

Groundwater Replenishment System (GWRS) — Orange County's Advanced Water Purification & Aquifer Recharge Programme

PES & Nature-Based Solutions · Good practice · United States of America

Quality score: 40/100

Evidence strength: Moderate

Summary

OCWD and OCSD's Groundwater Replenishment System purifies treated wastewater via microfiltration, reverse osmosis and UV/advanced oxidation, producing 130 million gallons/day for about 1 million people, recharging Orange County's aquifer and blocking seawater intrusion.

Key dimensions

Dimension	Score
Carbon — sequestration / storage, evidenced	0/3
Biodiversity — conservation / improvement, evidenced	0/3
Water & soil — retention, infiltration, erosion control	3/3
Fire resilience — risk reduction, evidenced	0/3
Governance, certification & transferability	3/3

Evaluated by C-NAPSE

Data sources

[C-NAPSE web research](#) — accessed 2026-09-02

[Orange County Water District \(OCWD\) & Orange County Sanitation District \(OCSD\)](#) — accessed 2026-09-02

[OCWD — GWRS Frequently Asked Questions](#) — accessed 2026-09-02

[California State Water Resources Control Board — Orange County Groundwater Replenishment press release \(2023\)](#) — accessed 2026-09-02

[National Ground Water Association — Orange County Water District case study](#) — accessed 2026-09-02

[Stateline \(Pew\) — From Flush to Faucet: More Places Look to Turn Sewage into Tap Water \(2023\)](#) — accessed 2026-09-02

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