

# Sustainable Groundwater Management: Ensuring Benefits to People and Nature





Our mission:  
To conserve the lands  
and waters on which  
all life depends

# SUSTAINABLE GROUNDWATER MANAGEMENT ACT

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...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



Shasta Valley spring-fed stream, Northern California



Desert Palm Oasis, Coachella Valley, Southern California







>90%

of historic wetlands  
destroyed



# Groundwater Resource Hub

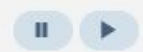
Understanding and Managing Groundwater Dependent Ecosystems

- What are GDEs? ▶
- Importance Of GDEs
- GDE Tools ▶
- Case Studies ▶
- Additional Resources ▶
- About Us



### Where are California's GDEs?

A new database maps the location of seeps and springs, wetlands, and vegetation that are likely to depend on groundwater in California...[Learn More](#)



## 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

GroundwaterResourceHub.org

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Cosumnes River, Central Valley