

EXECUTIVE SUMMARY

Managing Groundwater with Small Farms in Mind:

Risks, Barriers, and Opportunities of the Sustainable Groundwater Management Act



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Dulce Organic Farm, Santa Cruz County

“

Sustainable groundwater management should not come at the expense of the very communities it is meant to serve.”

— Farmer in the San Joaquin Valley

The Challenge

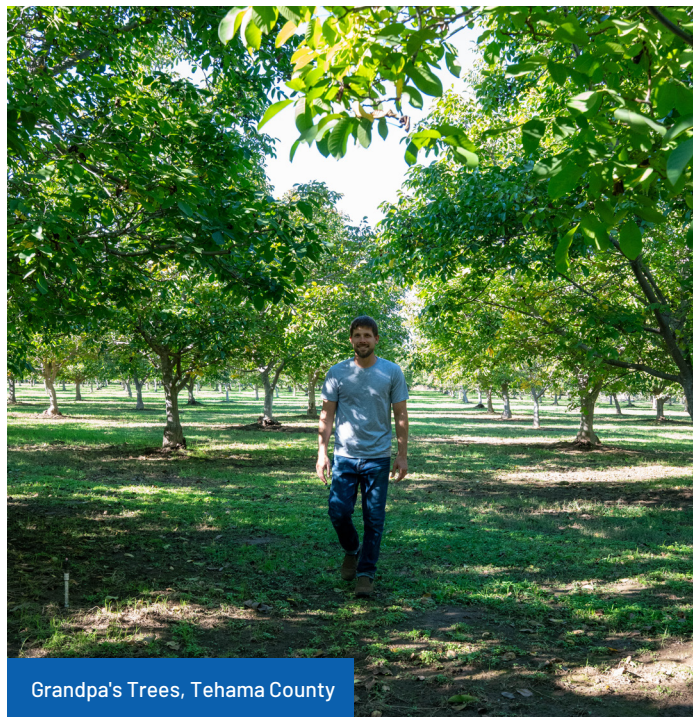
California's 2014 Sustainable Groundwater Management Act (SGMA) is a necessary step toward ending decades of unsustainable groundwater pumping. Yet, as local agencies work to achieve groundwater sustainability and farms across the state adapt to new regulations, there is a growing risk that small farms face disproportionate challenges in understanding and adapting to those rules. These producers anchor rural communities, local food systems, and cultural heritage across California, while contributing the least to groundwater overdraft.

Vital to the state's economy and the national food supply, California agriculture faces increasing challenges. Farmers are producing food in the face of volatile commodity markets, rising costs, complex regulations, and now, increasing constraints on the water they depend on. Within this landscape, small-scale farmers, including immigrant, refugee, tenant, and multi-generational family farmers, grow diverse and culturally significant crops that support food sovereignty and rural community resilience. Despite this valuable contribution, they are among the state's most vulnerable groundwater users and have fewer pathways to adapt and less capacity to absorb new costs.

SGMA identifies six "undesirable results" to avoid: chronic lowering of groundwater levels, reduced groundwater storage, seawater intrusion, degraded water quality, land subsidence, and depletion of interconnected surface water. This report argues that **the widespread loss of small farms should be understood as an emerging "seventh undesirable result"** – one that arises not only from overdraft itself, but from how groundwater management is designed and implemented. In using this framing, this report is not calling for statutory changes to SGMA – rather, it is a call for deliberate and proactive attention to prevent this outcome.

Small farms can be part of the solution to California's groundwater issues – through low-water-use crops, expansion of on-farm recharge opportunities, and long-term

land stewardship. As SGMA implementation continues, meaningful inclusion of small farms in management decisions can both protect rural livelihoods and food security, and provide additional tools for regional groundwater management.



Undesirable Results



The widespread loss of small farms should be understood as an emerging "seventh undesirable result" that arises not only from overdraft itself, but from how groundwater management is designed and implemented. This calls for deliberate and proactive attention to prevent this outcome (but is not intended as a statutory change to SGMA)

Findings

Findings of this report are the result of three years of direct engagement with small-scale farmers by Outreach Specialists across California through workshops, on-farm meetings, focus groups, statewide surveys, and review of Groundwater Sustainability Plans. The findings are consistent and concerning:

- Groundwater markets, land fallowing, recharge projects, and pumping fees — as currently structured — can unintentionally favor larger, better-resourced operations, which may contribute to the displacement of small farms.
- Small farms are subject to the same rates and regulatory complexity as larger operations, despite accounting for a small fraction of total groundwater use. For example, in the critically overdrafted Tule and Tulare Lake subbasins, **over 40% of pumpers account for only 1% of total water use.**
- Tenant farmers — who make up a significant share of small-scale producers — are often invisible to GSAs, which typically communicate only with landowners.
- Most small-scale farmers have limited awareness of SGMA — across outreach conducted in priority basins, **more than half of small-scale farmers had not heard of SGMA** before they met a SGMA Outreach Specialist.
- Satellite-based evapotranspiration monitoring tools used to estimate groundwater use are not well calibrated for diversified small farms, creating **risks of inaccurate assessments and overcharges.**
- Most surveyed small-scale farmers are concerned they may be **forced to shut down their operations.** This risk could intensify under inequitable implementation of SGMA, and this report outlines practical steps to help prevent that outcome.



EXAMPLES OF INCLUSIVE OUTREACH & MANAGEMENT ACTIONS

SONOMA GSAS

Inclusive Outreach

Contracted with CAFF to hire a small farm Outreach Specialist embedded in the farming community — expanding meaningful participation across monitoring programs, water use efficiency programs, and data exchange systems.

NORTH KINGS GSA

Accessible Engagement

Coordinated with UC ANR Fresno Small Farms bilingual team to provide targeted SGMA outreach and education to South East Asian small-scale farmers — creating space for inclusive small farmer engagement.

EAST TURLOCK SUBBASIN GSA

Cover Crop Accounting

Developed an innovative groundwater accounting approach that credits cover crop adoption by recognizing increased infiltration — directly incentivizing sustainable practice adoption.

PAJARO VALLEY WATER MANAGEMENT AGENCY

Recharge Incentive

ReNeM program offers landowner rebates based on infiltration volume — making on-farm recharge economically viable for smaller operations that would otherwise lack resources to participate.

Four Opportunities for Action

The report identifies four interconnected opportunities that, taken together, offer a practical and equitable path forward:

1

Identify Small-Scale Farmers Locally: Not all farmers carry equal responsibility for overdraft, yet most face identical requirements. GSAs should establish a transparent, locally grounded process to identify small-scale farmers who contribute minimally to groundwater overdraft yet face disproportionate risk. A proposed three-part framework suggests assessing minimal water impact, community value, and financial vulnerability to distinguish these producers from larger, higher-impact water users. This identification is the essential first step toward equitable policy design.

2

Coordinate and Act to Keep Small Farms in Business: State agencies, GSAs, and farmers each have a distinct role. DWR should establish a dedicated fund for “Building Small Farm Resilience Under SGMA” to support technical assistance, small-farm liaisons, and inclusive governance. GSAs should evaluate how their outreach, fee structures, and management actions affect small producers and adjust accordingly. Small-scale farmers, in turn, should have meaningful pathways to participate in and shape groundwater governance decisions.

3

Implement Actions that Support Small Farms in Groundwater Management Decisions: Fifty actionable recommendations — organized across GSA general operations, management actions, and groundwater use regulation — can protect small farms while bringing them into the fold as part of the groundwater management solution. The recommendations include practical reforms to outreach and accessibility, governance and board composition, monitoring accuracy, fee design, water markets, recharge programs, fallowing alternatives, allocation models, and adjudication processes.

4

Support Equitable Transition Pathways: Support transitions that build low-water-use landscapes while preserving the social and economic benefits of small-scale, diversified, and local farming operations. Value small-scale and diversified farming operations as a viable alternative to land fallowing for current water-intensive operations. Land repurposing should prioritize systems that reduce groundwater use while protecting working lands and keeping working people on the landscape. For farms unable to sustain current operations, California should establish an “Equitable Transition Initiative,” offering coordinated technical assistance, financial support, and workforce training for farmers and farmworkers navigating land repurposing, crop transitions, or departure from irrigated agriculture.

The Case for Action

Equity and sustainability are not competing goals under SGMA — **they are mutually reinforcing**. Small-scale farmers contribute least to overdraft yet face disproportionate risk under current implementation, and their loss would undermine the rural economies, food systems, and cultural heritage that they sustain.

By embedding equity, transparency, and support into SGMA implementation, California has the opportunity to build a groundwater governance system that protects both its water resources and the farmers who depend on them.

The future success of SGMA will be measured not only by hydrologic indicators, but by whether California’s agricultural communities remain viable, diverse, and resilient.