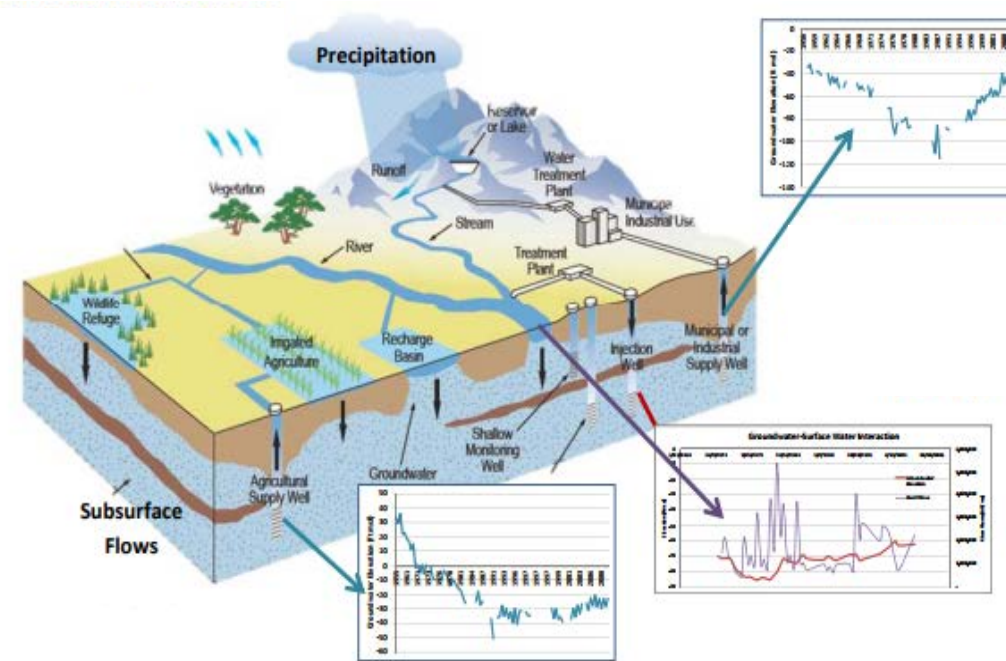
- ✓ Data Management System (DMS)
- ✓ Description of Plan Area
- ✓ Notice and Communication (SCEP)
- ✓ Hydrogeological Conceptual Model (HCM)
- ✓ Groundwater Conditions Assessment

In Progress Water Budget

- ✓ Sustainable Management Criteria (SMCs)

In Progress Monitoring Network

In Progress Projects & Management Actions (P&MAs)



* 23-CCR Sections 352.6 , 354.8-20;
www.water.ca.gov/groundwater/sgm/gsp.cfm

KGA GSP DEVELOPMENT SCHEDULE

Date	GSP Development Schedule
✓ Mar 22	Draft GSP Chapters Due
April 26	GEI/KGA to provide feedback
June 7	Revised GSP Chapters Due
July 12	Administrative Draft KGA GSP
Aug 30	Public Review Draft KGA GSP
Jan 24 2020	KGA GSP submitted to DWR in coordination with other Basin GSPs

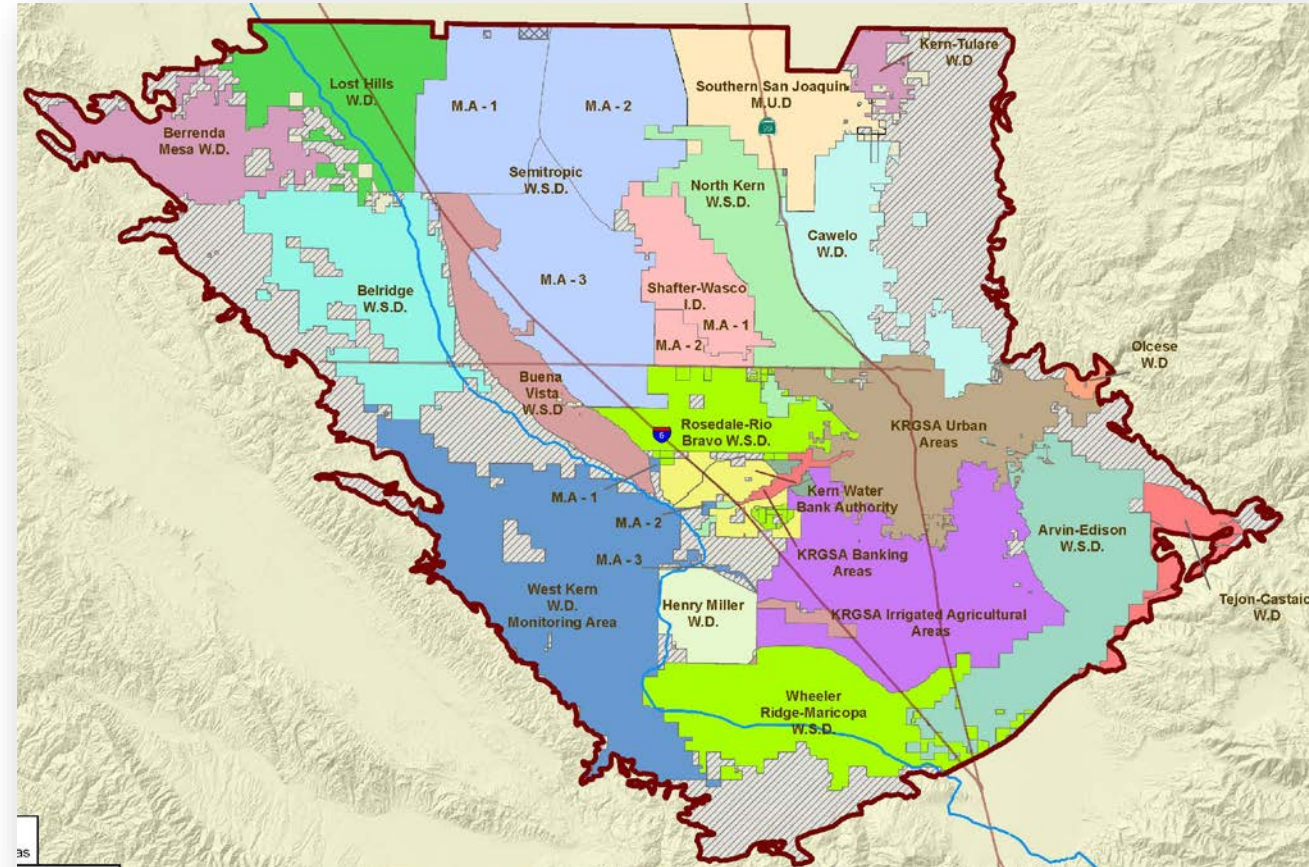
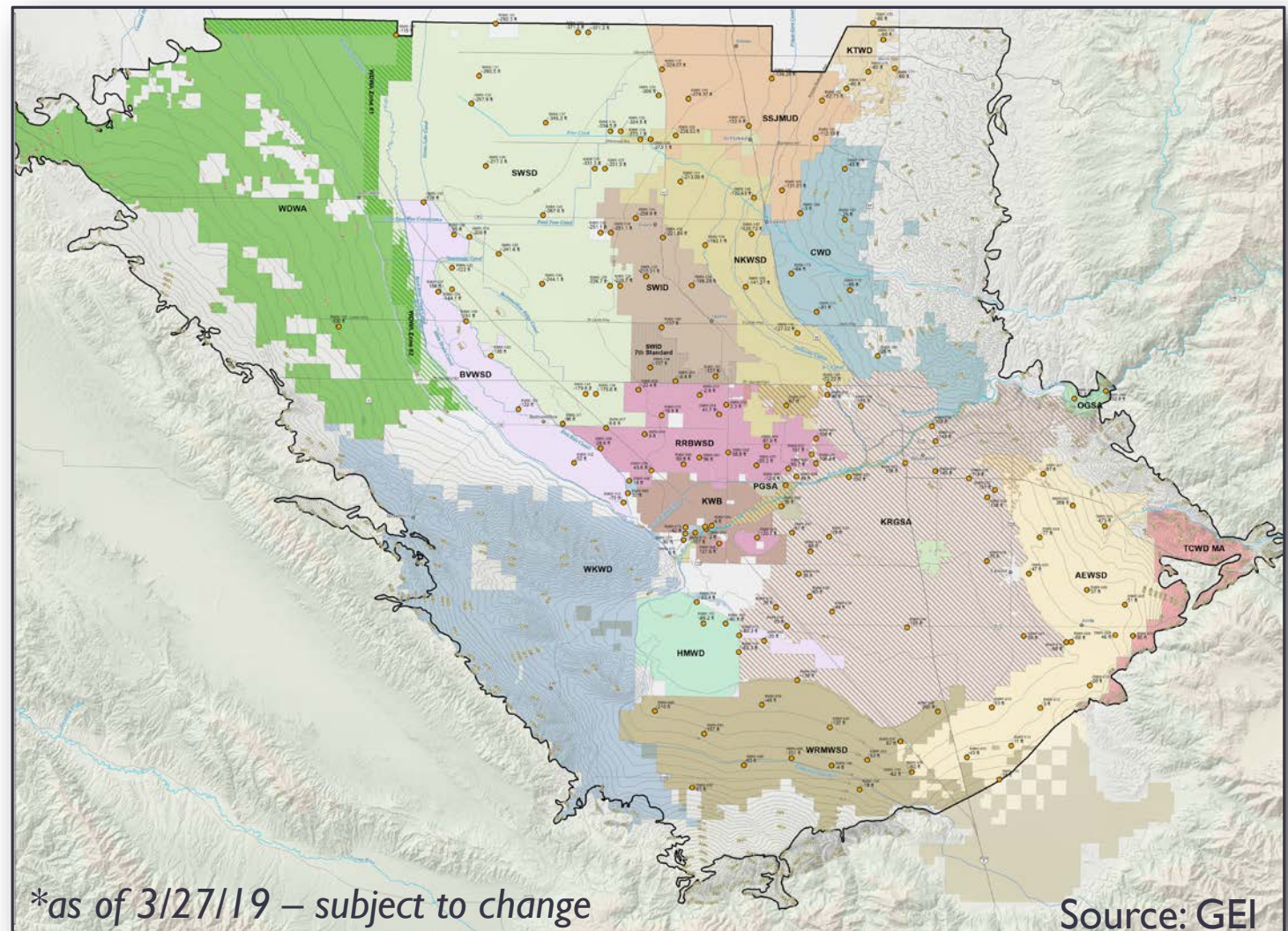


Image source: GEI



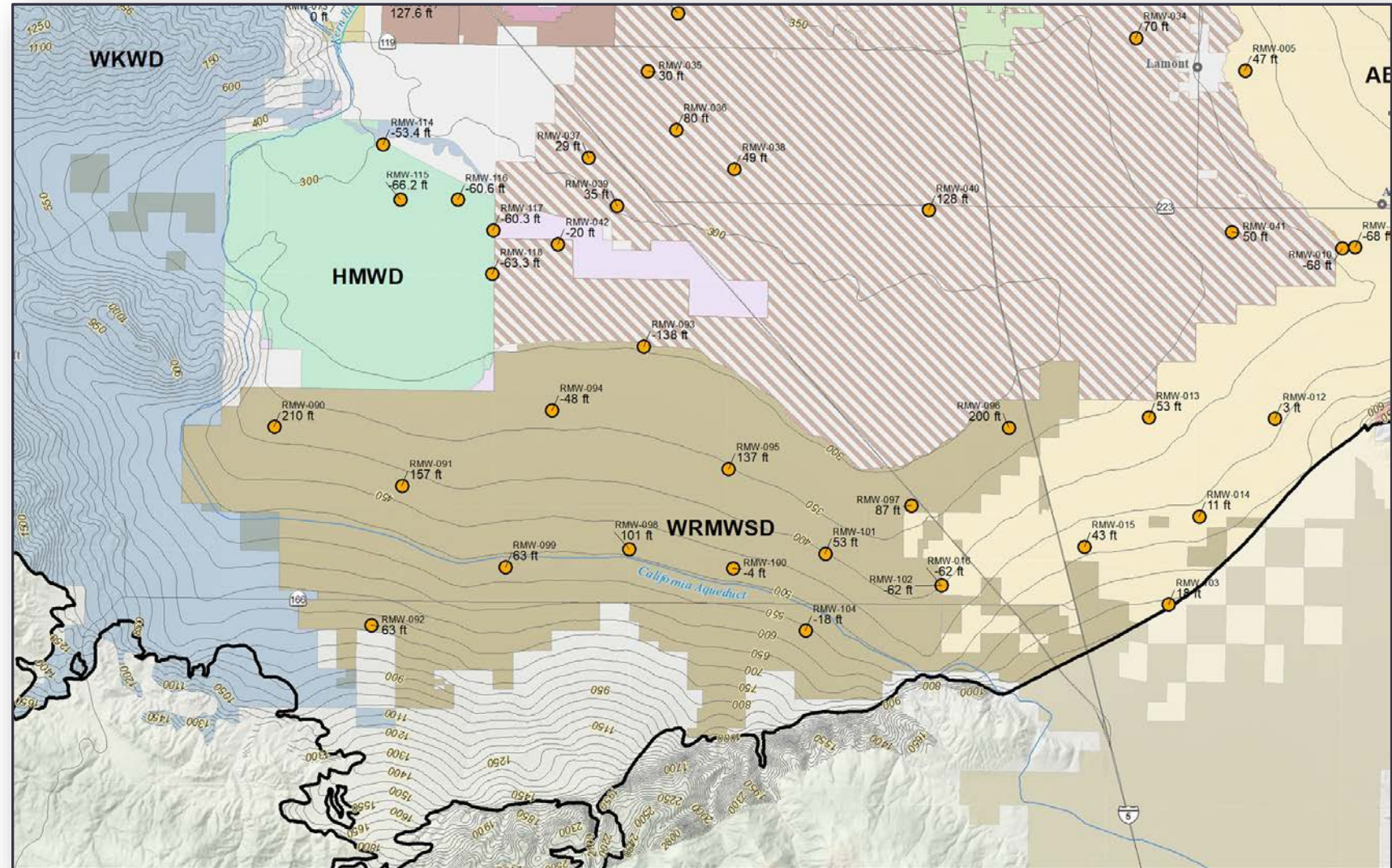
BASIN-LEVEL RECONCILIATION OF SUSTAINABLE MANAGEMENT CRITERIA (SMCS)

- GEI developed map of draft Basin-wide *water level Minimum Thresholds**



SOUTH OF KERN RIVER SMCs IN GENERAL AGREEMENT

- Reasonable agreement with bordering GSAs / Management Areas

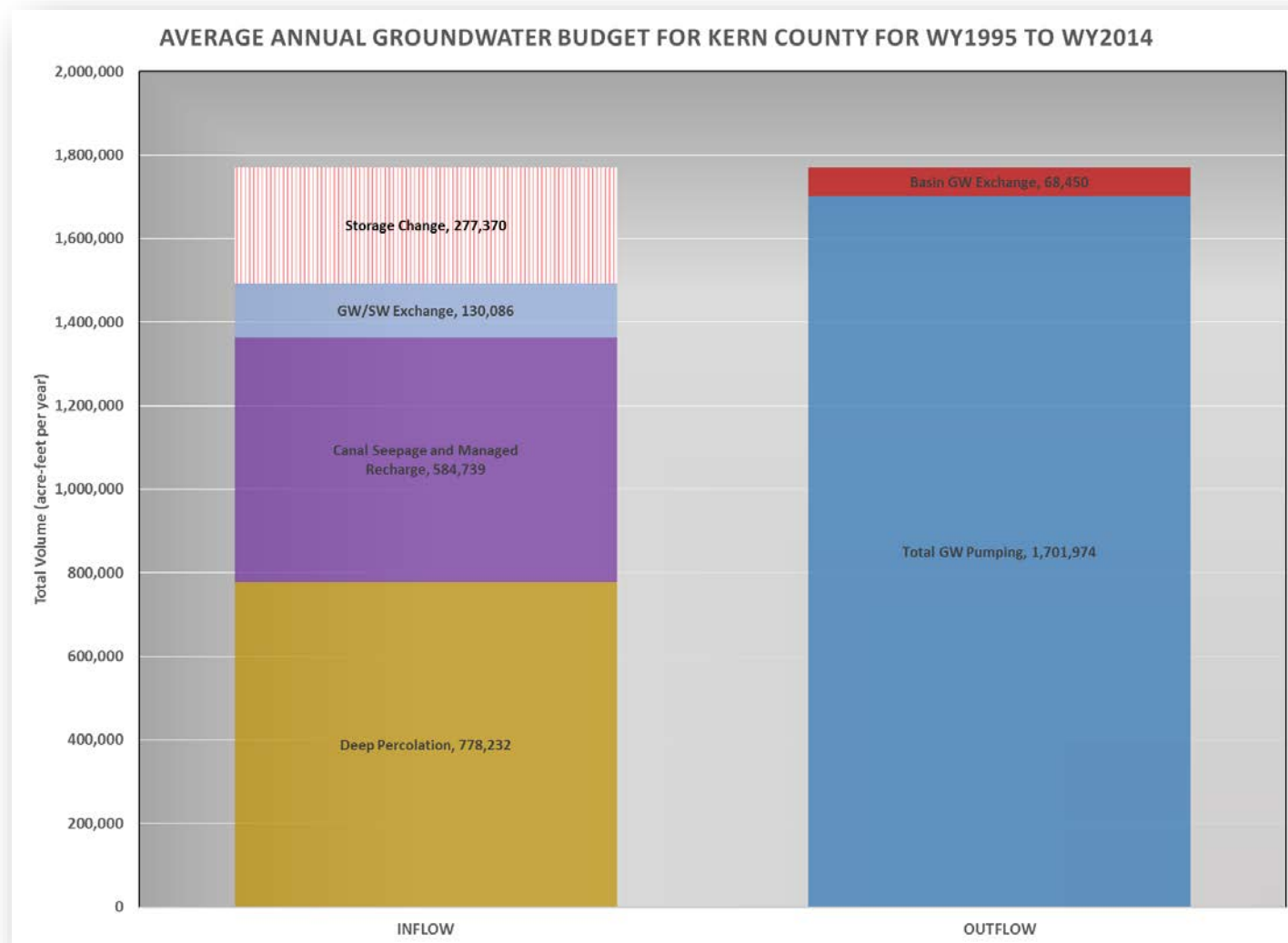


*as of 3/27/19 – subject to change



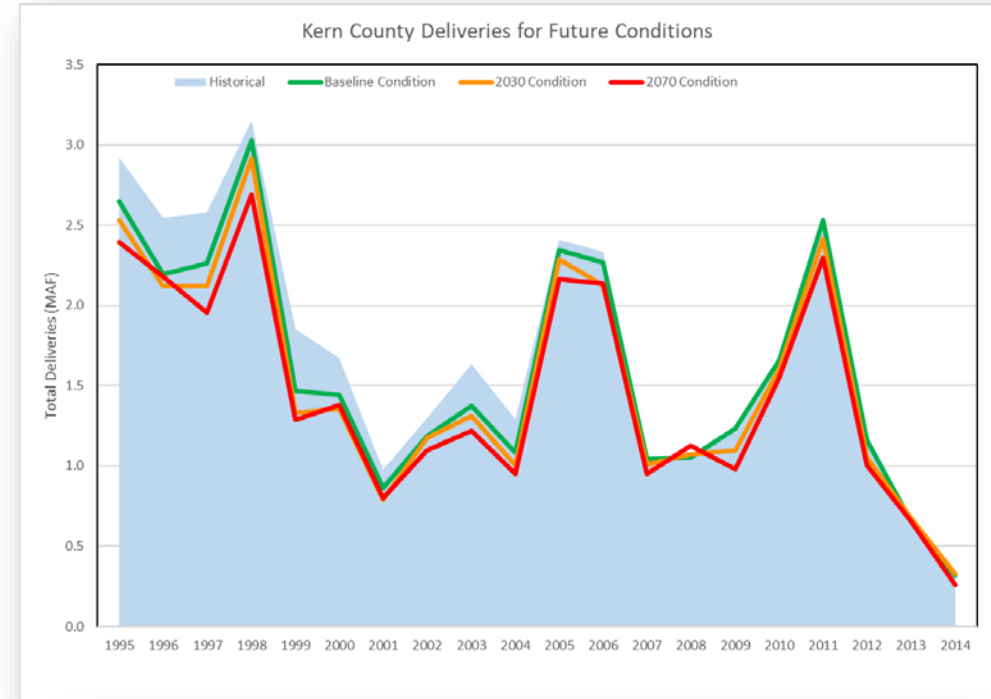
BASIN-SCALE WATER BUDGET UPDATE

- TODD released revised Basin-wide *historical & current water budget* results on 3/21/19
- Basin-wide historical change in GW storage confirmed at approximately **-280,000 AFY**



FUTURE WATER BUDGET SHOWS ADDITIONAL DEFECIT

- TODD presented an approach for development of **projected water budgets**
 - Using CalSim & Friant Water Authority studies to estimate future surface water supply availability
 - Projected water budget includes baseline (i.e., current), 2030 & 2070 DWR climate change scenarios
 - 2070 climate change scenario results in reduction of approx. **-300,000 AFY** of surface water imports to the Basin



Future Supplies vs Historical

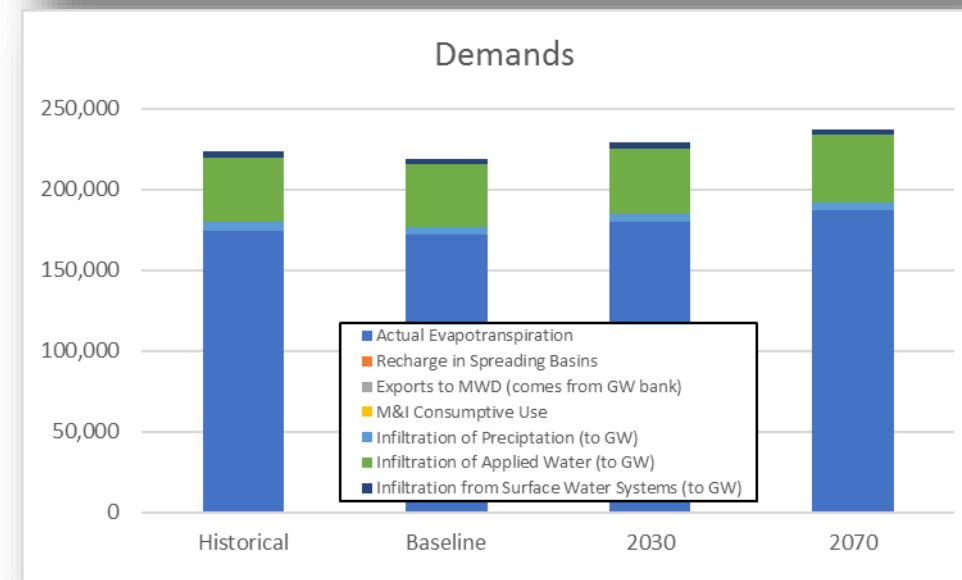
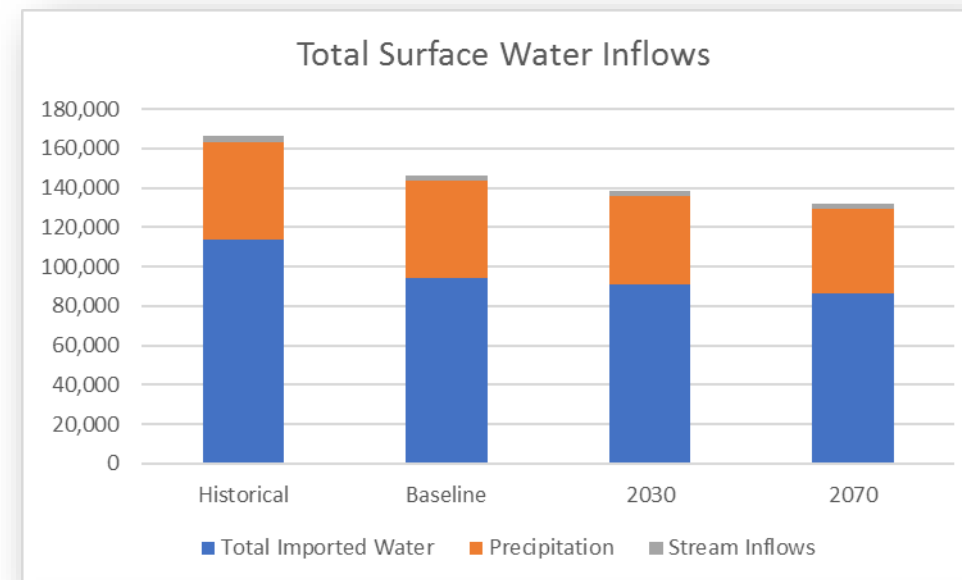
TAF/Yr	Kern River	SWP	CVP	Total
Historical	772	734	261	1,716
Baseline	772	608	261	1,590
2030	719	589	207	1,516
2070	718	560	176	1,454

	Kern River	SWP	CVP	Total
Baseline	100%	82.8%	100%	92.7%
2030	99.6%	80.3%	79.5%	88.3%
2070	99.4%	76.4%	67.6%	84.7%



DRAFT LOCAL PROJECTED WATER BUDGET RESULTS

- EKI developed a preliminary local projected water budget for the WRMWSD Kern Management Area
 - Used same set of assumptions on changes to surface water import availability, hydrology, and demands as in TODD model
 - Scaled major GW inflow/outflow components from WRMWSD historical water budget to calculate projected water deficit under **baseline (i.e. repeated), 2030, and 2070 climate change scenarios**

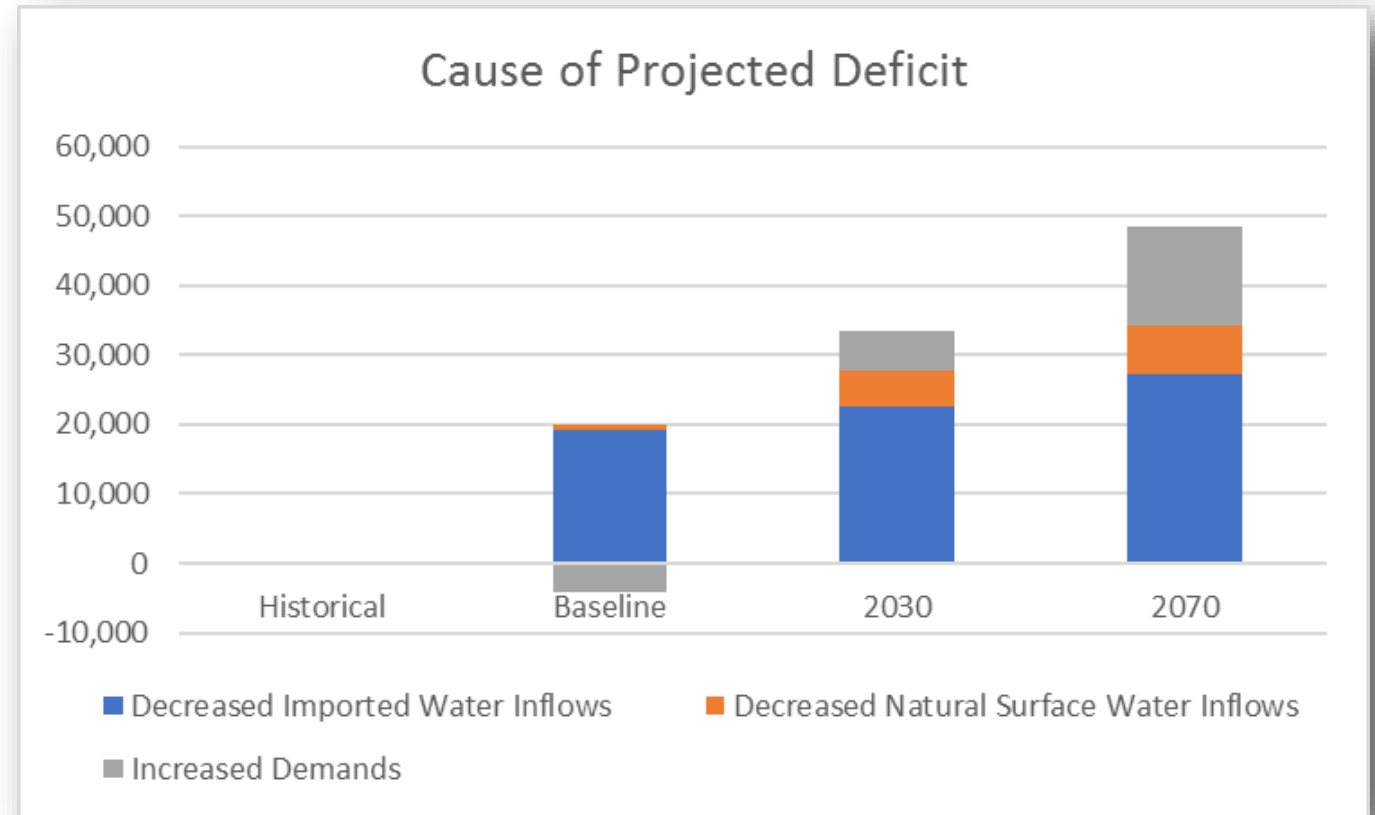


Units are acre-feet per year (AFY)



MAJOR CAUSES OF FUTURE DEFICITS

- ~56% from decreased surface water imports
- ~29% from increased ET demands
- ~14% from decreased natural inflows (i.e., precip)
- Projects & Management Actions must address projected future deficit



Units are acre-feet per year (AFY)

NEXT STEPS

- Host Stakeholder Workshop – *April / May?*
- Continue South of Kern River Coordination
- Continue Basin Level Coordination
- Continue GSP Development
 - Develop list of Projects & Management Actions to include in GSP chapter
 - Finalize Water Level, Water Quality, Land Subsidence Monitoring Networks
 - Revise GSP Chapter pending receipt of KGA comments (anticipated by end of April 2019)

