



Questions for RFP Responders

Submitted by 4Creeks, Inc.

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Questions for RFP Responders

1. QA/QC: What processes are in play for quality assurance and quality control for data?

Code Review:

All new or modified code is required to be reviewed and approved via Azure Source Control by senior level staff before those updates are implemented into the deployment database.

Sandbox Databases:

Any major updates or processes will take place on a sandbox for a trial run prior to executing on the production environment. This allows programmers and admin staff to review results, reports, and work out any issues before rolling out to the live database.

Data Imports:

Majority of the data that is imported into Basinsafe is also run through a verification report. I.E. Monthly ET import, Surface water imports, ET consumption and extraction summaries, well registries, meter readings, etc.

Examples (all reports can be modified for the specific needs of the GSA):

Monthly ET import

Print

Save

Bookmarks

Parameters

Resources

Single Page

MinimumDeltaPercentage

95

Month

5

Year

2025

Reset

Submit

Monthly ET Delta Comparisons
(Min Delta %: 95)
5 / 2025

Total APNs with ET up from last year by:

0-25%	26-50%	51-75%	76-89%	90-100%	> 100%	NULL	Flagged
860	241	53	0	0	0	5	5
1559	937	267	68	35	60		
0 to -25%	-26 to -50%	-51 to -75%	-76 to -89%	-90 to -100%	< -100%		

APN	Parcel Gross Acres	5/2025 AF/Acre	5/2025 ET	Last Year ET	Last Year AF/Acre	Delta %	Delta AF	Last Month ET	Last Month AF/Acre	Delta %	Delta AF
		0.11	0.55	1.21	0.25	-120.00	-0.66	0.85	0.17	-54.55	-0.30
		0.11	0.11	0.22	0.22	-100.00	-0.11	0.19	0.19	-72.73	-0.08
		0.12	2.41	5.35	0.27	-121.99	-2.94	3.82	0.19	-58.51	-1.41
		0.09	0.01	0.02	0.18	-100.00	-0.01	0.02	0.18	-100.00	-0.01
		0.08	2.92	6.29	0.16	-115.41	-3.37	10.56	0.28	-261.64	-7.64
		0.07	0.04	0.08	0.15	-100.00	-0.04	0.06	0.11	-50.00	-0.02
		0.11	0.56	1.20	0.24	-114.29	-0.64	0.91	0.18	-62.50	-0.35

Well Registration

Incomplete Wells

Wells for

Well ID 2495 - WELL #1, Created: 3/4/2025 2:57:04 PM

Installation Date	Top Depth	Bottom Depth	Total Depth	Max Production	Casing Diameter	APN Located On
Completed	Missing!	Missing!	Completed	Completed	Missing!	Completed

Well ID 2512 - WELL #3, Created: 3/4/2025 2:57:04 PM

Installation Date	Top Depth	Bottom Depth	Total Depth	Max Production	Casing Diameter	APN Located On
Completed	Missing!	Missing!	Completed	Completed	Missing!	Completed

Well ID 2513 - WELL #2, Created: 3/4/2025 2:57:04 PM

Installation Date	Top Depth	Bottom Depth	Total Depth	Max Production	Casing Diameter	APN Located On
Completed	Missing!	Missing!	Completed	Completed	Missing!	Completed

Well ID 3144 - CB4, Created: 3/4/2025 2:57:04 PM

Installation Date	Top Depth	Bottom Depth	Total Depth	Max Production	Casing Diameter	APN Located On
Completed	Missing!	Missing!	Completed	Completed	Missing!	Completed

Well ID 3146 - CB1, Created: 3/4/2025 2:57:04 PM

Installation Date	Top Depth	Bottom Depth	Total Depth	Max Production	Casing Diameter	APN Located On
Completed	Missing!	Missing!	Completed	Completed	Missing!	Completed

Well ID 3147 - CB2, Created: 3/4/2025 2:57:04 PM

Installation Date	Top Depth	Bottom Depth	Total Depth	Max Production	Casing Diameter	APN Located On
Completed	Missing!	Missing!	Completed	Completed	Missing!	Completed

Well ID 2651 - D, Created: 3/4/2025 2:57:04 PM

Installation Date	Top Depth	Bottom Depth	Total Depth	Max Production	Casing Diameter	APN Located On
Completed	Missing!	Missing!	Completed	Completed	Missing!	Completed

Well ID 3570 - 1, Created: 3/19/2025 10:31:09 AM

Installation Date	Top Depth	Bottom Depth	Total Depth	Max Production	Casing Diameter	APN Located On
Needs Attention	Completed	Completed	Completed	Completed	Completed	Completed

Well ID 3369 - E, Created: 3/4/2025 2:57:04 PM

Installation Date	Top Depth	Bottom Depth	Total Depth	Max Production	Casing Diameter	APN Located On
Completed	Missing!	Missing!	Missing!	Completed	Missing!	Completed

ET and Surface Water Usage Summary

Allocation and Use Summary

Customer #
 Send Date 7/01/2025
 ET Year Data For: 2025

THIS IS NOT A BILL

Gross ET (Acre-Feet)

APN	Acres	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD Total
Fields 3 and 4	160.00	11.95	18.67	38.01	48.20	10.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	127.39
Fields 1 and 2	159.00	16.39	25.64	42.73	52.69	14.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	151.56
T1 - T4	320.00	20.87	32.83	80.25	130.40	143.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	407.62
Total (AF)	639.00	49.21	77.14	160.99	231.29	167.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	686.57

Surface Water Delivered (Acre-Feet)

Delivery Type	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD Total
Riparian/Poplar	0.00	0.00	114.99	0.00	0.00	83.70	0.00	0.00	0.00	0.00	0.00	0.00	198.69
Regular	0.00	10.32	20.18	0.00	219.81	131.86	133.13	0.00	0.00	0.00	0.00	0.00	515.30
Total (AF)	0.00	10.32	135.17	0.00	219.81	215.56	133.13	0.00	0.00	0.00	0.00	0.00	713.99

Ground Water Allocation Summary (Acre-Feet)

Allocation Group	Beginning Year Balance	YTD Adjustment	YTD Consumed	End Balance
Precipitation Yield	0.00	485.64 ^G	-393.32	92.32
Sustainable Yield	101.63	95.85 ^G	0.00	197.48
District Allocated Groundwater Credits	1156.59	600.66 ^G	0.00	1,757.25
Transitional Pumping	0.00	479.25 ^G	0.00	417.75
Landowner Developed Credits	4423.08	-61.50 ^B 0.00 ^G	0.00	4,423.08
Total (AF):	5,681.30	1,661.40	-393.32	6,887.88

Notes(s): A - Developed Credits from overapplication of Surface Water
 B - Developed Credits from Landowner Recharge.
 C - Developed Credits from Landowner Recharge on District Facilities.
 D - Credits transferred to or From another Landowner.
 E - District Allocation Increase or Decrease.
 F - Administration Adjustments.
 G - New Water Year Allocation

Error Logging/Notifications:

Basinsafe has an integrated notification system that is sent directly to the programming team in case an error or bug is triggered.

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

We maintain strict data security practices by hosting our server on-site, which gives us direct control over physical and network access. Our database server is protected behind our internal firewall and is only accessible from computers that are either on the premises or connected via a secure VPN. This ensures that no external access is permitted without proper authentication.

To safeguard against data loss, we perform both daily and weekly backups. These backups are stored securely and regularly tested to ensure data integrity and recoverability. By combining controlled access with a robust backup strategy, we ensure that our data remains both secure and resilient.

3. Mobile Apps: Does your product have a mobile applications or interface?

We are rolling out specific tools and features, but the full functionality of Basinsafe has not been ported to mobile version yet.

Our most recent mobile migrations include Well Registration and meter reading uploads. We realized that growers may be required to upload photos of the meters on a regular basis, so we wanted the tools to be readily available to work out in the field.

4. Use by Other GSAs: Please list any other Groundwater Sustainability Agencies (GSAs) using your products.

Lower Tule River GSA (2020): 4Creeks partnered with GSA staff for the development of Basinsafe. The agency utilizes groundwater and surface water Basinsafe tools to account for landowner surface water deliveries, sending annual assessments, and invoicing landowners for groundwater and surface water usage.

Pixley GSA (2020): Similarly to Lower Tule GSA, Pixley staff assisted with development of Basinsafe. Onboarding two GSA's simultaneously allowed for a flexible and robust platform design. Basinsafe was future proofed for ongoing rapid policy changes that are unique to each GSA's needs.

Eastern Tule GSA (2021): ETGSA consists of one incorporated city, incorporated community, multiple irrigation districts/private water companies, and groundwater dependent irrigated lands. 4Creeks assisted with administrative landowner support services being that the ETGSA was a new governing agency. ETGSA utilizes groundwater Basinsafe tools with add-on features including the Water Market Board, a Craigslist-type group for landowner

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communication trading groundwater credits, and customized allocations and groundwater tracking for Special Management Areas.

Tri-County Water Authority GSA (2021): TCWA rules and regulations implemented an extraction-based credit deduction system utilizing a hybrid of LandIQ's ETc, precipitation, and field/crop data. This unique approach required the additional feature add-ons within Basinsafe™ for individual field management along with various reporting capabilities and our groundwater Basinsafe™ tools.

Vandalia GSA (2024): In 2024, VWD departed from ETGSA and became their own GSA. The software team assisted in the migration from one database to another, along with all of the grower's historically available credits and data records. In early 2025, software modifications were made to the system to comply with new GSA policies. VWD manages 1,300 acres of irrigated and non-irrigated lands.

Tea Pot Dome GSA (2024): In 2024 TPD departed from ETGSA and became their own GSA. The software team assisted in the migration from one database to another, along with all the grower's historically available credits and data records. In early 2025, software modifications were made to the system to comply with new GSA policies. TPD manages 3,500 acres of irrigated and non-irrigated lands.

Porterville GSA (2025): Porterville Irrigation District has been utilizing Basinsafe for their surface water tracking software since 2022 and has recently formed a new GSA with the intention of utilizing Basinsafe for their groundwater tracking. Onboarding will begin to roll out in Oct 2025.

Saucelito GSA (2025): Saucelito Irrigation District has been utilizing Basinsafe for their surface water tracking software since 2022 and has recently formed a new GSA with the intention of utilizing Basinsafe for their groundwater tracking. Onboarding will begin to roll out in Oct 2025.

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? If so, can the public see it?

Basinsafe hosts the land use data that typically is a deliverable from the ET providers. Growers have the ability to review which fields are associated with each APN. Basinsafe can generate a report for a master list of all crops and their acreages. We can also build a new feature for viewing all crops if there is a need for it.

7. Grower Accessible Platform:

a. Does the platform have the ability to aggregate ET data over unique geospatial polygons provided by the GSA (fields)?

Yes. Our GIS team at 4Creeks receives and processes the ET data and associates it to each respective field and parcel. Growers can customize their fields names and export that ET data into an excel.

b. Does the platform have the ability for growers and /or the GSA to combine field polygons into larger management groups (farm units)?

No, Basinsafe does not currently have these tools, however, this feature can certainly be implemented as customization if desired.

c. 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, growers can view real time water budgets and any available ET associated to the account or specific parcel and field.

d. Does the platform have the ability to incorporate allocation adjustments provided by the GSA (recharge credits, surface water credits, carryover)?

Yes, the GSA administrative staff can create any water adjustments, water buckets, and policies for water management in Basinsafe. Water bucket transactions are labeled and designated according to their specific needs.

e. Does the platform have the hold grower-uploaded, geotagged photos?

Yes, Basinsafe does store uploaded photos along with their embedded meta data. This feature was implemented for the well registration, meter readings, and other supporting documents that may apply. The geotagged photos do require the grower to modify their personal phone settings for this feature to work so we can't guarantee 100% success.

f. Explain why your platform is the best.

Basinsafe is an innovative online landowner water accounting platform designed to address the critical need for Groundwater Sustainability Agencies (GSAs) and their landowners to achieve groundwater sustainability in compliance with the Sustainable Groundwater Management Act (SGMA) regulations. Recognizing the importance of transparency and effective tools, Basinsafe offers a fully customizable solution tailored to the unique needs of each GSA.

Over the past six years, Basinsafe's flexible and robust framework has been shaped by a diverse range of implementations, resulting in a platform that adapts to the specific policies and goals of each GSA. This adaptability ensures that Basinsafe meets the

varied requirements of groundwater management across different subbasins, with features that are made available across our diverse network of users.

Our team is committed to providing exceptional customer support, drawing on extensive expertise in technical consulting for Groundwater Sustainability Plans (GSPs) and policy development across multiple subbasins. Enhanced by comprehensive landowner support services, we have cultivated a deep, full-circle understanding of the needs of both GSAs and landowners. This expertise enables Basinsafe to deliver a seamless, effective, and user-focused accounting platform that empowers GSAs and landowners to work together toward sustainable groundwater management.

4Creeks has tools and resources to provide additional services, beyond what the out-of-the-box software provides, I.E. GIS mapping and analysis, water policy consulting, and a software team that truly understands what they are building, why it's being built, and who we are building it for.

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?

N/A

b. Can your firm's ET data be integrated into a groundwater accounting platform?

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?

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.

N/A

e. What details can be shared on how the data is validated?

N/A