

Notice and Agenda of a Board Meeting of the Yucaipa Sustainable Groundwater Management Agency

Wednesday, April 22, 2020 at 10:00 a.m.
(909) 797-2489 | www.yucaipasgma.org

Due to the spread of COVID-19 and in accordance with the Governor's Executive Order N-29-20, this meeting will be conducted by teleconference only. There will be no location available to attend this meeting in person.

**This meeting is available by calling
(866) 899-4679 using passcode 798-578-861#**

**View the meeting online at
<https://global.gotomeeting.com/join/798578861>**

- I. **Call to Order**
- II. **Roll Call**
- III. **Public Comments** At this time, members of the public may address the representatives of the Yucaipa Groundwater Sustainability Agency on matters within its jurisdiction.
- IV. **Discussion Items**
 - A. Status Report on Activities Related to the Preparation of the Groundwater Sustainability Plan
 - Development of a Water Budget for the Yucaipa Region
 - Status Report on the USGS Groundwater Flow Model
 - B. Status Report on the Data Management System
 - C. Status Report on the Stream Monitoring Locations
 - D. Status Report on the Sustainable Groundwater Management Act Grant and Financial Status
 - E. Discussion Regarding the Scheduling of the First Public Meeting
- V. **Topics for Future Meetings**
 - Discussion regarding groundwater dependent ecosystems
 - Discussion regarding potential recharge projects to be included in the groundwater model
- VI. **Comments by Board of Directors**
- VII. **Announcements - Future Meetings**
 - A. Wednesday, May 27, 2020 at 10:00 am - Workshop - *Potential Teleconference*
 - B. Wednesday, June 24, 2020 at 10:00 am - Workshop - *Potential Teleconference*
 - C. Wednesday, July 22, 2020 at 10:00 am - **Board Meeting** - *Potential Teleconference*
 - D. Wednesday, August 26, 2020 at 10:00 am - Workshop
 - E. Wednesday, September 23, 2020 at 10:00 am - Workshop
 - F. Wednesday, October 28, 2020 at 10:00 am - **Board Meeting**
 - G. Wednesday, January 27, 2021 at 10:00 am - **Board Meeting**
- VIII. **Adjournment**

Roll Call - Board of Directors

	Present	Primary Representative	Present	Alternative Representative
Purveyors				
South Mesa Water Company		David Armstrong		George Jorritsma
South Mountain Water Company		Bob Martin		Rolland Moore
Western Heights Water Company		Mark Iverson		Tim Green
Yucaipa Valley Water District		Joseph Zoba		Jennifer Ares
Municipals				
City of Redlands		Cecilia Griego		Kevin Watson
City of Yucaipa		Ray Casey		Fermin Preciado
Regionals				
San Bernardino Valley MWD		Bob Tincher		Matt Howard
San Gorgonio Pass Water Agency		Jeff Davis		Leonard Stephenson
* Quorum of the Board of Directors requires a total of five Purveyor, Municipal, Regional Members				
Stakeholders				
County of Riverside		Steve Horn		Jeff Johnson
County of San Bernardino		Bob Page		- -
City of Calimesa		Lori Askew		Bonnie Johnson

Future Dates and Milestones

The dates provided below are subject to change.

Public Presentation of the Goals and Objectives of the Groundwater Sustainability Plan - Meeting Number 1

Distribution of the Administrative Draft of the Yucaipa SGMA Groundwater Sustainability Plan

Monday, July 20, 2020

Release of the Draft Yucaipa SGMA Groundwater Sustainability Plan for Public Comment

Monday, January 18, 2021

Final Groundwater Sustainability Plan Submitted to the Department of Water Resources for Review and Approval

Monday, May 24, 2021

An aerial photograph of a city, likely Yucaipa, California, showing a large stadium in the foreground and a dense urban area in the background. The text is overlaid on this image.

Yucaipa SGMA

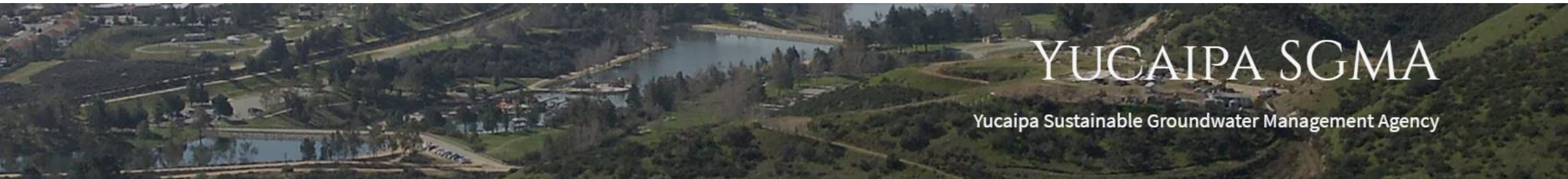
Groundwater Sustainability Plan (GSP)

Development

Yucaipa GSA Board Meeting
April 22, 2020

Presentation Outline

- Project Road Map
 - First Public Meeting?
- Update on Preliminary Water Budget Analysis
- Update on USGS Numerical Model
 - Action: provide feedback on USGS assumptions
- Update on Stream Monitoring Locations
- Update on Data Management System
- Update on Grant and Financial Status



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GSP Road Map

Start GSP

Data Collection, Review Models

Start: Nov 2018

Basin Area + Setting

Analyze Data, 3D Conceptual Model, Historical and Current Groundwater Conditions

Basin Understanding

Monitoring Protocols, Model Uncertainty, Identify Data Gaps

Defining Sustainability

Current Balance and Future Projections – Do We Need More Supply to Achieve Sustainability?

Public Outreach & Engagement Plan

May 2019

Feb. 2019

Nov. 2019

Dec. 2019

Evaluate Achieving Sustainability

Monitoring Network, Identify Management Actions and Projects

Prepare Public Draft GSP

GSA Review Draft GSP

Jan. 2021

Nov. 2020

Aug. 2020

Feb. 2020

Jan. 2020

Admin Draft GSP
Dec. 2020

1st Public Meeting
Nov. 18, 2020

Sustainable Yield
Sep. 2020

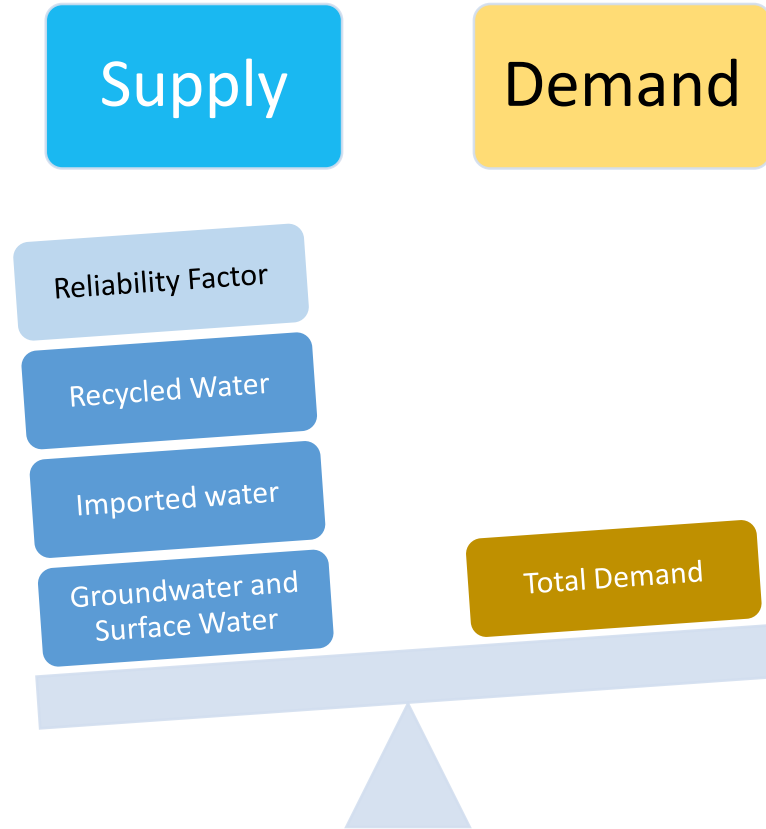
Public Draft GSP
2nd Public Meeting
April 18, 2021

GSP to DWR
May 24, 2021

GSP Deadline
January 31, 2022

 = Milestone

GSP GOAL - Sustainability



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GSP Requirements under SGMA

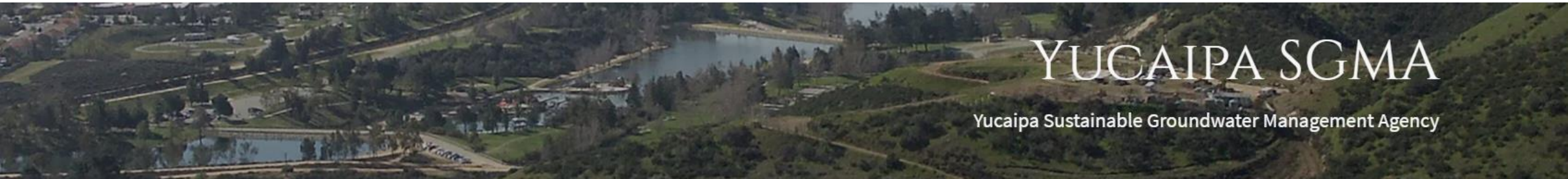
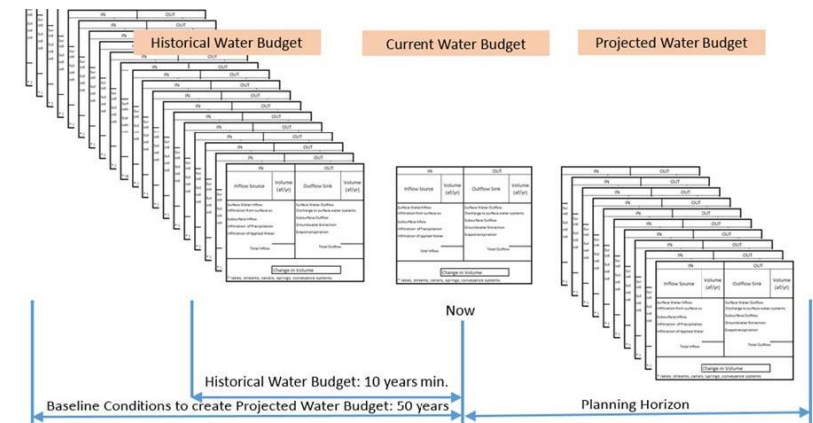
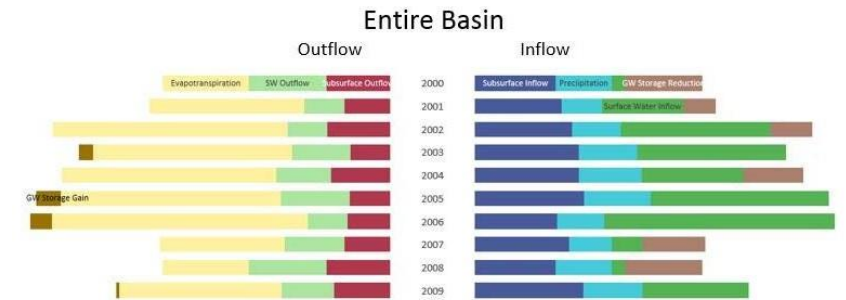
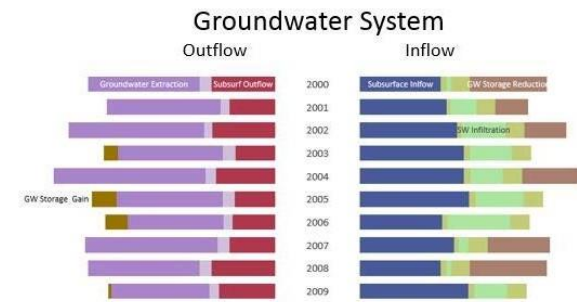
- Show that Basin is Sustainable

- Water Budget

- Water Year Type
 - Past, Present and Future
 - Evaluate Future with Projected Demands + Climate Change
 - Inflows vs. Outflows = Δ in storage
 - Water supply portfolio to meet demands
 - Withdrawal of water for the long-term without causing undesirable results

- SGMA Sustainability Indicators:

- ✓ Water levels
 - ✓ Storage
 - ✓ Groundwater dependent ecosystems
 - ✓ Subsidence
 - ✓ Water quality
 - ✓ Seawater intrusion

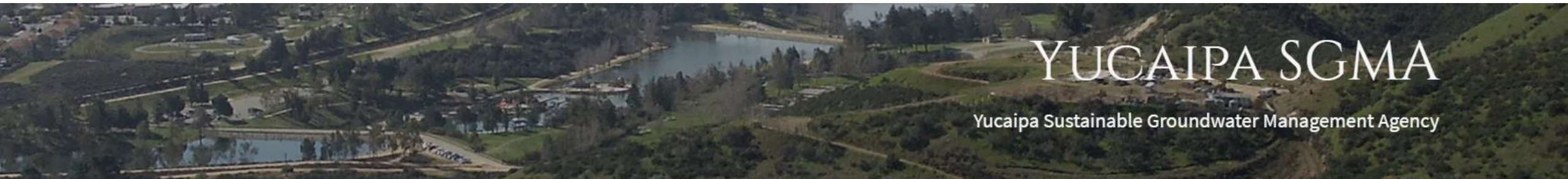


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Groundwater in Storage Calculations

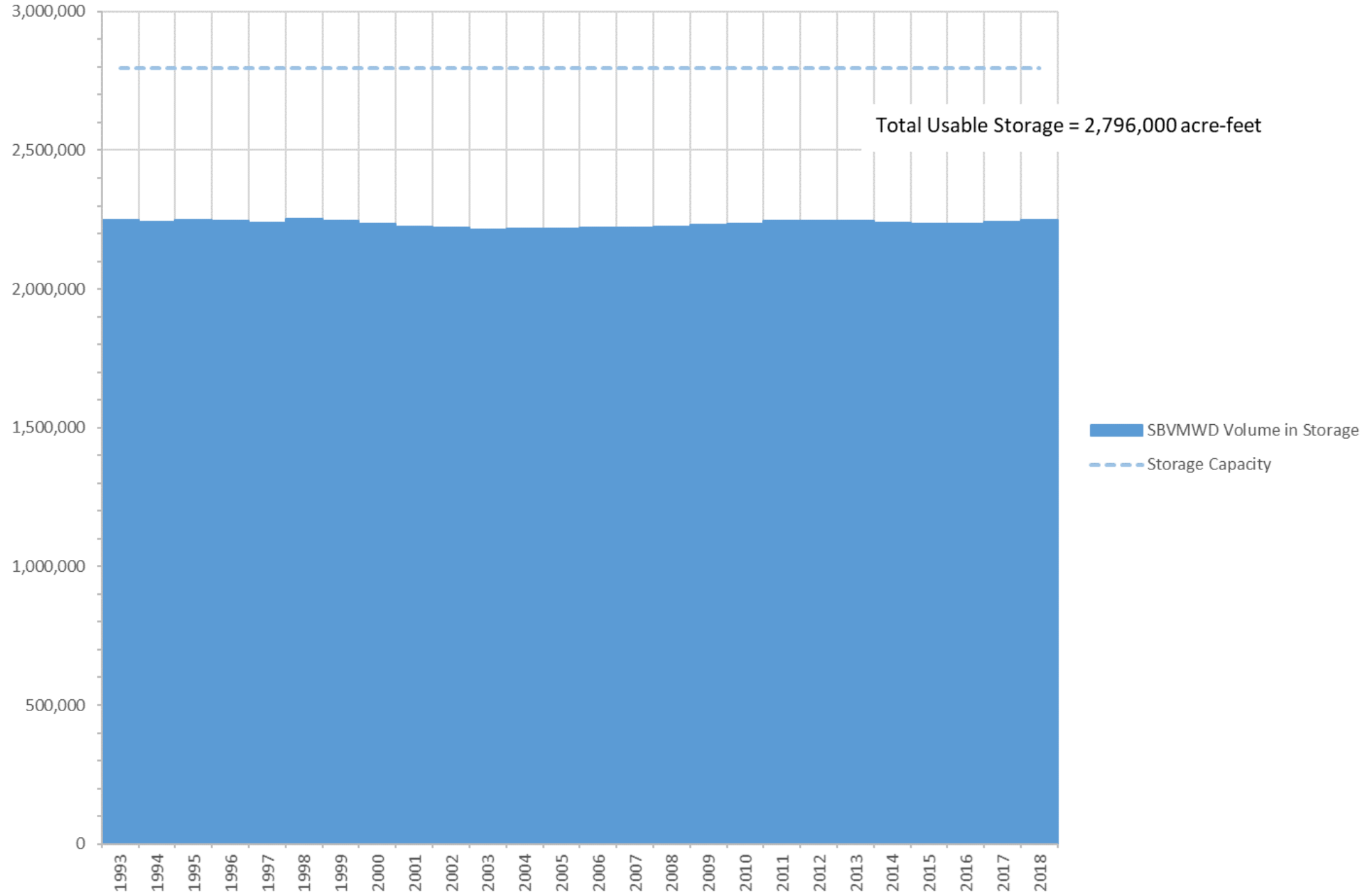
- SBVMWD annual estimates of volume in storage
 - Based on water level measurements
- Water Budget Analyses
 - USGS numerical model of Yucaipa Basin
 - Geoscience integrated hydrologic model for San Bernardino Valley
 - Dudek preliminary spreadsheet analysis of Yucaipa Basin
 - Subbasins/Management Areas



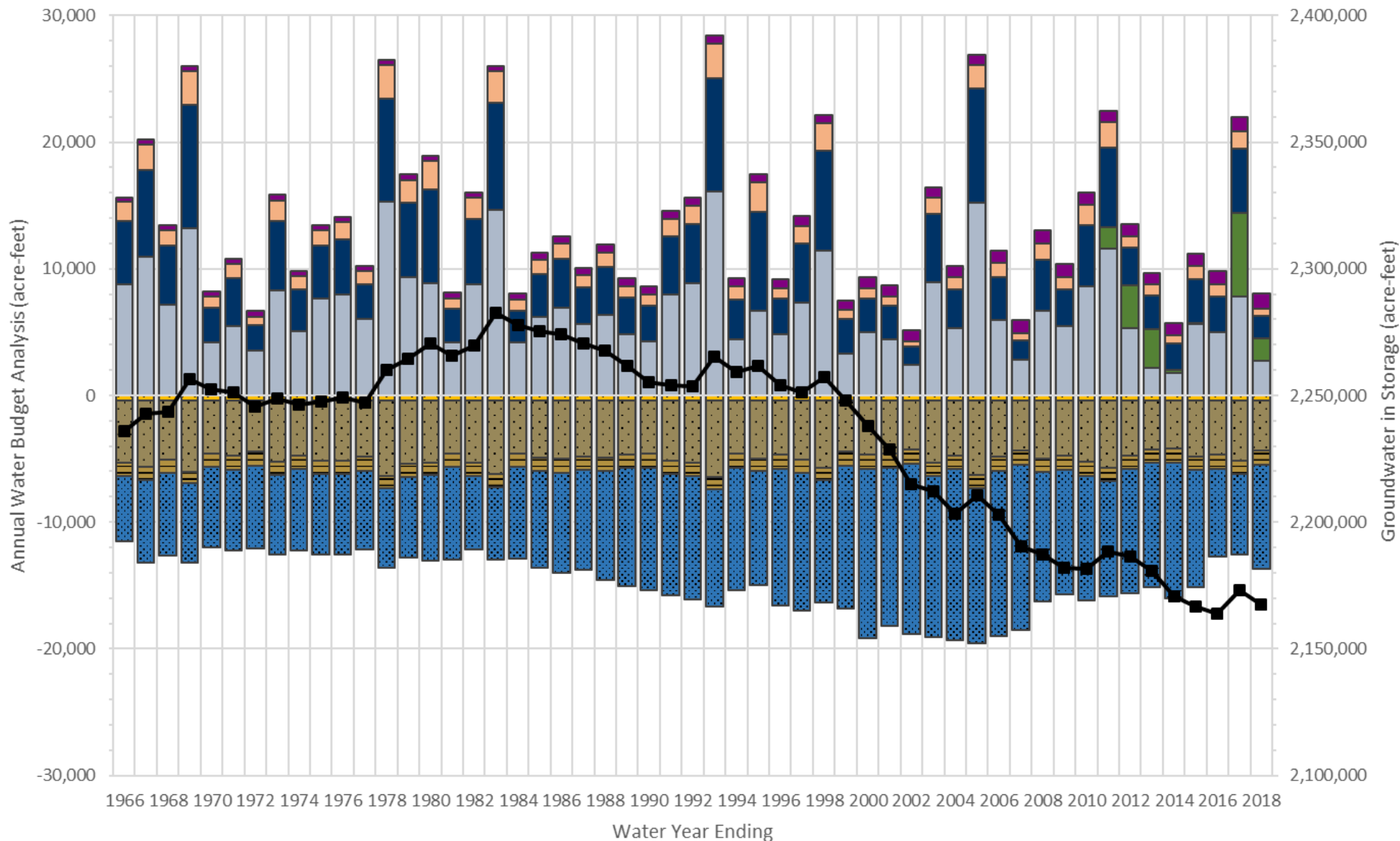
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Yucaipa Basin Storage (in acre-feet)

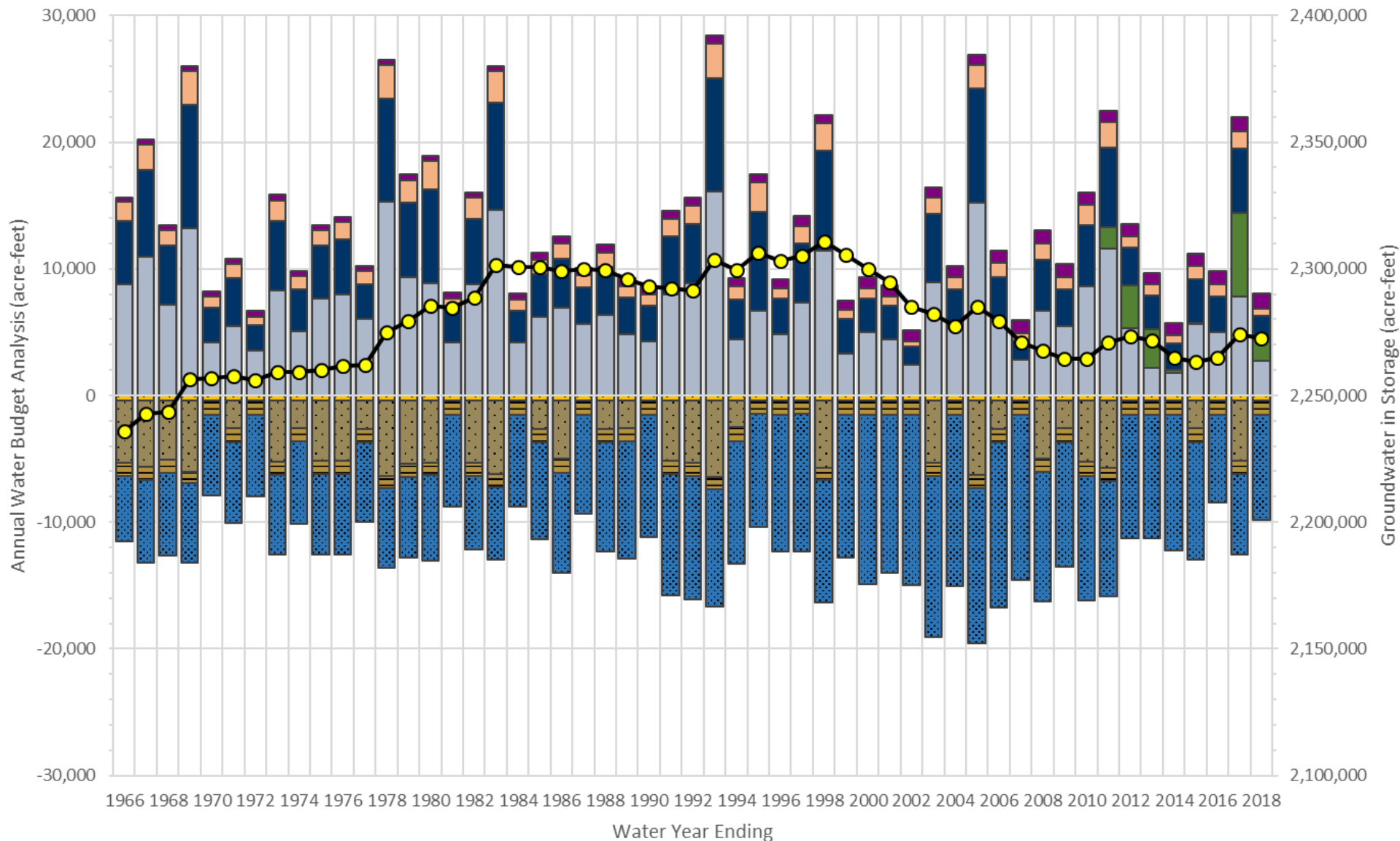


Dudek Preliminary Water Budget Analysis - Yucaipa Basin



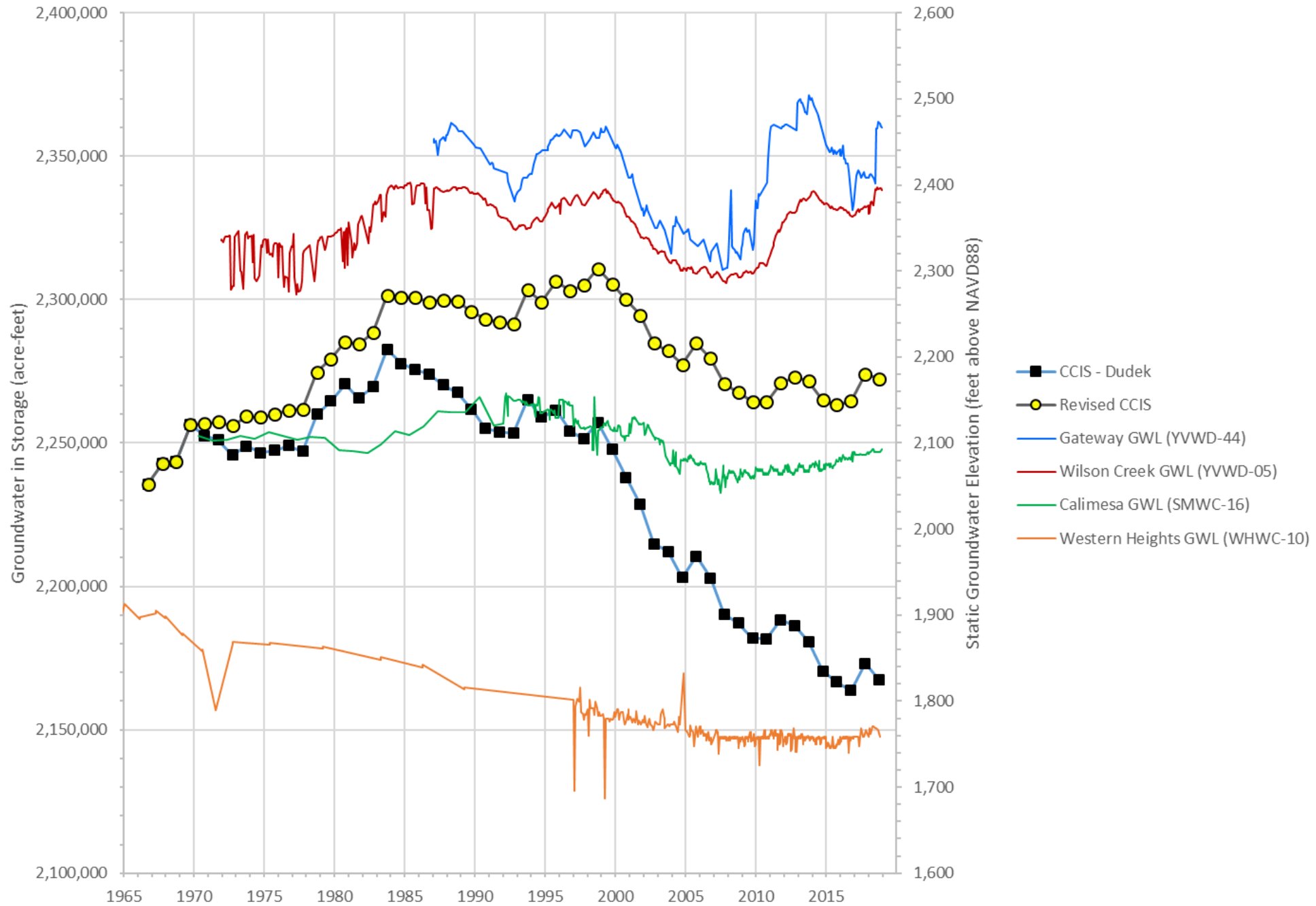
- Streambed Percolation*
- Mountain front Recharge
- Areal Recharge via Precip
- Return Flows
- Underflow to SBBA
- GW Discharge to Streams
- ET
- Cumulative Change in Storage
- Recharge Ponds
- GW Extractions

Dudek Preliminary Water Budget Analysis - Yucaipa Basin

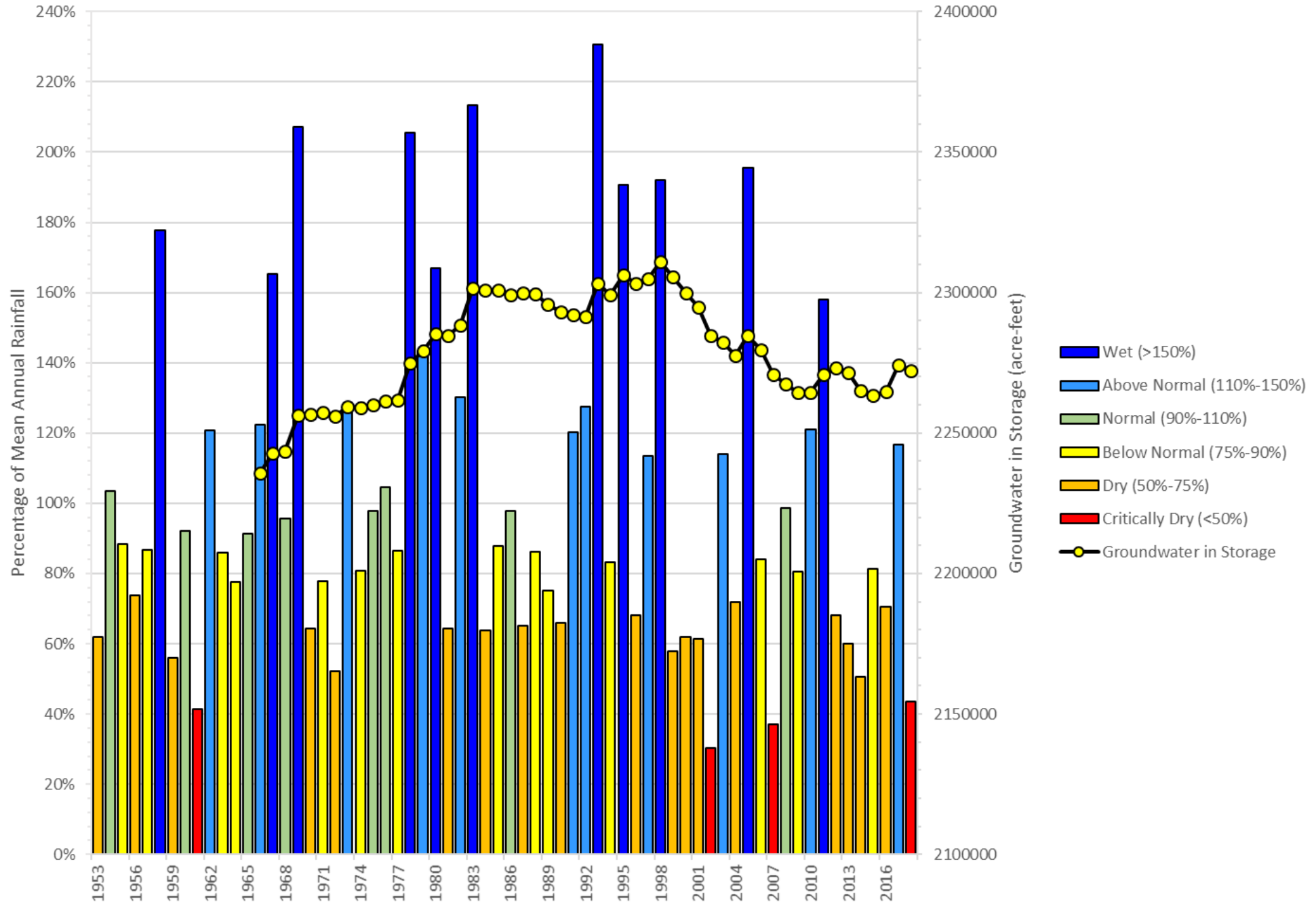


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- Cumulative Change in Storage

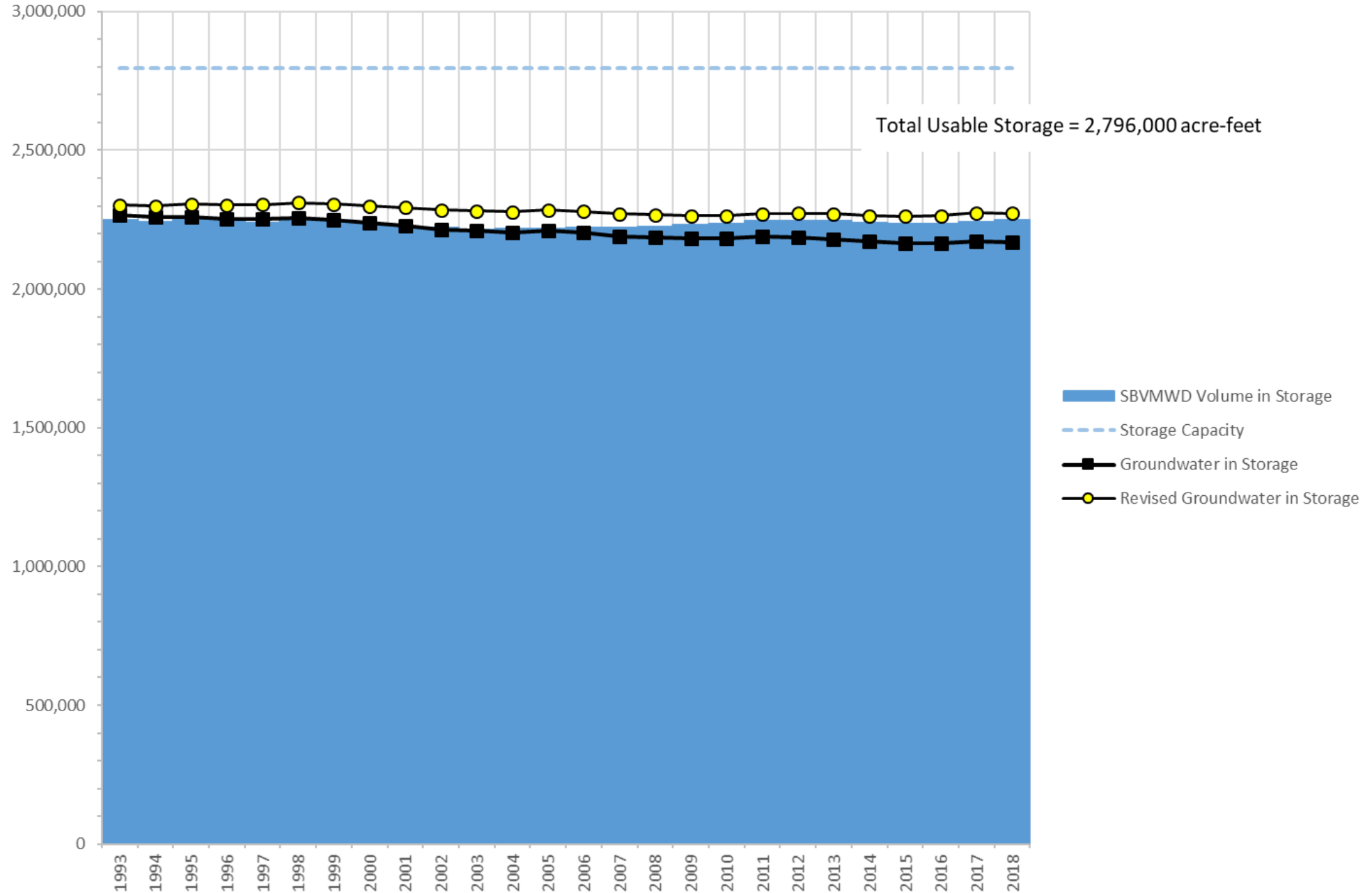
Groundwater in Storage in the Yucaipa Basin vs Groundwater Elevations



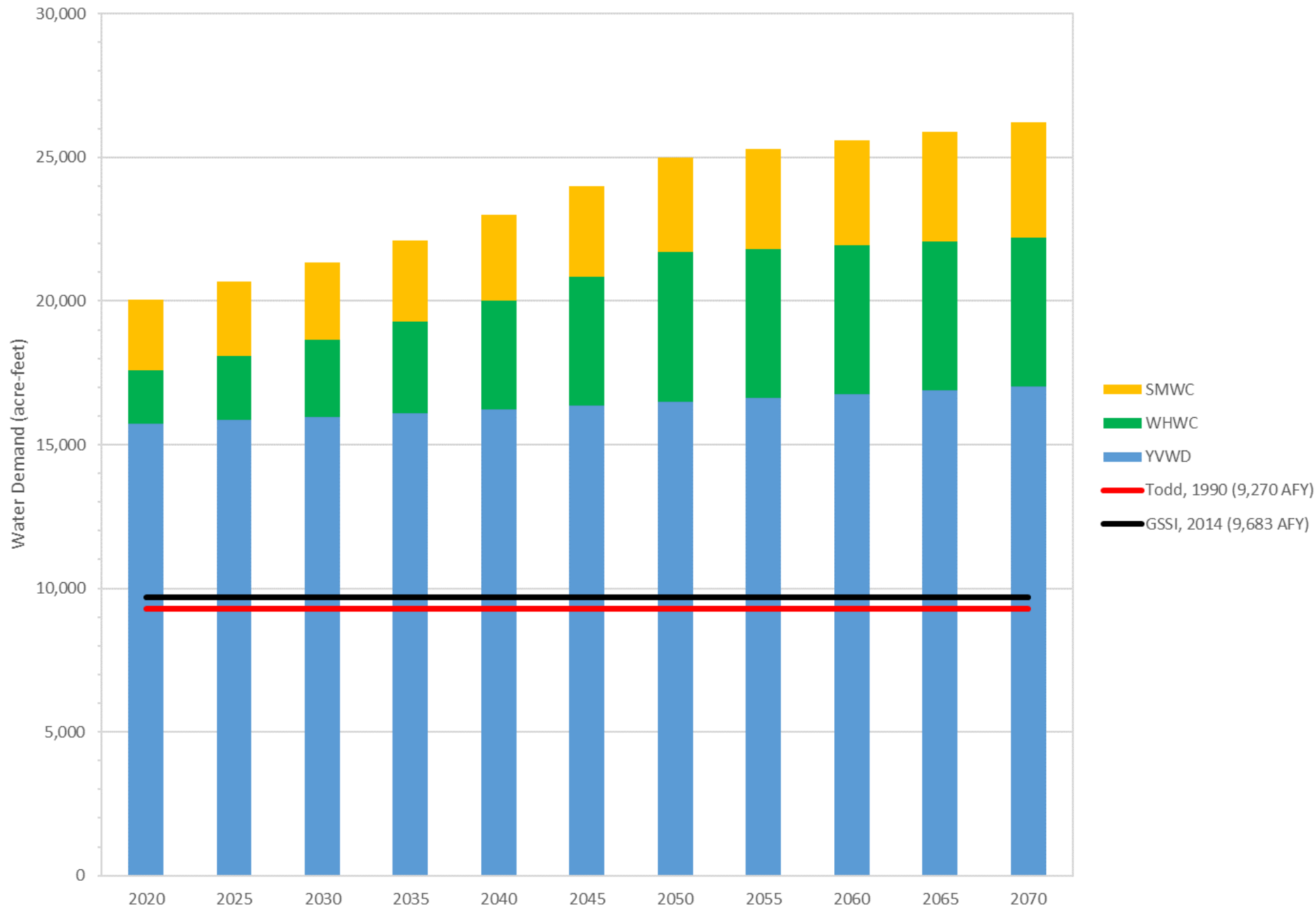
Dudek Preliminary Analysis - Water Year Type for Yucaipa Subbasin



Yucaipa Basin Storage (in acre-feet)

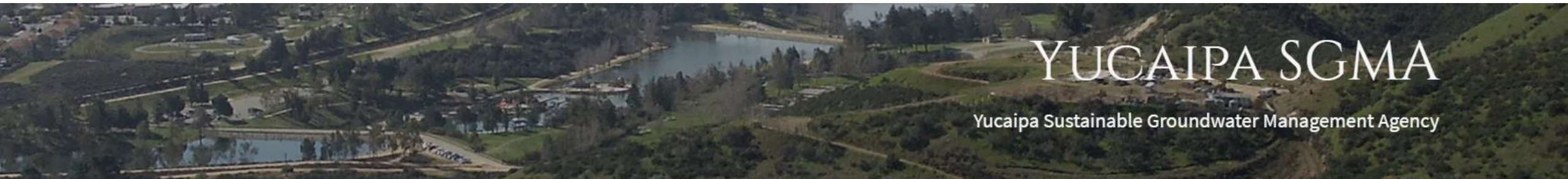


Projected Water Demands and Estimated Safe Yield



Update on USGS Numerical Model

- Meeting at USGS San Diego Office – Feb. 26, 2020
 - Hydrogeological Conceptual Model
 - Some Subbasin boundaries modified
 - New formation – Live Oak Canyon Formation
 - Draft of Hydrology of the Yucaipa Groundwater Basin
 - Numerical Model Preliminary Results
 - Underestimating recharge in Calimesa + Western Heights
 - Missing septic return flows, applied irrigation at parks, golf courses, leakage from regional park ponds?



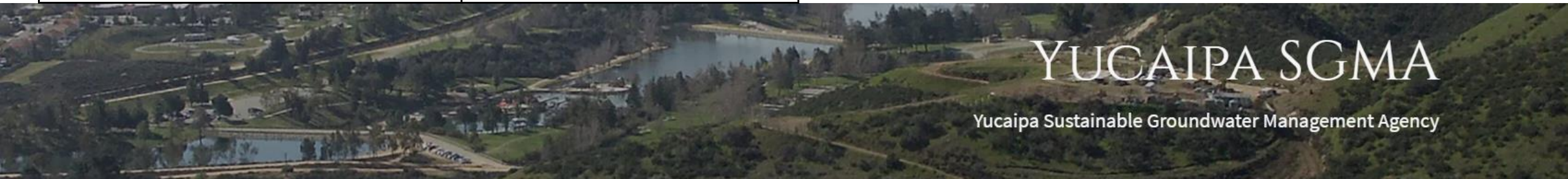
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USGS Model Water Budget Assumptions

Inflows	
Source	Avg. Rate (AFY)
Stream Flow Infiltration	Model calibration
Mountain Front Recharge	Model calibration
Return Flows from Pumping	15%-30% of Total Pumping
Recycled Water Discharge to San Tim	1000-4,200
Septic	70 GPDC
Wilson Creek Spreading Basins (SPW)	60 - 4,600
Oak Glen Spreading Basins (Stormwater)	48 - 288
Imported Water Reservoir	1,000 - 1,700
Wildwood Creek Retention Basin	1,650 - 36,900
Parks/Golf Courses	1.6 - 4 AFY per irrigated acre

Outflows	
Source	Avg. Rate
Evapotranspiration	Model calibration
Pumpage	133 wells from 1947-2014



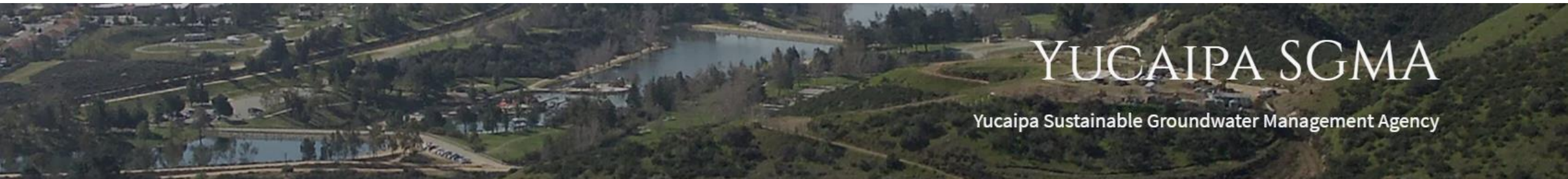
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USGS Questions for Numerical Model

What are the locations where recycled water is used for irrigation, and how much water is applied at each location?

Location	2019 Recycled Water (AF)
Yucaipa Golf Course	216.144
Agriculture (below Wolchholz facility, Live Oak Canyon area)	18.460
Industrial (Wolchholz Facility)	654.412
Chapman Heights Irrigation	730.987
Construction (misc locations)	4.680
2019 Total	1,624.683



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USGS Questions for Numerical Model

What are the sources of recycled water?

- **Untreated Imported Water**
- **DAF / Backwash Water – This is backwash water from the filters. It is sent up to the recycled water reservoir.**
- **Treated water from the Wochholz Plant**



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USGS Questions for Numerical Model

Are there estimates of leakage at the Yucaipa Valley Regional Water Filtration Facility (YVRWFF) and/ or the Imported Water Reservoir?

- **No leakage at YVRWFF.**
- **SBVMWD may have info on leakage at imported water reservoir.**

Are there any other potential sources of anthropogenic recharge (parks, managed aquifer recharge structures)?

- **Possibly, the Yucaipa Regional Park which is untreated imported water. SBVMWD would have the amount of water applied at that location.**



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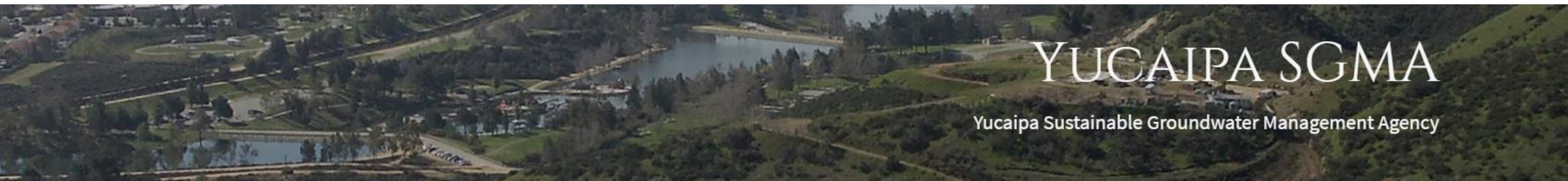
USGS Questions for Numerical Model

How much water was applied at the Calimesa Country Club?

Records show the golf course opened in 1958

Year	Acre/Feet
2010	242.807
2011	283.388
2012	272.813
2013	262.056
2014	248.736
2015	197.938
2016	277.800
2017	85.573*

*Golf course closed and irrigation was reduced in 2017



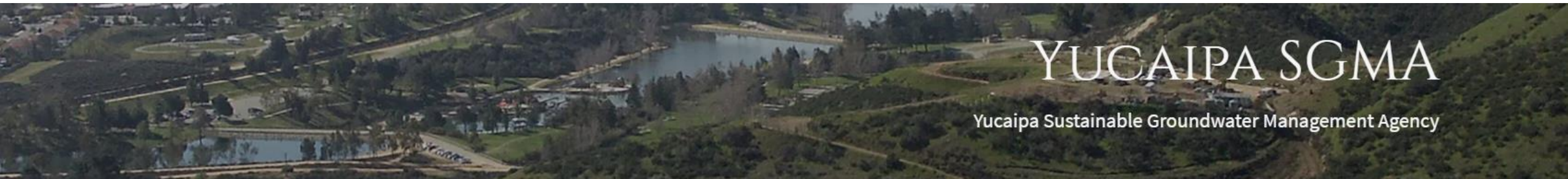
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USGS Questions for Numerical Model

Amount and duration of irrigation at 7th Street Park, near USGS well YV6E?

Year	Acre/Feet
2010	22.48
2011	35.281
2012	40.265
2013	31.227
2014	44.531
2015	42.506
2016	19.961
2017	53.83
2018	42.905
2019	43.365

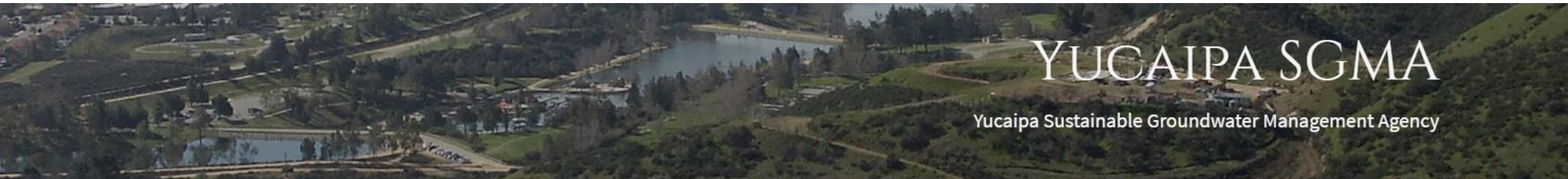
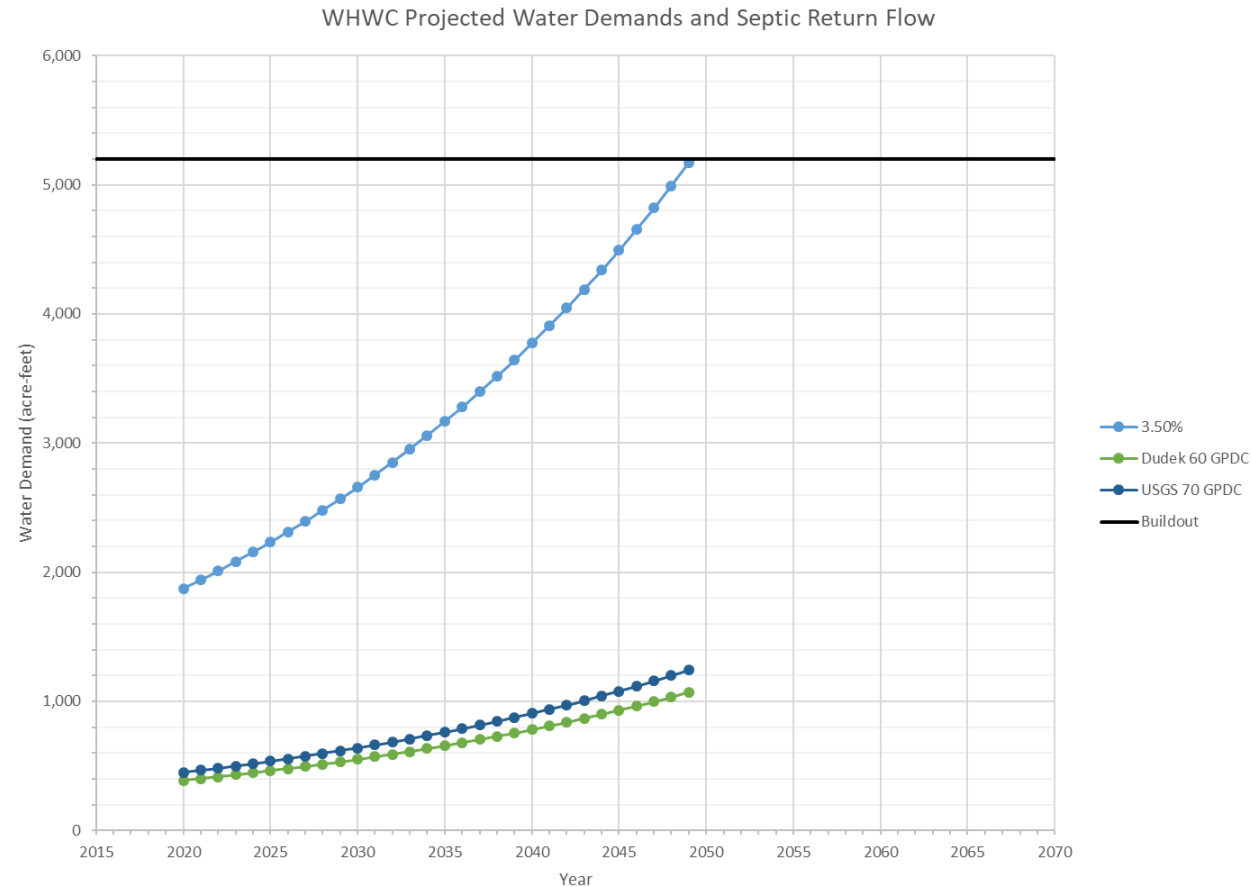


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Septic Return Flows

- Prior to 1986, entire Yucaipa basin on septic.
- After 1986, entire basin on sewer except 91% of WHWC on septic.
- USGS estimated avg. septic discharge of 70 GPDC.
- Dudek estimated avg. septic discharge of 61 GPDC.

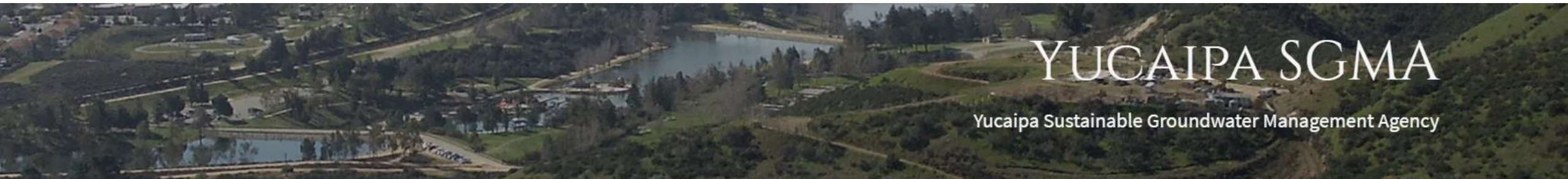


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Tentative Timeline for USGS

- Anticipated Submittals of Materials to SBVMWD
 - April 17 – Preliminary Integrated Hydrologic Model Files – RECEIVED!
 - April 24 – Preliminary Conceptual Hydrology Report
 - May 1 – Preliminary Numerical Model Report
 - July – refined model incorporating comments from Yucaipa SGMA and USGS Peer Review



Proposed Stream Flow Gaging Site(s)

- DWR Proposed Station
 - Live Oak Canyon Rd Bridge
 - DWR working with City of Redlands on obtaining encroachment permit
- Proposed Station B/Alessandro Rd
 - Evaluating other potential sites along San Timoteo Creek near Alessandro Rd



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Update on Data Management System

- On April 21, Valley District Board approved the Dudek DMS proposal as a contract amendment to Dudek's contract
- Kick-off meeting with Dudek in early May 2020.
 - Identify staff that will participate in building the DMS
 - Project schedule
 - 12-month timeline (May 2020-May 2021)

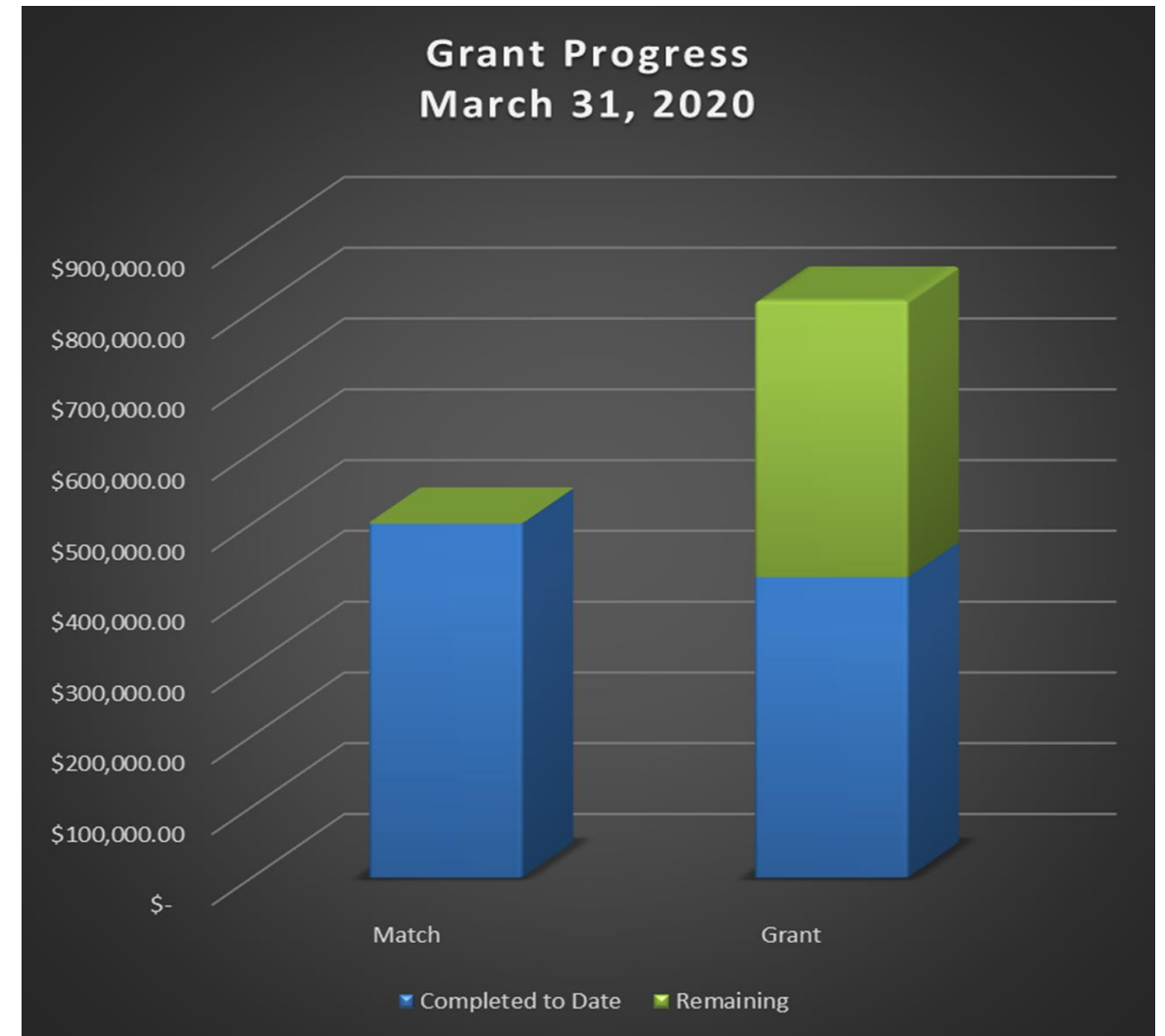


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Grant Status

- 5th Quarterly Report (1/1/20-3/31/20)
- Planning Activities 97% Complete
- The final Model Report is the last outstanding deliverable
- GSP Activities 42% Complete
- Match Requirements were met



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Yucaipa GSP Development (as of 3/31/2020)

