



Item 8A: Review of Key Principles of Allocation Methodology for Madera County GSAs

Background

Legal Framework

Water Allocation Concepts

I. Principles

II. Water Types

III. Process

IV. Farm Units and Farm Unit Zones

V. Monitoring

Outstanding Questions

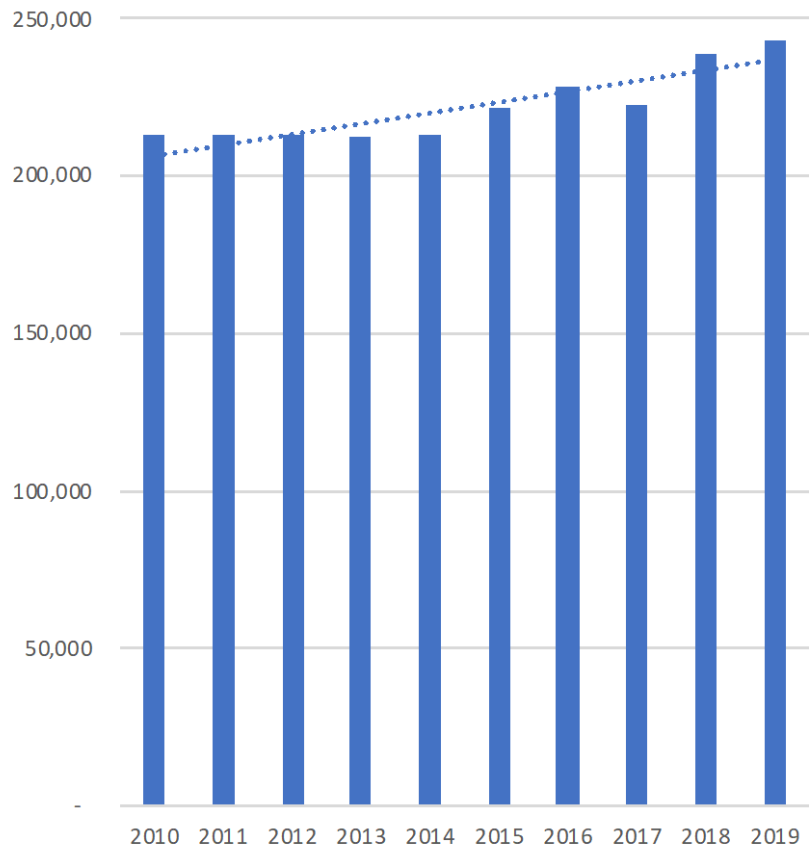


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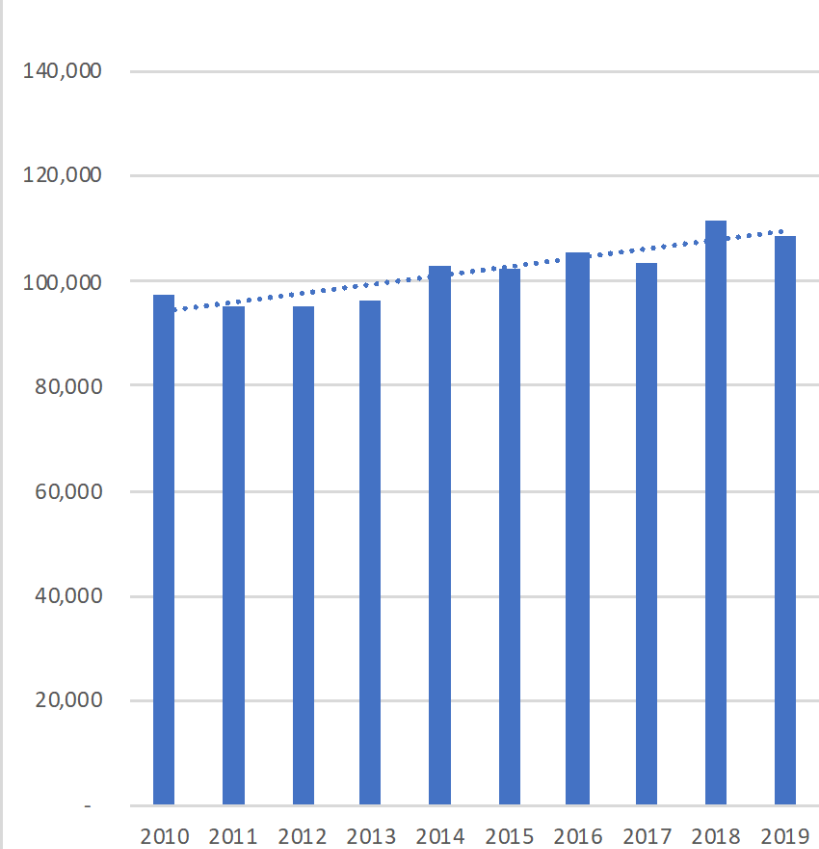


Background

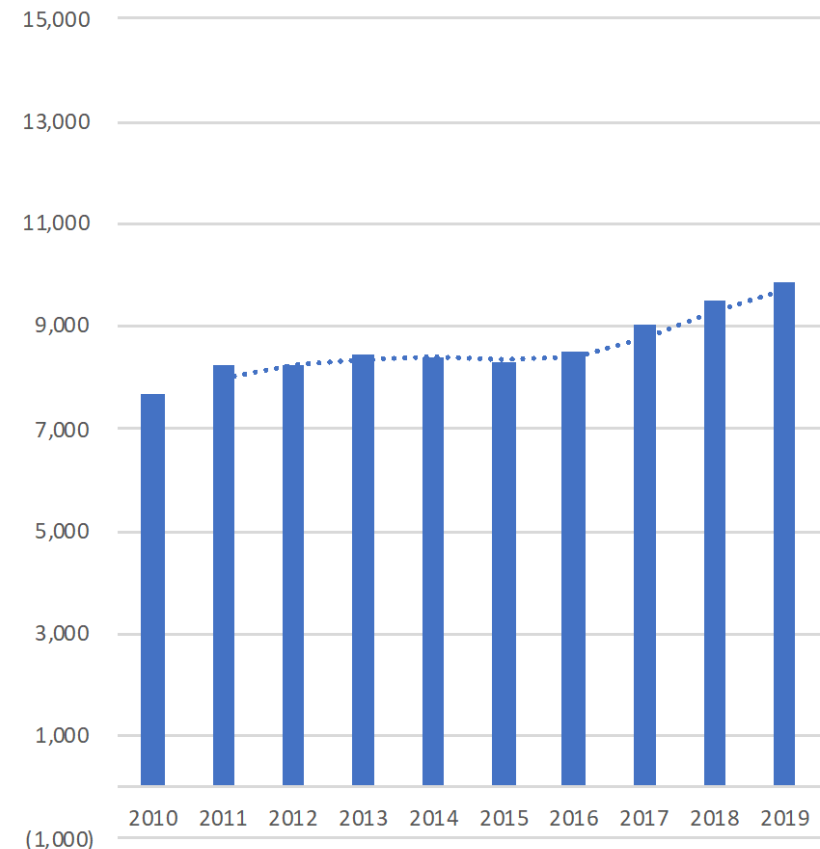
Madera County GSA - Madera Subbasin



County of Madera GSA - Chowchilla



County of Madera GSA - Delta-Mendota





Legal Framework

- SGMA allows GSAs to establish extraction allocations and to authorize transfers of allocations within a subbasin.
 - This is different than an overlying right to use groundwater, which is appurtenant to the land and correlative
- SGMA allows a GSA to manage overdraft over a 20-year period.
- A GSA may allocate more water than the owner has an overlying right to.



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Legal Framework

- An allocation system is required to be consistent with a GSA's Groundwater Sustainability Plan (GSP)
- A GSP is required to contain components related to the avoidance of “undesirable results,” which include:
 - Chronic lowering of groundwater levels
 - Reduction of groundwater storage
 - Land subsidence
 - Water quality degradation
- Therefore, any allocation system implemented by a GSA must take into consideration the necessity of avoiding undesirable results.



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I. Principles

- a. Certainty
- b. Domestic Water Protection (Equitable Access to Safe Drinking Water)
- c. Fairness and Equity
- d. Flexibility
- e. Overlying Groundwater Rights Protection
- f. Simplicity
- g. Preserving the Economic Stability of Madera County and its Citizens



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II. Water Types

2. The allocation approach will include access to groundwater categorized classified using two designations:
 - a. A “sustainable yield” of native groundwater, that is, water that naturally exists in the subbasins from seepage and percolation; and
 - b. “Transitional water” that is continued overdraft of the subbasins, but will incrementally decrease during the GSP implementation period.



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III. Process

3. The allocation approach will be a process whereby sustainable yield access is offered to overlying groundwater rights users every five years, and whereby participation will include:
 - a. The opportunity to pump a designated quantity of sustainable yield within each year,
 - b. The opportunity to pump a designated quantity of transitional water within each year, and
 - c. The requirement to pay for pumped quantities of **sustainable yield and transition water** based upon a volumetric rate structure that is to be established.



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IV. Farm Unit Zones

4. The allocation approach will allow the County GSAs' per-acre (parcel-based) allocations of sustainable yield and transition water to be shared within designated "farm units" that would meet criteria defined by the County GSAs, so as to allow flexibility and reflect real-world farming conditions in which resources are shared among commonly operated lands.



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V. Monitoring

5. The allocation approach will include monitoring of evapotranspiration (“ET”) and the ET of applied water (“ETAW”) for designated “farm units” and the comparison of ETAW to assigned allocations, where such services will be provided through a contract between the County and a third party vendor, with quality assurance and quality control performed by multiple parties.



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Feedback from Advisory Committee

- Allocations discussed with Advisory Committee:
 - May 15, 2019
 - May 23, 2019
 - July 9, 2020
 - August 6, 2020
 - September 3, 2020
 - October 14, 2020
 - November 12, 2020
- November 12, 2020 - Voted 9-1 to conceptual allocation approach with five parts (principles, water types, process, farm units, measurement)
- Not thrilled with quantity of demand reduction
- Discussion of fairness/equity
- Not supportive of constraints on farm unit zones



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Outstanding Questions

- Farmland Unit Zones
- Annual Transitional Water Determination

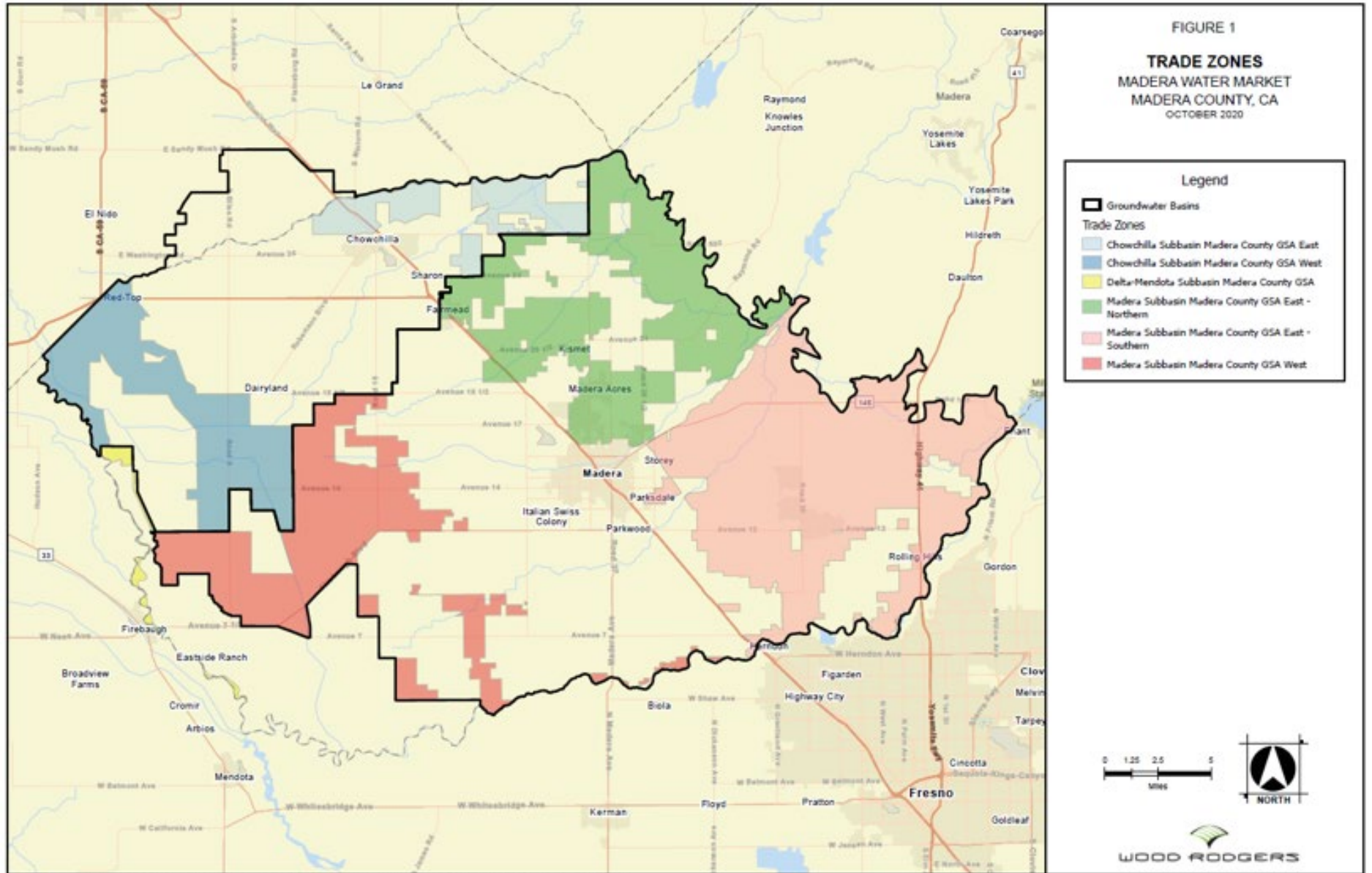


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Farm Unit Zones



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Annual Transition Water Determination

- GSA Board will make annual determination of transition water available for the Madera County GSA in each subbasin
- Quantity will follow the GSP defined ramp-down, unless otherwise adjusted due to monitoring indicators
- GSPs stated:
“[s]tarting in 2020 and continuing through 2025, average annual groundwater pumping will be reduced by 2% (of the total demand reduction amount) per year, for a total cumulative reduction of 10% by 2025. Groundwater pumping will be reduced by 6% per year starting in 2026 and continuing through 2040.”



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Annual Transition Water Determination

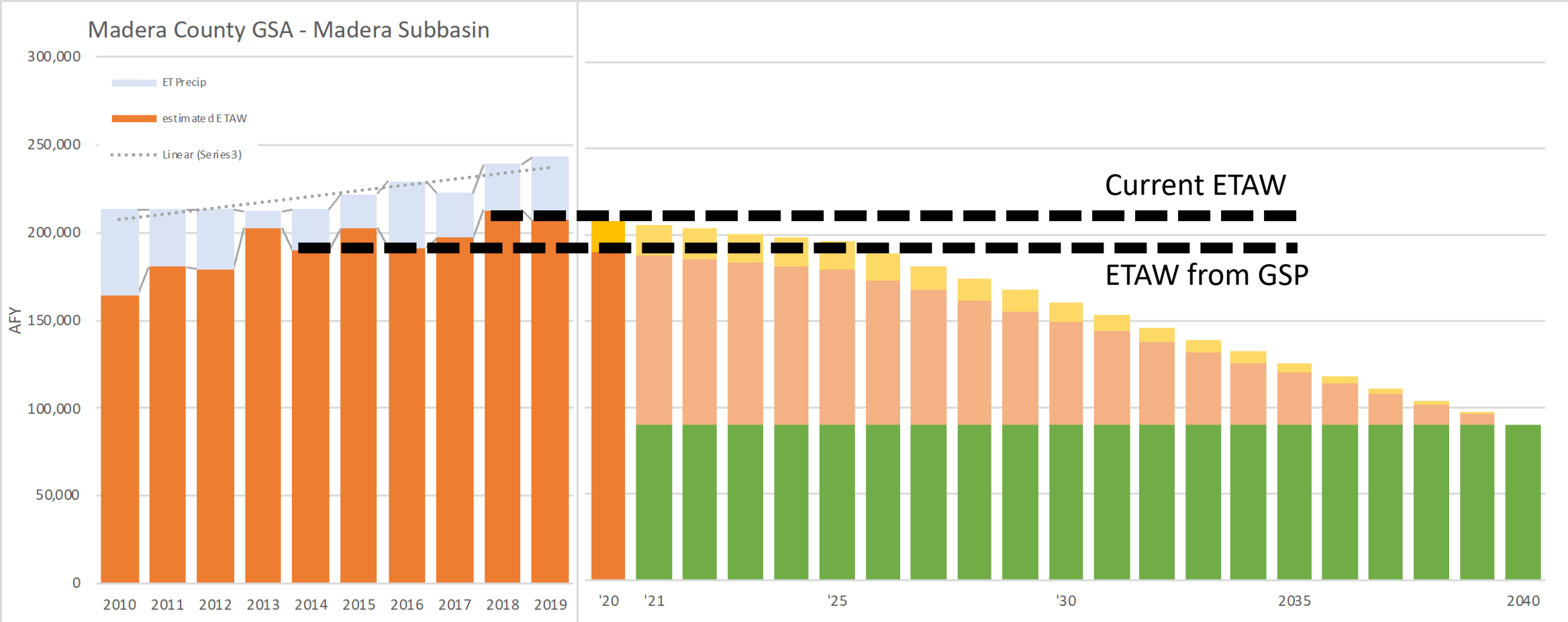
- GSA Board has some discretion for establishing the initial transition water (TW) quantity, where for each subbasin:
 - Initial TW = Total ETAW - SY
- At least two options:
 - Option 1 = Total ETAW = ~ ETAW in the GSP
 - Option 2 = Total ETAW = ~ Current ETAW
- Regardless of the Initial TW, the TW will reduce annually by the 2% and 6% increments over 20 years
- Same end point is reached by 2040
- The annual TW quantity will be distributed based upon the allocation process



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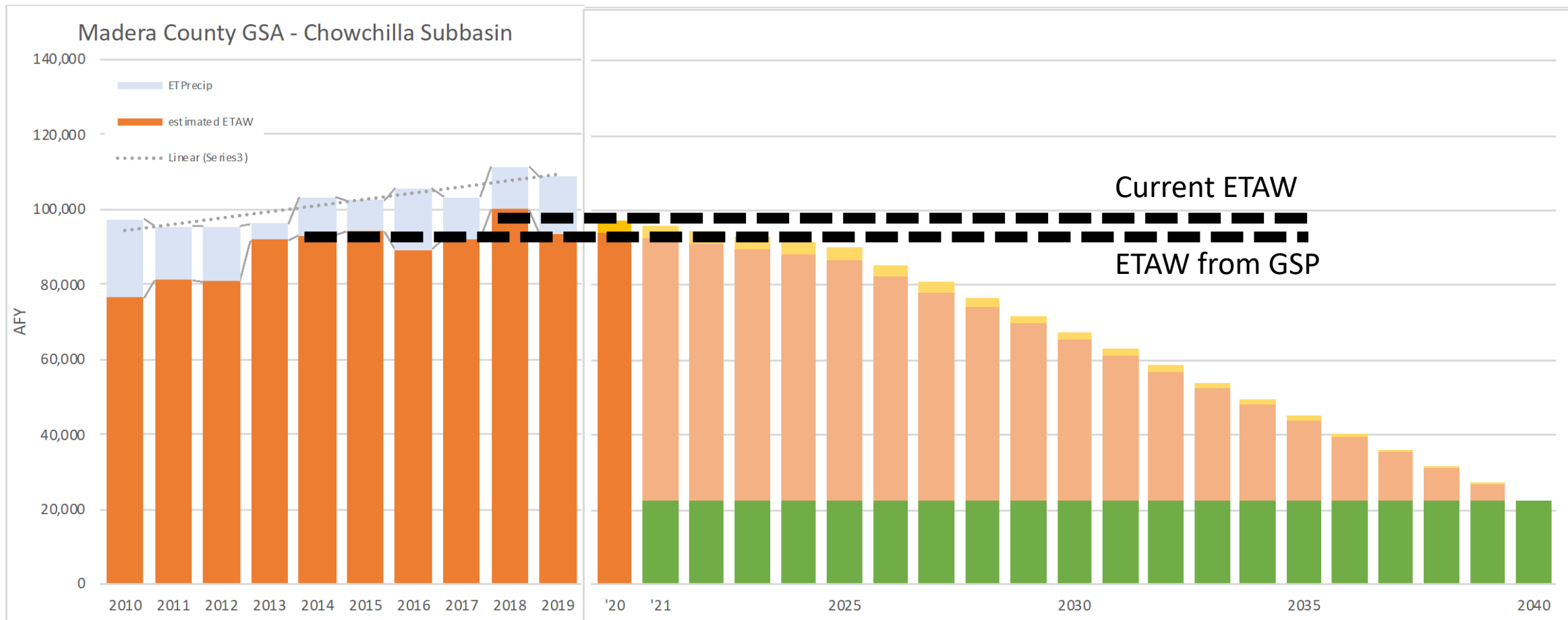
Madera County GSA – Madera Subbasin



ETAW from GSP = ~ 190,000 af/yr
 Current ETWA = ~ 208,000 af/yr
 Difference = ~ 18,000 af/yr

<u>Annual Increment</u>	<u>GSP</u>	<u>Current</u>
First 5 years @ 2%	2,000 af	2,360 af
Next 15 years @ 6%	6,000 af	7,080 af

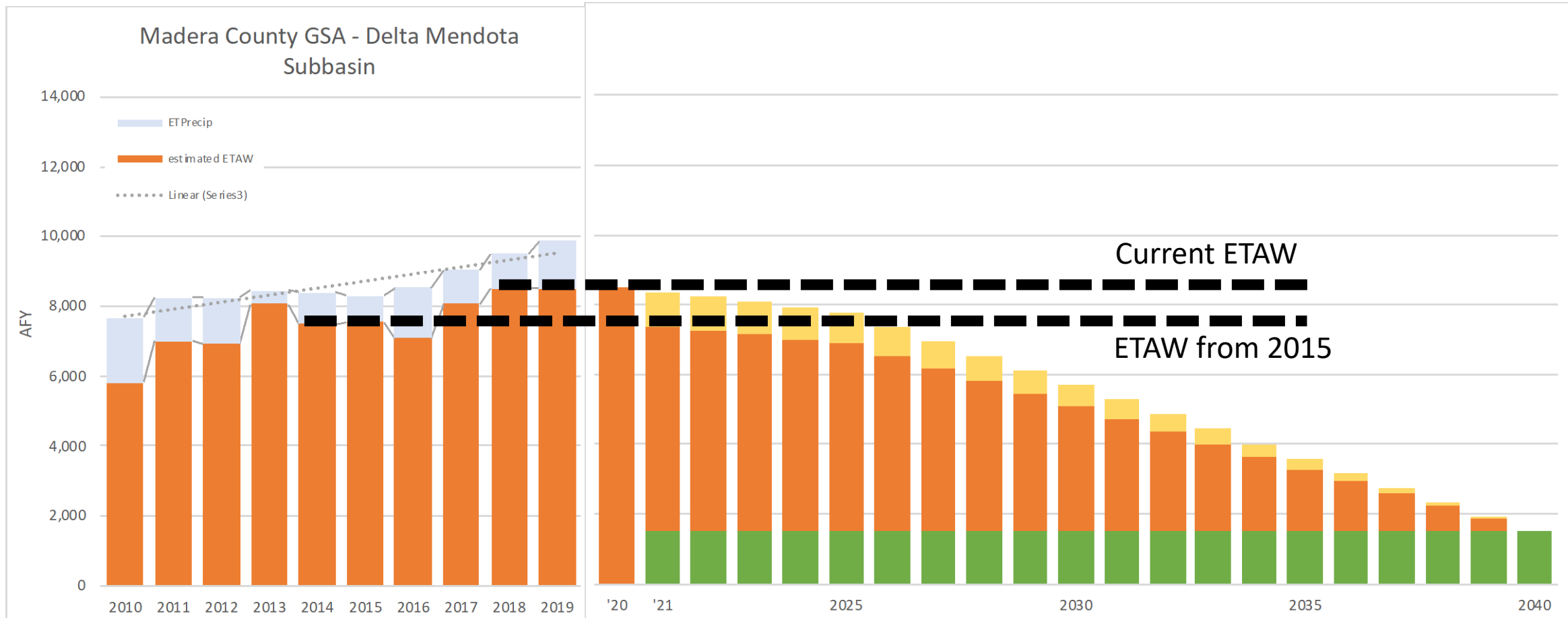
Madera County GSA – Chowchilla Subbasin



ETAW from GSP = ~ 94,000 af/yr
 Current ETWA = ~ 97,500 af/yr
 Difference = ~ 3,500 af/yr

<u>Annual Increment</u>	<u>GSP</u>	<u>Current</u>
First 5 years @ 2%	1,400 af	1,500 af
Next 15 years @ 6%	4,300 af	4,500 af

Madera County GSA – Delta Mendota Subbasin



ETAW from 2015 = ~ 7,500 af/yr
 Current ETWA = ~ 8,500 af/yr
 Difference = ~ 1,000 af/yr

<u>Annual Increment</u>	<u>GSP</u>	<u>Current</u>
First 5 years @ 2%	120 af	140 af
Next 15 years @ 6%	360 af	420 af