Sustainable Groundwater Management: Ensuring Benefits to People and Nature

SANDI MATSUMOTO
ASSOCIATE DIRECTOR
CALIFORNIA WATER PROGRAM
smatsumoto@tnc.org
Our mission:
To conserve the lands and waters on which all life depends
SUSTAINABLE GROUNDWATER MANAGEMENT ACT

...GSP shall include ... impacts on groundwater dependent ecosystems

(Cal. Water Code § 10727.4)
SGMA | Requirements for Nature

- Map land uses, including native vegetation (23 CCR §354.8(a)(4))
- Describe **beneficial uses and users** of groundwater in the basin, including nature (23 CCR §354.10(a))
- Develop a hydrogeologic conceptual model that includes seeps, springs, wetlands and surface water bodies (23 CCR §354.14(d)(4-5))
- Describe current and historical groundwater conditions, including interconnected surface waters and GDEs (23 CCR §354.16(f-g))
- Develop a water budget that quantifies water use, including for managed wetlands and native vegetation (23 CCR §354.18(b)(3))
- Describe undesirable results, including potential effects on **beneficial users** of groundwater, including nature (23 CCR §354.26)
- Describe how minimum thresholds may affect interests of **beneficial users**, including nature (23 CCR §354.28)
- Describe the monitoring plan, which shall monitoring impacts to **beneficial users** as an objective (23 CCR §354.34)
Amargosa River, Mojave Desert
>90% of historic wetlands destroyed
What are Groundwater Dependent Ecosystems and Why are They Important?

Groundwater dependent ecosystems (GDEs) are plant and animal communities that require groundwater to meet some or all of their water needs. California is home to a diverse range of GDEs including palm oases in the Sonoran Desert, hot springs in the Mojave Desert, and the California Coastal Plain where coastal dunes and estuaries are common. These ecosystems are crucial for maintaining biodiversity and providing critical habitat for many species. Understanding and managing these ecosystems is essential for preserving their health and sustainability.