Watermark – Responses to Madera GSA Grower Questions

1. QA/QC

What processes are in play for quality assurance and quality control for data?

Our approach includes multiple layers of checks to ensure the data is accurate and makes sense:

Verification Codes – When growers claim parcels, they must enter a verification code sent to the legal landowner on record, ensuring data accuracy and preventing unauthorized access.
(e.g., if someone tries to claim a neighbor's field, they won't have the correct code, so the system blocks it)

Application-Level Validation – The platform checks all submitted information before it's saved, looking for things like missing numbers, invalid formats, or illogical entries.
(e.g., if a grower enters "50000" as their monthly water use for a 2-acre parcel, the system flags it as an error and blocks submission until fixed)

Database Constraints – The system enforces built-in rules that prevent saving incorrect data such as negative values, duplicate entries, or mismatched parcel IDs.
(e.g., if someone tries to type "twenty" instead of "20" for applied water, it won't save)

User Review & Approval Workflows – GSA staff see "pending" entries from growers and can review and approve data before it becomes official, adding a human layer of quality control.
(e.g., a GSA reviewer is able to catch if a grower meant to report 120 AF but accidentally typed 1,200 AF)

Ongoing Oversight by Data Specialists – Our internal data team reviews and monitors incoming and outgoing data to catch inconsistencies and outliers early.
(e.g., if a group of growers suddenly show zero water use mid-summer, we investigate whether it's a real change or a data issue)

2. Data Security
How do you make sure that your data is securely shared and stored?

We take security seriously: your data is private, encrypted, and under GSA control. Here's how:

Encrypted Storage via Amazon RDS – All grower and water data is stored in Amazon's cloud database service, with encryption turned on using AWS Key Management Service (KMS).
(e.g., even if someone accessed the raw files, they couldn't read the contents without the encryption keys)

Access Control Using Login Permissions – Only users with proper credentials can access data—roles are assigned based on whether you're a grower, GSA staff, or admin.
(e.g., a grower can only see their own account, not a neighbor's, even if they're part of the same farm unit)

Data in Transit is Encrypted via HTTPS – All data that moves between your phone, browser, and the database is encrypted to prevent "eavesdropping" or theft.
(e.g., if you log in using public Wi-Fi at a coffee shop, your password and water use info still can't be intercepted)

Daily Backups with Version Control – We take automated snapshots every day so we can recover your data if something goes wrong.
(e.g., if a grower accidentally deletes a report or inputs bad data, we can restore the previous day's version)

In-House Cloud Architect Overseeing Security – We don't outsource security. Our own expert manages the system and monitors for potential risks.
(e.g., if AWS rolls out a new security patch, our architect applies it immediately to protect your data)

3. Mobile Interface
Does your product have a mobile application or interface?

Yes, we built the platform to work on phones, tablets, and any web browser. You don't need to install anything.

Fully Mobile-Responsive Design – The interface adjusts automatically for smaller screens and touch controls.
(e.g., if you open it on an iPhone while checking fields, the text and buttons adjust to fit your screen)

No App Required – Works in Mobile Browsers – Because it works directly through Chrome or Safari, there's no need to download or update an app.
*(e.g., a grower can pull up their dashboard in seconds without going to the App Store)*

Tested in Low-Bandwidth Areas – We optimize for speed, even in rural locations with slower internet.
(e.g., a grower with 2 bars of signal can still load their water budget and parcel info while out in the field)

In-House Designer Ensures Ease of Use – We regularly test the design with real users to improve clarity and simplicity.
(e.g., we changed the "Water Allocation" button to "Your Water Budget" after growers said it was easier to understand)
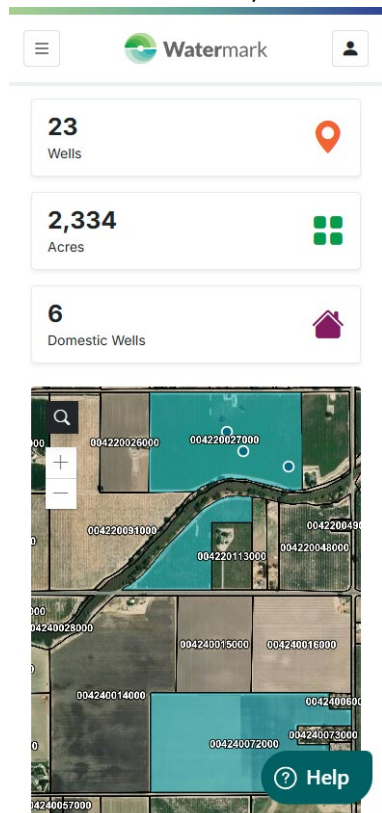
4. Use by Other GSAs
Please list any other Groundwater Sustainability Agencies (GSAs) using your products.

Watermark is actively used by multiple GSAs:
- North Fork Kings GSA
- South Fork Kings GSA
- El Rico GSA

5. NOAA
Are any of your satellites/data collection capabilities affected by the loss of weather prediction in NOAA data?

N/A

6. Crops
Is there a list of crops covered by either the ET data collection or platform service?

Yes, we maintain a comprehensive crop list and are transparent about it:

ET Provider Crop Classifications – Your chosen ET provider typically maintains a list of crop types, and we match this same list.

ILRP Crop List Integration – We also integrate crop lists from the Irrigated Lands Regulatory Program.
(e.g., if a grower is already reporting a crop for water quality purposes, we match that same info in Watermark)

Available Upon Request – The GSA can make the crop list public to help growers understand what's being tracked.

7. Grower Accessible Platform
Watermark is built to serve both GSAs and growers, and many features are grower-facing:

Does the platform have the ability to aggregate ET data over unique geospatial polygons provided by the GSA (fields)?
Yes, if the GSA supplies field boundary shapefiles.

Does the platform have the ability for growers and /or the GSA to combine field polygons into larger management groups (farm units)?
Yes, growers can group parcels into a single account or "farm unit."
(e.g., a grower with 6 parcels can combine them into "East Ranch" and "West Ranch" to simplify budgeting)

Does the platform have the ability to display and compare groundwater allocation amounts to current groundwater use (budgets) by farm unit or grower account?
Yes, dashboards show real-time balances for groundwater use vs. allocation.
(e.g., the grower sees: Allocated = 200 AF, Used = 147 AF, Remaining = 53 AF as of July 1st)

Does the platform have the ability to incorporate allocation adjustments provided by the GSA (recharge credits, surface water credits, carryover)?
Yes, GSA-issued credits or adjustments show immediately.
(e.g., after earning 15 AF of recharge credit, the dashboard updates the grower's groundwater balance on the time step established by GSA policy)

Does the platform have the hold grower-uploaded, geotagged photos?
Yes, if enabled by the GSA.
(e.g., a grower uploads a photo of a recharge basin with GPS data that helps the GSA verify the field activity)

Explain why your platform is the best.

Simple, Proven, and User-Friendly – Designed with real grower feedback.
(e.g., 90%+ of landowner acreage is actively registered and using the platform in current GSAs)

Rural Friendly – Optimized for low bandwidth and mobile access.
(e.g., growers in remote areas can access the platform reliably via phone)

Private and Secure – No third-party data sharing without GSA permission.
(e.g., even internal MLJ staff can't access a grower's account unless allowed by the GSA)

Experienced Team – More than just a software company, we are water consultants too.
(e.g., our team has helped growers navigate both ILRP and SGMA requirements for the past 25 years)

Dedicated Support – You're supported by a real team of developers, data analysts, and project managers, all in-house. This ensures faster response times and fewer handoffs.
(e.g., if something doesn't make sense in your report, we don't send a help article—we walk through the issue with you)

Cost-Effective and High Value – Our platform is one of the most competitively priced options available, with full functionality.
(for many GSAs, the cost per grower is lower compared to other tools—your dollar goes further, and you get a full team behind the software, not just the technology)

Ready to Deploy – We have successfully implemented the platform across multiple GSAs, and the features are already built in-house. This allows us to tailor the system to your GSA's needs without lengthy development timelines or delays.

8. ET Data

a. Does your service calculate for ET? ETAW? If so, how does the calculation work (and why do you think it's the best). If not, where does the data come from?
   i. N/A
b. Can your firm's ET data be integrated into a groundwater accounting platform?
   i. N/A
c. Does your firm have the capability of providing ET data through an automated method (such as an API) to an accounting platform and at what frequency and with what delay factor?
   i. N/A
d. What is the expected accuracy of your calculation of ETAW, including its margin of error? Explain how the accuracy figure is calculated. Feel free to discuss "absolute accuracy" and accuracy relative to others. Quantify the improved accuracy.
   i. N/A
e. What details can be shared on how the data is validated?
   i. N/A