

Water Resources and Development Management Plan 2024 Update

Plan Advisory Group Meeting 3

September 4, 2024





Meeting Objectives

The PAG was reconvened to inform the Water Resources Development and Management Plan (WRDMP) 2024 update.

- ✓ Share key updates on WRDMP24 development process
- ✓ Share findings from the Water Supply-Demand Imbalance Analysis
- ✓ Review the current draft WRDMP24 update and solicit PAG input
 - Focusing on Section 4: RMS

Note: The Plan Advisory Group (PAG) is established under the Countywide Plenary for Water for the WRDMP24 effort.





TIME	AGENDA ITEM	PRESENTER
11:00	Welcome and Introductions	Rebecca Guo, EDWA, General Manager
11:10	WRDMP24 Status Update	Yung-Hsin Sun, Sunzi Consulting
11:15	Water Supply-Demand Imbalance • West Slope (review & input) • Tahoe Basin (review & input)	Ibrahim Khadam, Khadam Consulting Yung-Hsin Sun, Sunzi Consulting
11:50	WRDMP Review and Group Discussion • Sections 1-3 (review & input) • Section 4 (focused review & input) • Section 5 (review & input) Feedback on Review Process	Yung-Hsin Sun, Sunzi Consulting All
12:50	Next Steps	Rebecca Guo, EDWA, General Manager
13:00	Adjourn	





Apple Hills Vineyard (Credit: Yung-Hsin Sun, Sunzi Consulting)

Welcome and Introduction

Rebecca Guo, General Manager, El Dorado Water Agency





Horsetail Falls near Twin Bridge, El Dorado County (Stock photo used with permission from El Dorado Water Agency)

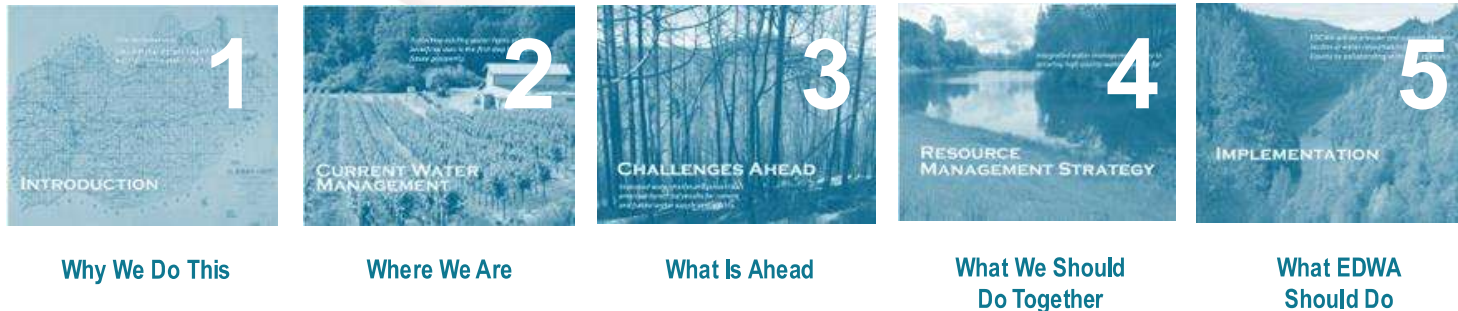
WRDMP24 Status Update

Yung-Hsin Sun, Sunzi Consulting

20240904 EDWA WRDMP24 PAG MEETING 3



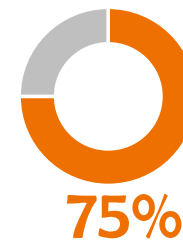
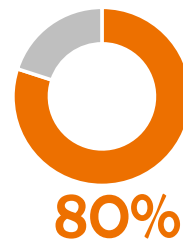
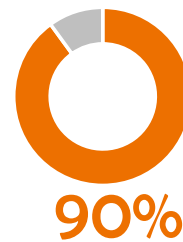
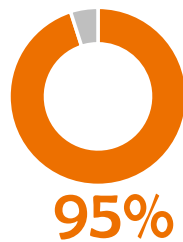
WRDMP24 Outline (same as 2019 version)



- **Supports realization of the County's General Plan vision for economic development, environmental protection and social well-being.**
- A concise policy document as the countywide water plan, serving as an expectation of collective implementation among all partners and a reference for setting up EDWA's investment and actions.
- An effort with collaborative development among partners and respect their corresponding roles and responsibilities



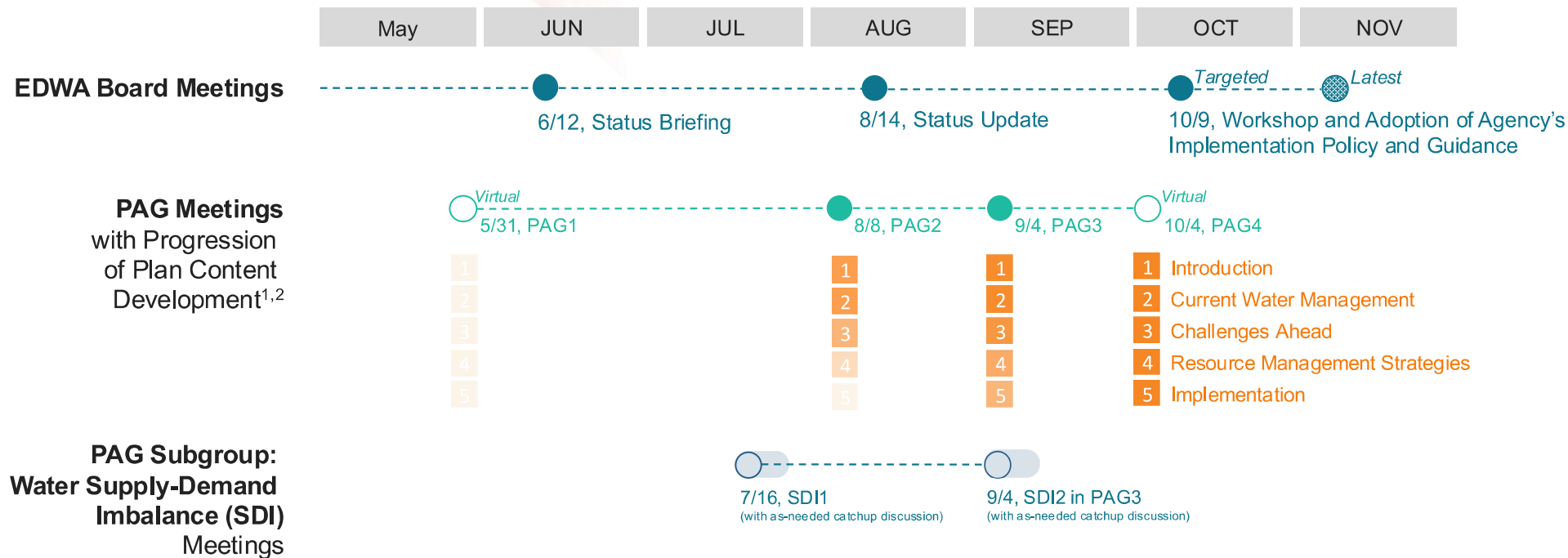
WRDMP24 Progress Update



Major Piece:
Water Supply-Demand
Scenarios



Planning Schedule



Notes:

1. As-needed topic-specific meetings will be scheduled with subject matter experts within and outside of the PAG to support content development. The PAG will be informed about these meetings and the results will be incorporated into the draft plan.
2. For every review cycle, the PAG will review the current draft of the plan in its entirety.





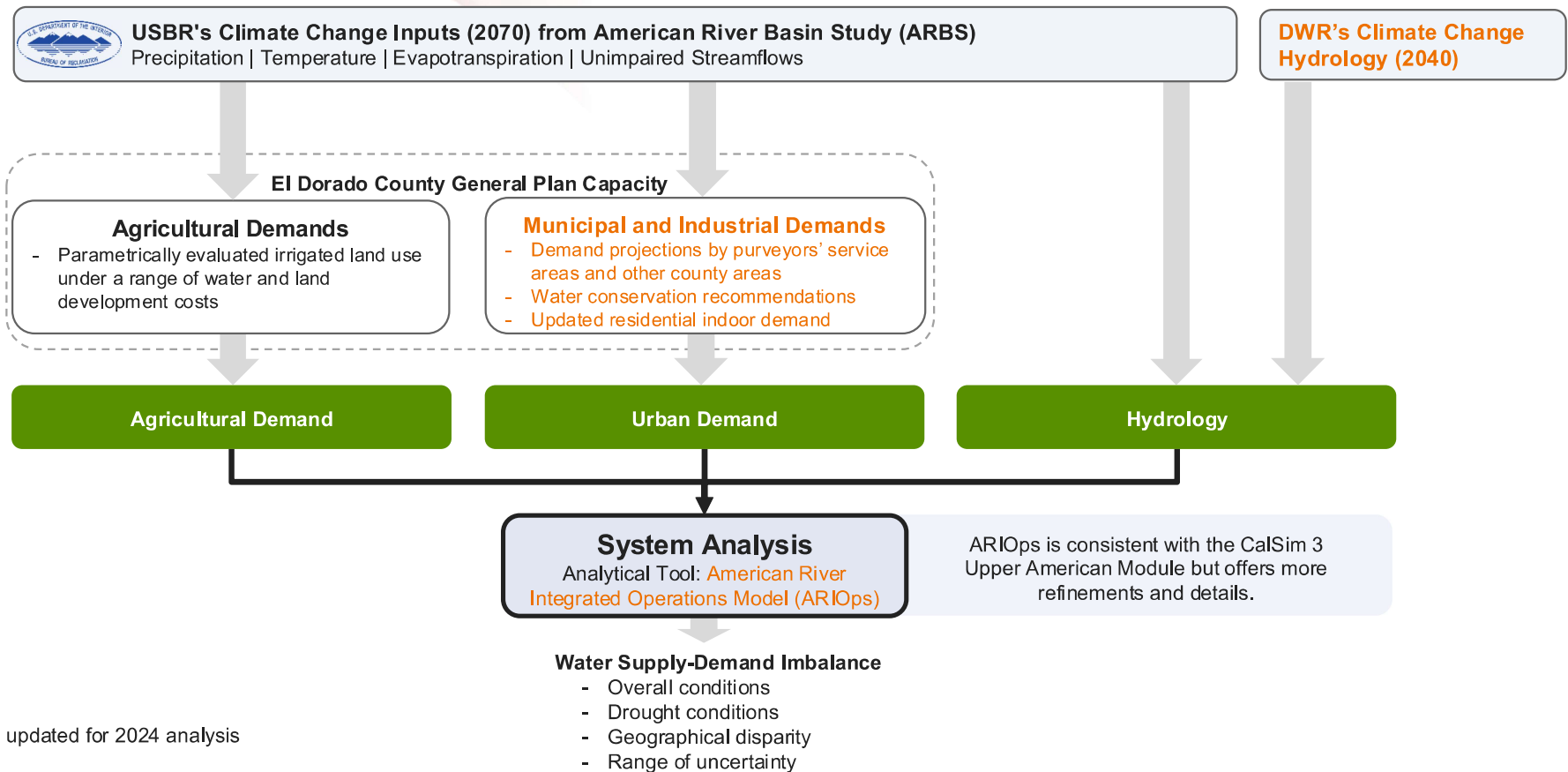
Placerville Old Town Center (Credit: Yung-Hsin Sun, Sunzi Consulting)

Water Supply-Demand Imbalance Analysis (West Slope)

Ibrahim Khadam, Khadam Consulting



Methodology for Assessing Water Supply-Demand Imbalance in West Slope

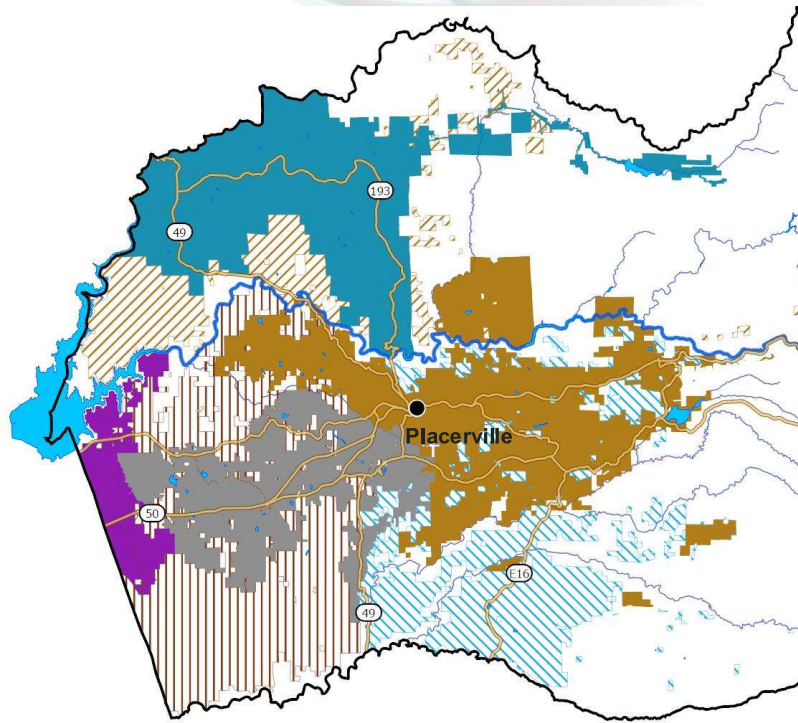


West Slope Demand Update for Regulatory Changes

Component	Approach	Rationale
1. Land use and zoning	Use 2019 parcel eligibility analysis as is.	Negligible changes between 2024 and 2019 county database (~ 5 parcels changes land use designation).
2. M&I Water Demand		
– Residential indoor	Use 42 gpcd per SB 1157 of 2022.	Reflect the SWB-adopted indoor residential use standard after 2030.
– Residential outdoor	Use 2019 analysis as is.	No updates to parcel data, outdoor irrigated area or demand.
– Commercial, industrial, institutional	Use 2019 analysis as is.	No updates to parcel data, or indoor/outdoor demand assumptions.
– Water loss	Use agency-specific water loss standards per SWB for EID and GDPUD	Reflect the SWB-adopted water loss standards.
– Other allowable uses	Use 2019 analysis as is.	No updates to assumptions (% of active water demand: 9% for EID, 4.5% for other areas).
3. Agricultural Water Demand	Use 2019 analysis as is.	No updates to parcel data, crop mix, or crop demands.

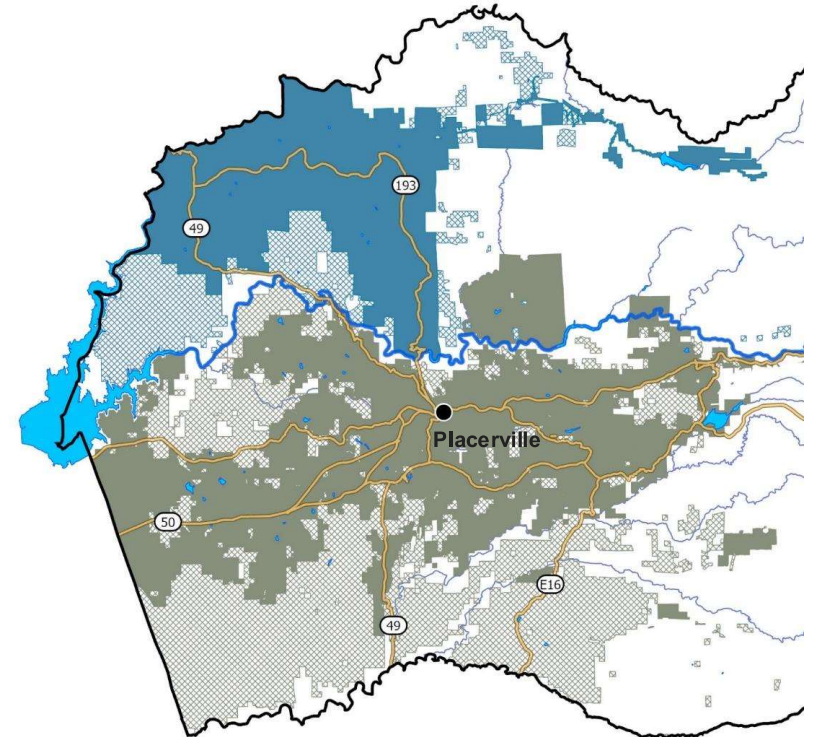


West Slope Demand Areas



- El Dorado Irrigation District (EID) - El Dorado Hills
- EID - Eastern Region
- EID - Western Region
- Georgetown Divide Public Utility District
- Other County Area (OCA) - North of South Fork American River (SFA)
- OCA - South of SFA, East of Highway 49
- OCA - South of SFA, West of Highway 49

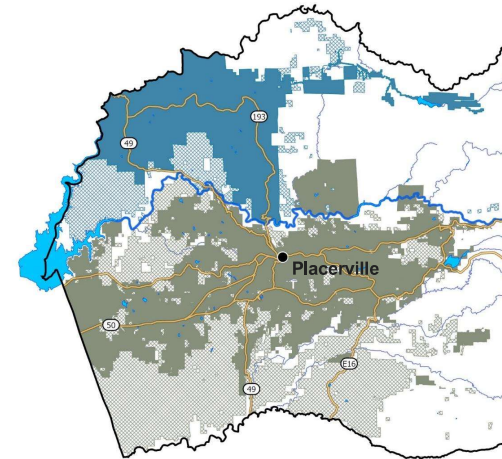
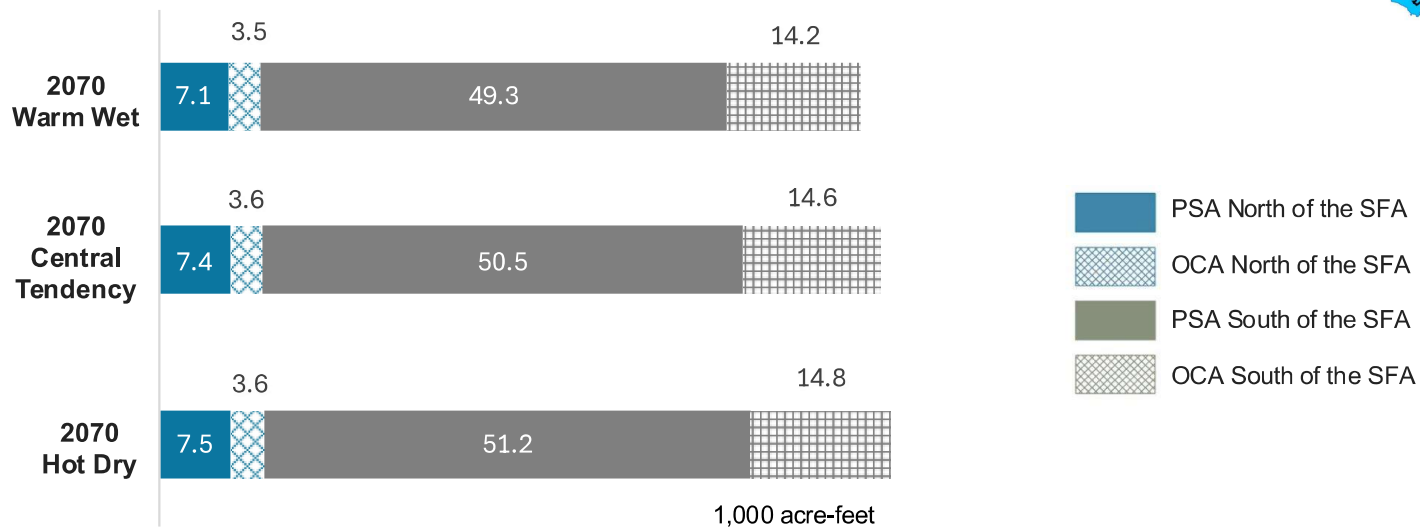
Reporting Areas



- PSA North of the SFA
- OCA North of the SFA
- PSA South of the SFA
- OCA South of the SFA



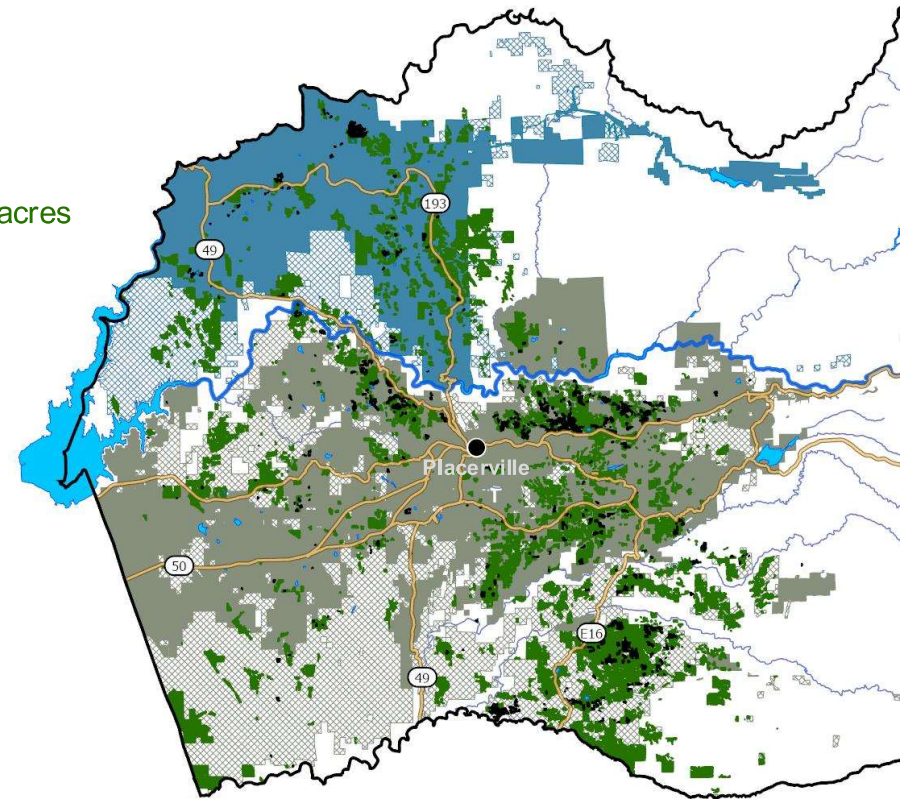
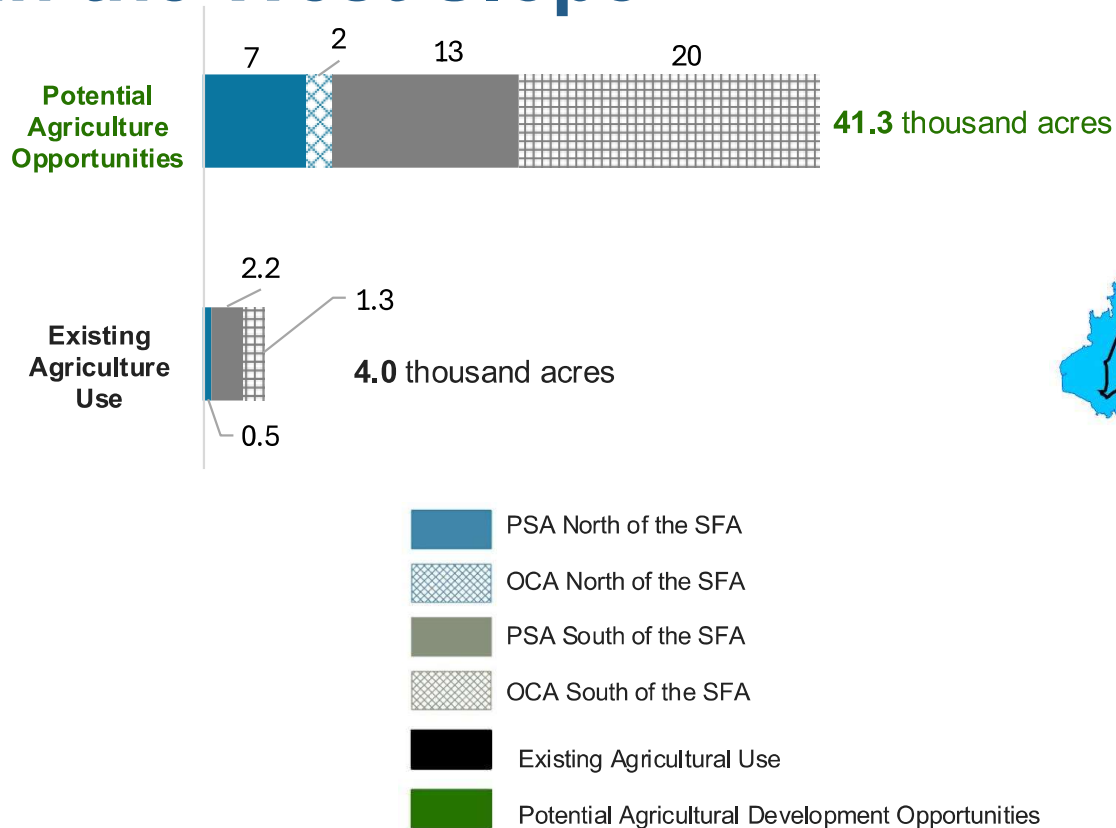
Estimated M&I Water Demand (West Slope)



M&I Demand	2070 Central Tendency	2070 Hot Dry	2070 Wet Warm
2024 WRDMP	76.1	77.1	74.1
2019 WRDMP	85.4	86.5	83.4
Change	-10.9%	-10.8%	-11.2%



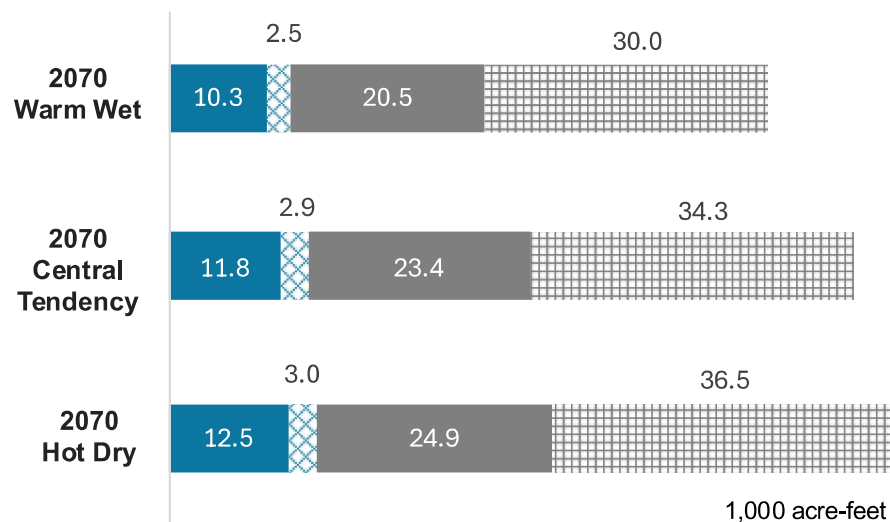
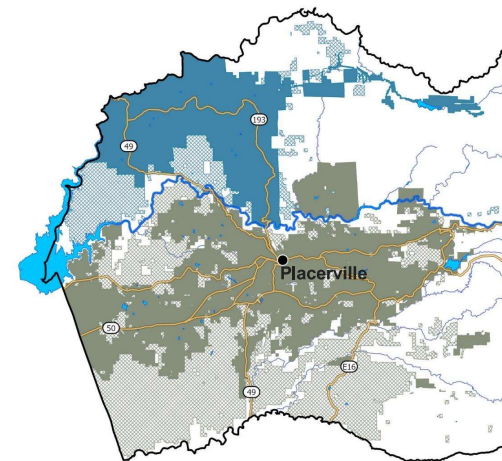
Projected Agricultural Development in the West Slope



Source: Davids Engineering & ERA, 2020



Estimated Agricultural Water Demand (West Slope)

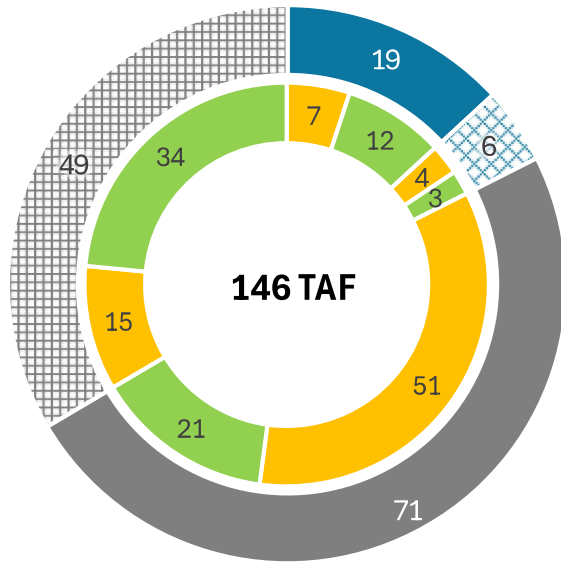


	2070 Central Tendency	2070 Hot Dry	2070 Wet Warm
Ag Demand	72.8	78.4	64.5

Davids Engineering & ERA, 2020



Total Estimated Annual Water Demand (West Slope)

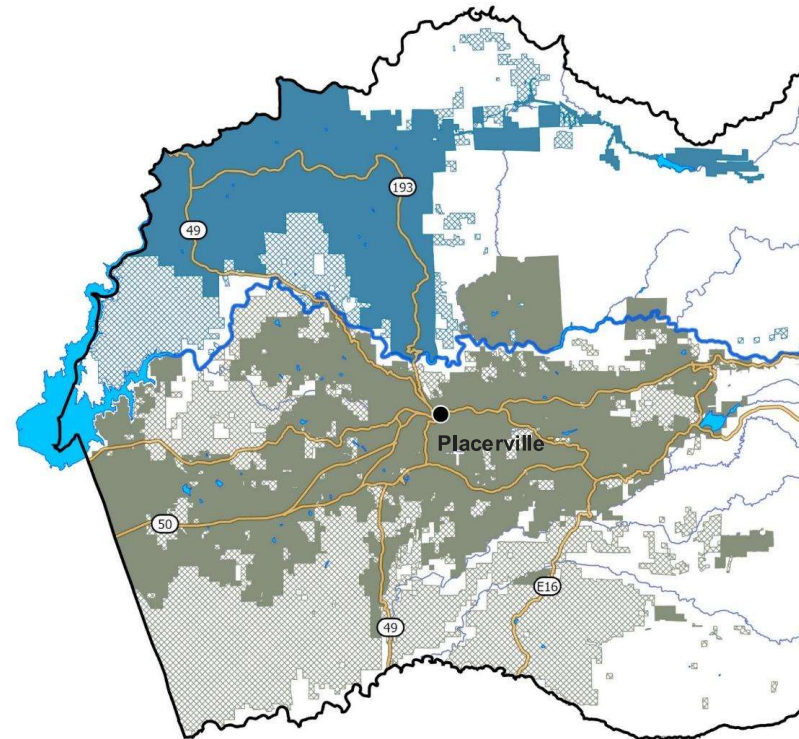


2070 Central Tendency

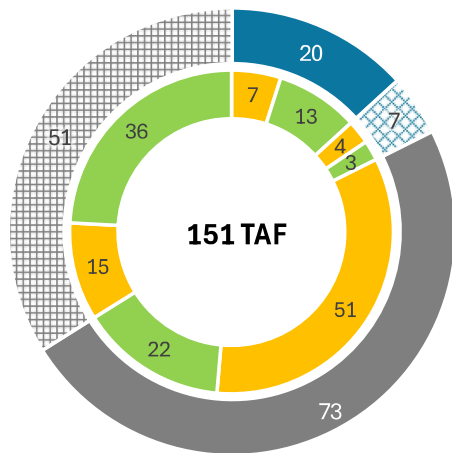
Urban
Agricultural
1,000 acre-feet

Water Demand

PSA North of the SFA
OCA North of the SFA
PSA South of the SFA
OCA South of the SFA



Total Estimated Annual Water Demand (West Slope)

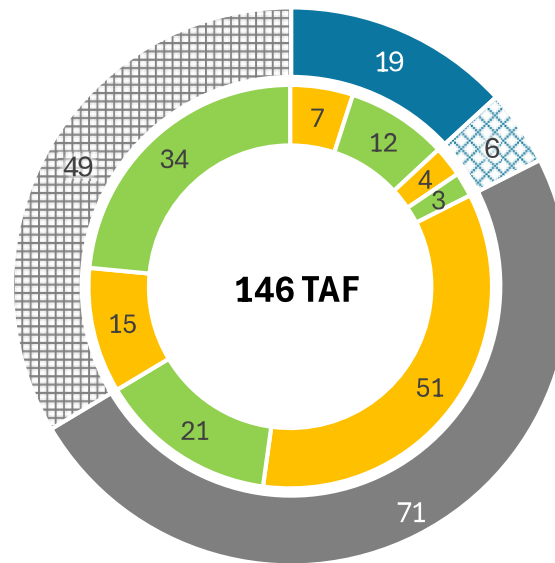


2070 Hot Dry

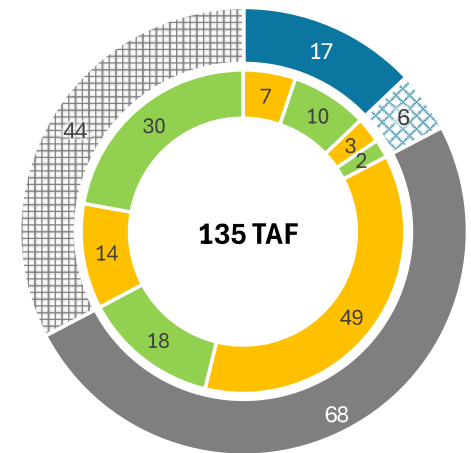
Urban
Agricultural
1,000 acre-feet

Water Demand

PSA North of the SFA
OCA North of the SFA
PSA South of the SFA
OCA South of the SFA



2070 Central Tendency



2070 Warm Wet



Available Water Supplies (West Slope)

- Reflects existing water supply sources for purveyors in West Slope, as represented in the 2020 Urban Water Management Plans.
 - Considers existing terms and conditions of water rights and contracts.
 - Considers effects of future climate change on supply availability.
- Use in the West Slope by other water right users are also considered.



Final – Adopted June 28, 2021

2020 Urban Water Management Plan



GEORGETOWN DIVIDE PUBLIC
UTILITY DISTRICT

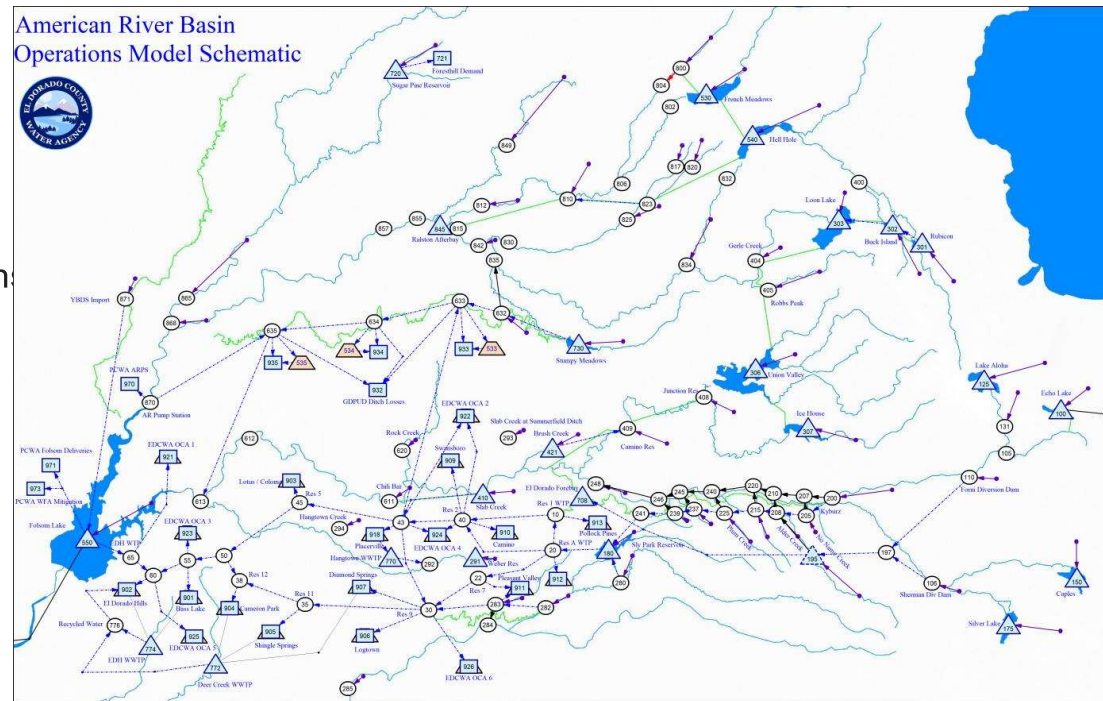
2020 URBAN WATER MANAGEMENT PLAN

March 2023

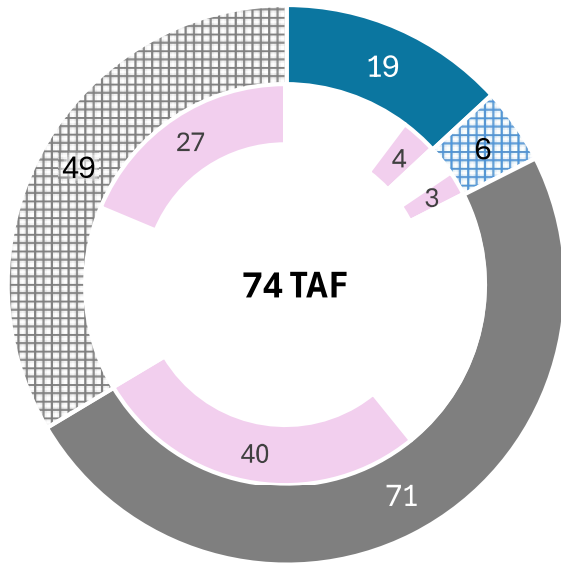


Assessment of Su (West Slope)

- Analysis used the American River Integrated Operations Model (ARIOps).
 - Best up-to-date representation of operations on the upper American River watershed.
 - Daily timesteps for simulation of water operation and power generation.
 - 94-year simulation period (water years 1922 to 2015).
- Climate change hydrology
 - Central Tendency scenario, 2070 and 2040
 - Hot-Dry scenario, 2070
 - Warm-Wet scenario, 2070



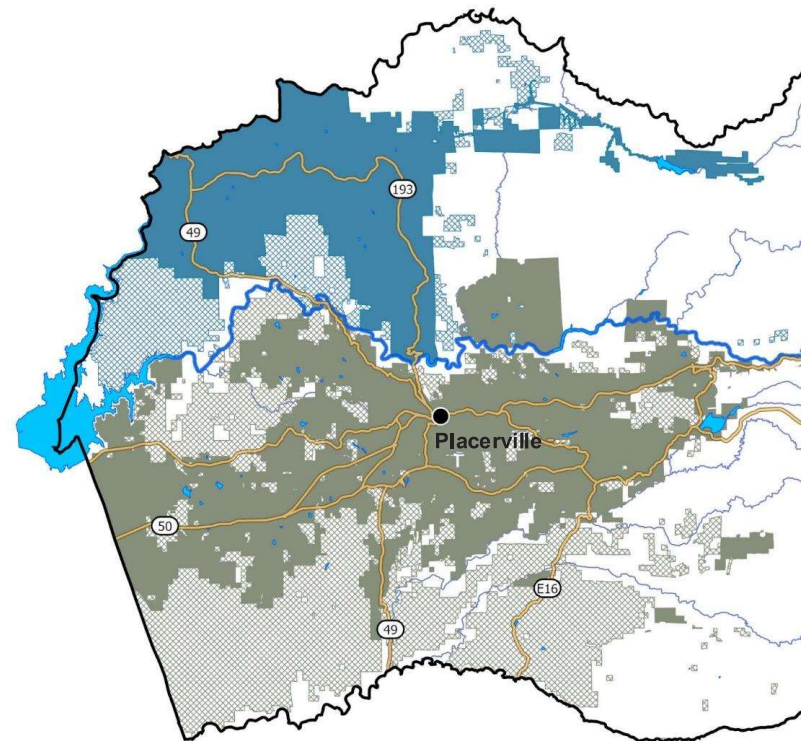
Water Supply-Demand Imbalance (West Slope)



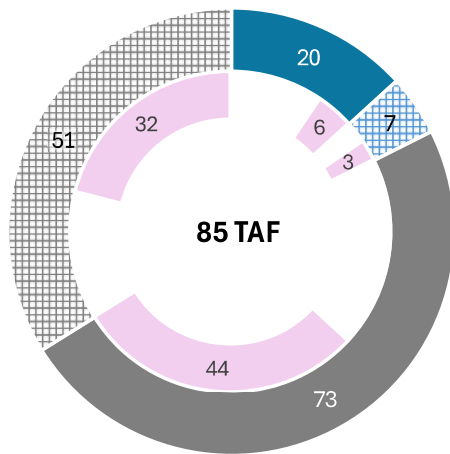
2070 Central Tendency

Imbalance
1,000 acre-feet/year

Water Demand

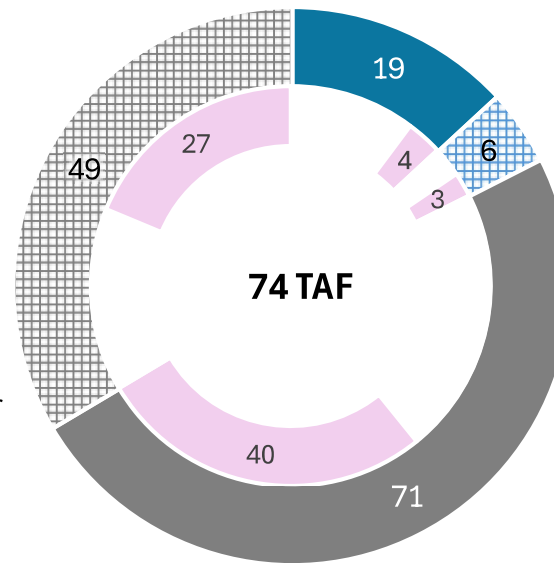


Supply-Demand Imbalance (West Slope)

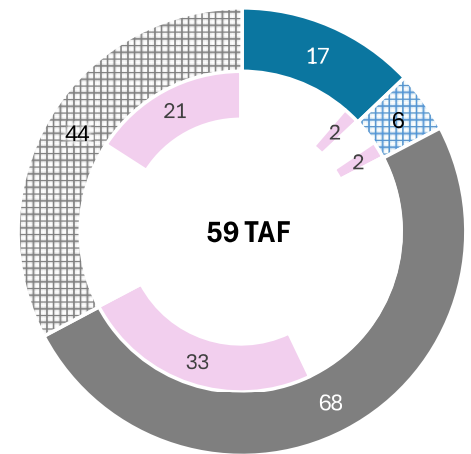


2070 Hot Dry

Imbalance
1,000 acre-feet/year

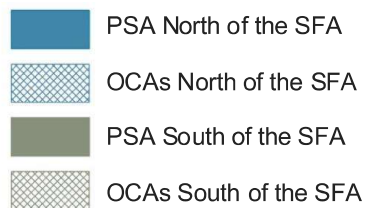


2070 Central Tendency



2070 Warm Wet

Water Demand





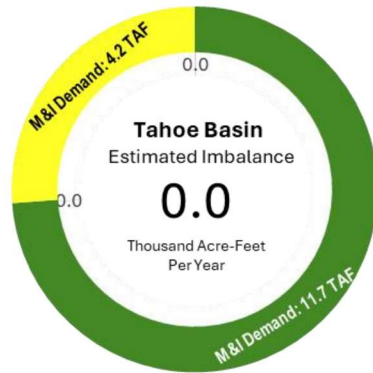
Placerville Old Town Center (Credit: Yung-Hsin Sun, Sunzi Consulting)

Water Supply-Demand Imbalance Analysis Results (Tahoe Basin)

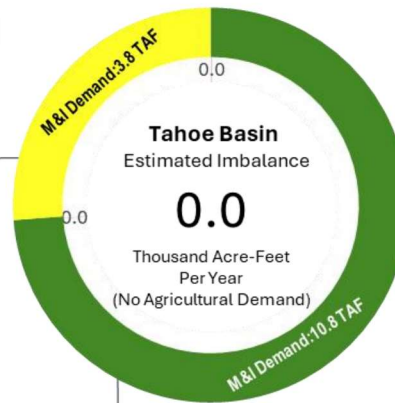
Yung-Hsin Sun, Sunzi Consulting



Demand Estimate Based on Historical Trend with More Changed Conditions



Demand Estimate Based on Historical Trend with Limited Changed Conditions



Demand Estimate Based on the Historical Trend Only



City
Water Purveyors
South Tahoe Public Utility District
Tahoe City Public Utility District

0 2.5 5 10 15 20 Miles
2/19/2023 10:00:00 AM
2/19/2023 10:00:00 AM

Source: Total District Water Production Requirements within the Boundaries of the Public Utility Districts Located in the California Portion of the Lake Tahoe Basin (Kennedy Jenks, 2020)

The Tahoe Basin is unlikely to have a water supply-demand imbalance because of the relatively low demands in comparison with the available snowpack and runoff, even under climate change conditions; however, seasonal populations are one of the major challenges in demand projection and both STPUD and TCPUD are conducting continued reviews but expected to be fully accommodated by California's share of 23,000 acre-feet per year along with other legal water uses.





Placerville Old Town Center (Credit: Yung-Hsin Sun, Sunzi Consulting)

Plan Review by Section

Yung-Hsin Sun, Sunzi Consulting
All



Sections 1-3

Section 1 Topics

- Purpose of WRDMP and its objective
- Principles for plan update
- Focus for 2024 update

Section 2 Topics

- Water use planning zones and underlying land use
- The gap between the vision of County General Plan and existing conditions
- Characterization of role and responsibilities for water management
- Major water infrastructure

Section 3 Topics

- Challenges ahead with water supply-demand imbalance



Section 4 – RMS

Lists resource management strategies to mitigate water resource-related challenges in El Dorado County including corresponding roles and responsibilities for implementation

- **Section 4 Framing:**
 - Strategy through the lens of water resource management that is mindful of statewide and national trends
 - Locally-grounded perspective
 - Tangible outcomes to improve conditions of water resources management (see Section 3)
 - Integrated considerations that recognize connectivity among management of different resources
 - Collective efforts by all parties, naming management actions more on what may be missing or largely deficient where immediate attention would be warranted
 - Not a master project list nor intended to be one. A management action may be one to many projects or programs with different partners contributing to the same strategic intent.
- **Section 4 status:**
 - Combined RMS and management actions from 2019 WRDMP and 2023 PWP
 - Refined some RMS to reflect current conditions and past progress
- **Review and Discussion**



Section 5 – (EDWA's) Implementation

With a long-term perspective, formalizes EDWA's implementation policies and guidance over the next 5-years, as well as implementation programs with prioritized actions.

Review and Input





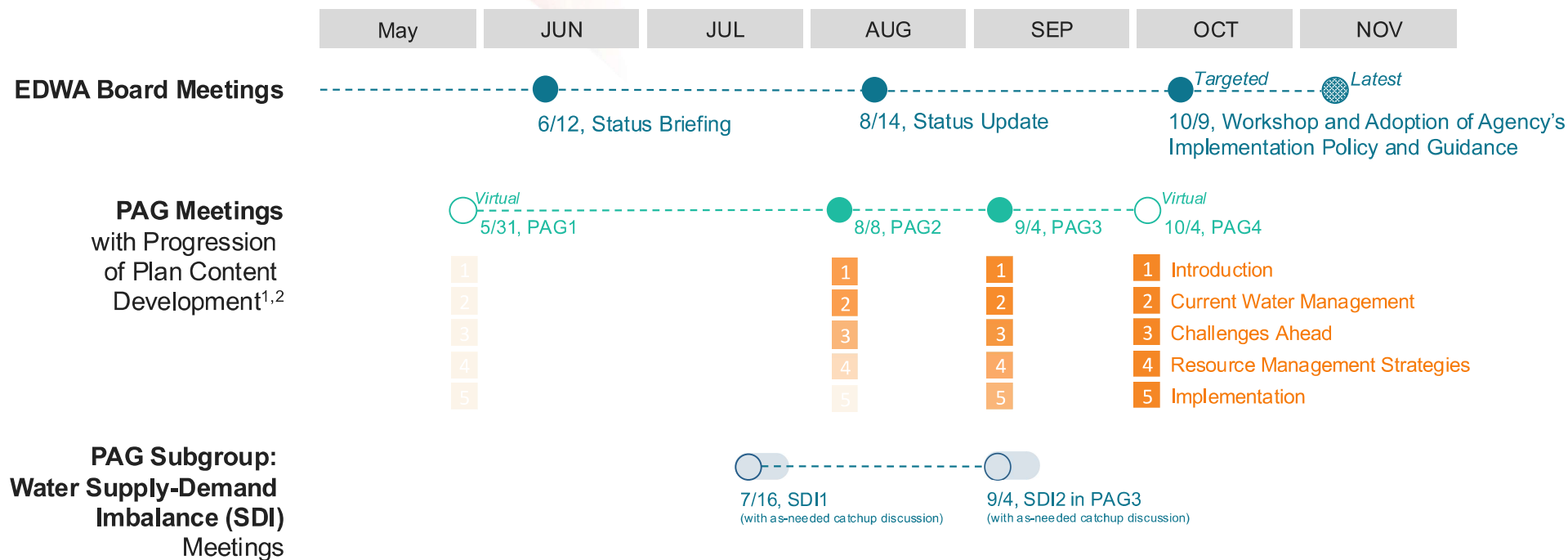
Loon Lake (Photo credit: Yung-Hsin Sun, Sunzi Consulting)

Next Steps

*Rebecca Guo, General Manager, El Dorado Water Agency
Yung-Hsin Sun, Sunzi Consulting*



Planning Schedule



Notes:

1. As-needed topic-specific meetings will be scheduled with subject matter experts within and outside of the PAG to support content development. The PAG will be informed about these meetings and the results will be incorporated into the draft plan.
2. For every review cycle, the PAG will review the current draft of the plan in its entirety.





Next Steps

- Complete the draft plan update
- Follow up with PAG members for additional questions and consultation
- Conduct the PAG4 meeting for last input on critical mistakes and omissions, if any
- Schedule workshop with the EDWA's Board for potential adoption of implementation policy and guidance to support EDWA's future actions





Apple Hills Vineyard (Credit: Yung-Hsin Sun, Sunzi Consulting)

Adjourn

Reminder: Next PAG meeting on October 9, 2024 (virtual)

