



CA LGMA Priority Setting Report

CA LGMA-Approved Guidelines 2024 Amendment Process

GROW WITH SCIENCE.

March 4, 2024



Table of Contents

Priority Setting Report 3

Selected Priorities 3

Priority Setting Process..... 3

Step # 1: Priority Setting Committee Selection Process..... 3

Step # 2: Priority Topic Submission..... 4

Step # 3: Meeting 1 Discussion of submitted priorities. 5

Step # 4: Priority Voting..... 5

Step #5: Meeting 2 Priority Survey Results and Priority Selection Consensus 7

Appendices 8

Appendix 1: Summary of Priority Topic Submitted..... 8

Appendix 2: Priority Topics and Comments from Meeting # 1 11

Priority Setting Report

Selected Priorities

The following priorities were selected by the priority setting committee to be considered for the 2024 CA LGMA amendment process. These two priorities were selected by following the process summarized in this document.

- a. Ag Water Standards
 1. Review of Type B to A water standards
 2. Review variable water quality and sampling standards as they relate to generic E. coli.
- b. Harvesting Equipment Sanitation
 1. Harvest Equipment Sanitation – review key changes. (initial process as part of a long-term effort)

Priority Setting Process

Western Growers (WG) supports the continuous improvement of the CA LGMA-approved leafy green food safety guidelines and facilitates a yearly systematic amendment process. The CA LGMA starts this process by confirming members of a priority-setting committee and ends it with the formal approval of any updates or changes to the guidelines. The Priority Setting Process is the first step of the CA-LGMA Guidelines amendments process. The goal of this process is to have a transparent selection of the topic(s) to be evaluated during the 2024 amendment process. The priority-setting process is split into the following steps.

1. Priority Setting Committee Selection Process
2. Priority Topic Submission
3. Meeting 1: Discussion of Submitted Priorities.
4. Priority Voting
5. Meeting 2: Priority Selection
6. LGMA Board Priority Approval

Step # 1: Priority Setting Committee Selection Process

The priority-setting committee was selected to have representatives from California and Arizona.

The composition of the priority-setting committee was defined as follows:

California

- 2 members from the CA LGMA Technical Committee (volunteers), there were more than two volunteers, and the two spots were randomly. This is coordinated between LGMA Staff and the Chair of the CA LGMA Technical Committee.
- 1 Staff Member from the CA LGMA (Selected by the CA LGMA)
- 1 Subject Matter Expert from California (Selected by the CA LGMA). Communication facilitated by Western Growers

Arizona

CA LGMA Priority Setting Report

- 2 members of the AZ LGMA Technical Subcommittee. The selection was facilitated by the AZ LGMA
- 2 staff members from the AZ LGMA
- 1 Subject matter expert from Arizona. The selection and communication were facilitated by the AZ LGMA

Table 1: Priority Setting Committee

Name	Role	
California		
Greg Komar	CA LGMA Technical Director <i>CA LGMA Staff</i>	
Chato Valdes	Sabor Farms <i>CA LGMA Technical Committee Member</i>	
Tony Banegas	Bounduelle <i>CA LGMA Technical Committee Member</i>	
Dr. Trevor Suslow	UC Davis <i>CA Subject Matter Expert</i>	
Arizona		
Teressa Lopez	AZ LGMA Program Administrator <i>AZ LGMA Staff</i>	
Kami Van Horm	AZ LGMA Technical Assistant <i>AZ LGMA Staff</i>	
Megan Chedwick	Church Brothers <i>AZ LGMA Technical Subcommittee</i>	
Matt Burke	Tanimura & Antle <i>AZ LGMA Technical Subcommittee</i>	
Dr. Channah Rock	University of Arizona <i>AZ Subject Matter Expert</i>	
Facilitator		
Gustavo Reyes	Western Growers <i>Facilitator</i>	

Step # 2: Priority Topic Submission

The members of the priority-setting committee were requested to submit priority topics to be considered by the group. Priorities were submitted through an online form prepared by Western Growers. A summary of the submitted priorities is found in “Appendix 1: Summary of Priorities Submitted,” and the exact priorities and comments submitted are found in the supplemental document to this report.

10 total priority topics were selected. The topics are shown in Table 2:

Table 2: List of priority topics submitted by the priority-setting committee.

Priority Number	Priority topic Name
1	Harvest Equipment Sanitation

CA LGMA Priority Setting Report

2	Ag Water Standards
3	Preharvest testing for leafy greens
4	Tissue testing standards
5	Buffer Distances/Adjacent land use
6	Flooding
7	LGMA Metrics Review
8	Soil amendments and soil inputs
9	Well Assessment
10	Alignment with Arizona Metrics

The “summary of priorities submitted,” and a compiled document with all submitted comments section were sent to the priority setting committee 9 days before meeting #1. This for the committee to prepare additional comments that would be used during the discussion that would be held in meeting #1.

Priorities with the most submissions were Priority #1 Harvest Equipment with 8 comments, submitted, followed by Priority #2 Ag Water Standards with 6 comments. Priorities #8 Soil amendments and soil inputs as well as Topic #7 LGMA metrics reviewed received 3 comments each.

Step # 3: Meeting 1 Discussion of submitted priorities.

A 1-hour discussion was held via Zoom. The slide deck for the discussion is found in the supplemental document to this report. Participants for this meeting included all members of the priority-setting committee (Table 1) except for Tony Banegas.

The meeting was held with the purpose of the priority-setting committee members to share additional comments for each priority. Each priority was discussed for 5 minutes. At the end of the process time allowed for additional discussion of priority #2, Ag Water Assessment.

As part of the discussion, the priority-setting committee agreed to create an 11th priority, which was a combination of priorities #2 Ag Water Standards, and #9 Wells Assessment. This is because comments suggested both priorities be considered together.

A summary of the comments made during this discussion was created and can be found in the “Appendix 2: Priority Topics and Comments from Meeting # 1”

Step # 4: Priority Voting

The priority-setting committee was sent an online survey to vote for each priority based on two criteria (i) Urgency, and (ii) Impact. The priority score was calculated by multiplying the urgency and impact scores selected. Scores were obtained by using the following priority matrix.

CA LGMA Priority Setting Report

Table 3: Priority Matrix

		Impact			
Urgency		1 Lower	2	3	4 Higher
	1 Minor	1	2	3	4
	2	2	4	6	8
	3	3	6	9	12
	4 Critical	4	8	12	16

A total of eight members voted for each priority. The average priority score was obtained by each priority following Equation 1. Where the average priority score was used to rank priorities from 1 to 11. The rank and boxplot of the priorities are displayed in **Figure 1**.

$$\text{Average Priority Score} = \frac{\text{sum of all 8 priority scores}}{8 \text{ votes}} \quad \text{Equation 1}$$

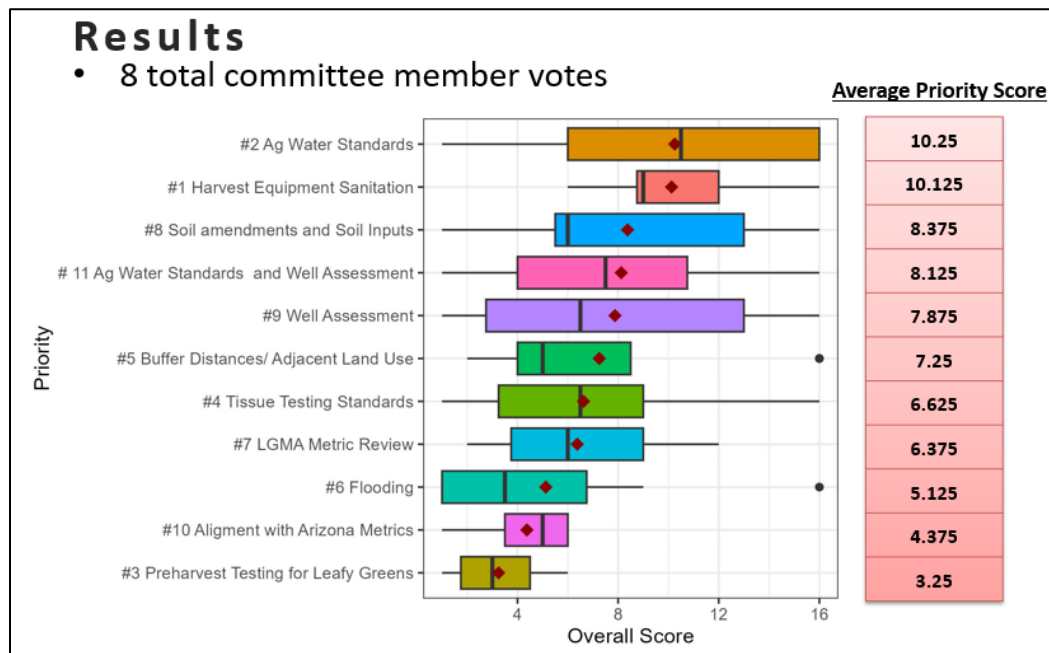


Figure 1: Summary of average overall scores for 11 priorities considered by the priority-setting committee.

The results of the priority survey indicated that the priority with the highest average overall score was priority #2, Ag water standards with a 10.25 average priority score. The second highest was Priority #1, harvest equipment sanitation with 10.13 points, the third highest was Priority #8 Soil amendments and soil inputs with 8.38 points, and the fourth highest priority was Priority #11, Ag Water Standards and Well Assessments combined with 8.13 points.

Step #5: Meeting 2 Priority Survey Results and Priority Selection Consensus

Following the Priority Survey, a 1-hour meeting was held via zoom. The results shown above were shared with the priority-setting group during Meeting #2. All members of the priority setting committee (Table 1) attended the meeting except Megan Chadwick and Teressa Lopez. Megan Chadwick confirmed alignment with the selected priority topics via email.

Following the results shown above, a recap of the concerns and top priority points were reviewed by the priority-setting group. The priority working group had the opportunity to comment on and discuss the concerns and top topics (summarized from meeting #1) for each of the top priorities. The PowerPoint Slides of this presentation are in the supplemental document to this report. The slide deck contains the results shared as well as the concerns and top topics for the four priorities with the higher average scores.

Following the review of top priorities and comments. The priority-setting committee engaged in a 20-minute discussion to determine the top priorities for the 2024 amendments process. For the agricultural water priority, the committee members discussed the review of type B to A water standards, as in meeting #1 topics such as the necessary level of testing, and a system-based approach to testing were discussed. In addition, the setting committee discussed prioritizing the evaluation of current quality and water standards as they relate to metrics for generic *E. coli*. For priority #1 harvesting equipment, a stepwise approach was discussed, where the metrics on harvesting equipment sanitation will be reviewed and key changes based on the currently available research would be beneficial to be included in the metrics.

The group reached a consensus, with the priority-setting committee agreeing on the following priorities:

- a. Ag Water Standards
 1. Review of Type B to A water standards
 2. Review variable water quality and sampling standards as they relate to generic *E. coli*.

- b. Harvesting Equipment Sanitation
 1. Harvest Equipment Sanitation – review **key** changes. (initial process as part of a long-term effort)

Appendices

Appendix 1: Summary of Priority Topic Submitted

Priority Number	Priority topic Name	Summarized Comments (statements from the Priority Setting Committee members):	Notes From Meeting # 1. Committee members can use this as their own notes space. Remember that as part of the voting process members will vote based on Urgency and Impact (1-4) to define top priorities
1	Harvest Equipment Sanitation	<p>Review and Update metrics: Multiple comments emphasize the need for a review and potential update of sanitation metrics and practices. These comments suggest a recognition that current practices may be insufficient or outdated, and there's a desire to improve and align with industry best practices.</p> <p>Highlights urgency and timelines</p> <ul style="list-style-type: none"> - Equipment sanitation has not been formally reviewed since 2020. - Harvesting equipment has been the focus of FDA sampling projects. - Many requirements from shippers are in place, however there is no standardized approach. - Harvesting equipment suppliers, and chemical companies influencing requirements. <p>Impact on food safety: Comments include concerns about the potential for equipment to act as a source of contamination for harvested produce. This indicates a recognition of the significant impact that inadequate sanitation practices can have on food safety and highlights the urgency of addressing this issue.</p> <p>Suggestions for Enhancements: Comments propose various suggestions for enhancing sanitation requirements, such as incorporating hygienic design principles, defining daily SOPs instead of a single SOP, and considering more complex concepts like PEC/PIC. This suggests a recognition that improving sanitation practices requires more than just basic cleaning procedures and may involve implementing more rigorous standards and protocols.</p>	
2	Ag Water Standards	<p>Review and Update Metrics: The comments collectively emphasize the need to review and update water standards and metrics in anticipation of regulatory changes. There's a recognition of the importance of ensuring water quality assessments are effective and aligned with industry best practices.</p> <p>Highlights to urgency and timelines:</p> <ul style="list-style-type: none"> - The release of the ag water rule - Subpart E shifting the industry away from testing. - 5 years since the LGMA reviewed the water section. <p>Identified concerns:</p>	

		<ul style="list-style-type: none"> - Concerns are raised regarding the clarity and complexity of existing water standards, emphasizing the importance of making them clearer and more manageable for implementation. - The need for science-based water quality assessment and corrective standards for standards and metrics for Type A and Type B to A Water - Incorporation of high-volume sampling following FDA's methodology. <p>Suggestions for Enhancements: Suggestions include integrating high-volume sampling methods following FDA methodology filter sampling (DEUF) These include pre-season filter sampling, on-filter sample per ranch per season, annual distribution system sampling, and analysis</p>	
3	Preharvest testing for leafy greens	<p>Preharvest testing requirements: The comments suggest standardization of methods, procedures, and results to make them as relevant as possible. Most of the industry is testing, the industry needs to move forward with having this as a requirement under the LGMA domain.</p> <p>Enhance requirements: Enhance requirements based on what is already accepted practices such as Canada's requirements.</p>	
4	Tissue testing standards	<p>Establishing Tissue testing standards and equivalency across platforms. This would meaningfully improve the usefulness of data aggregation, data analysis, and predictive models.</p>	
5	Buffer Distances/Adjacent land use	<p>Review current buffer distances for adjacent land use to make sure they are still adequate.</p> <p>Rouge dust from adjacent land activities: review the impact of rouge dust from adjacent land activities to produce farms. There is a need for additional research and communication with the industry</p>	
6	Flooding	<p>Arizona did not have time to take this topic up during the last review after the special project research was published, largely because of the timing of the release of the research and when our new season began. We'd like the opportunity to reopen that discussion and make necessary updates to that section. Considering the recent wet weather in growing regions over the past 2 seasons, the impact would be significant, and ensure we are applying the recent scientific findings.</p>	
7	LGMA Metrics Review	<p>The comments suggest that the current LGMA metrics be reorganized and updated.</p> <p>Suggestions include:</p> <ul style="list-style-type: none"> - All the additions have made the document confusing and difficult to interpret. The update needs to clarify what is being asked. - Refresher on how it is sorted. - Organization/reformat to be more user-friendly and easier to read. - Review of best practices and update based on necessity and impact 	
8	Soil amendments and soil inputs	<p>The comments highlight concerns regarding the potential amplification of zoonotic pathogens using biofertilizers and other inputs in fertigation processes.</p> <ul style="list-style-type: none"> - the need for stringent guidance due to substantial evidence indicating contamination risks associated with these inputs. <p>Other criteria:</p> <ul style="list-style-type: none"> - including EHEC along with STEC and Listeria Monocytogenes as part of certain input requirements 	

CA LGMA Priority Setting Report

		<ul style="list-style-type: none"> - Not allowing 0-day application intervals for some products (no less than 7 days) <p>Sampling depth and moisture content requirements:</p> <ul style="list-style-type: none"> - Integrate a finished compost moisture content minimum as part of processing validation records. - Assure compost sampling requirements for depth of sample meet best practices. 	
9	Well Assessment	<p>Assure all parts of the well are managed and maintained to prevent contamination of the water. Including:</p> <ul style="list-style-type: none"> - Periodic backflows check valve review when the well is off, or issues are noted. - Well vent assessment to ensure they are properly designed and sloped so they are protected and protect the water source. - *Might include best practice language when the well is possibly compromised by standing water, flooding, or other events 	
10	Alignment with Arizona Metrics	<p>Align requirements for CA and AZ LGMA-accepted food safety guidelines.</p> <ul style="list-style-type: none"> - Remove the requirement to document assigned food safety approved for sign off documentation. 	

Appendix 2: Priority Topics and Comments from Meeting # 1

Priority Number	Priority topic Name	Summarized Comments (statements from the Priority Setting Committee members):	Notes From Meeting # 1.
1	Harvest Equipment Sanitation	<p>Review and Update metrics: Multiple comments emphasize the need for a review and potential update of sanitation metrics and practices. These comments suggest a recognition that current practices may be insufficient or outdated, and there's a desire to improve and align with industry best practices.</p> <p>Highlights urgency and timelines</p> <ul style="list-style-type: none"> - Equipment sanitation has not been formally reviewed since 2020. - Harvesting equipment has been the focus of FDA sampling projects. - Many requirements from shippers are in place, however there is no standardized approach. - Harvesting equipment suppliers, and chemical companies influencing requirements. <p>Impact on food safety: Comments express concerns about the potential for equipment to act as a source of contamination for harvested produce. This indicates a recognition of the significant impact that inadequate sanitation practices can have on food safety and highlights the urgency of addressing this issue.</p> <p>Suggestions for Enhancements: Comments propose various suggestions for enhancing sanitation requirements, such as incorporating hygienic design principles, defining daily SOPs instead of a single SOP, and considering more complex concepts like PEC/PIC. This suggests a recognition that improving sanitation practices requires more than just basic cleaning procedures and may involve implementing more rigorous standards and protocols.</p>	<ul style="list-style-type: none"> - Multiple comments mentioned that this is a high-importance priority. - Concerns about the urgency regarding waiting to see the outcome/ having a better handle on new CPS-funded research. (updates coming this Summer) - Need to be careful in this section by considering the complexities around dismantling equipment. Dismantling the equipment causes downtime and expenses. - When choosing this as a priority, differentiate between what the harvest forward group is doing and what the LGMA will do and recommend. - There is a need to consider which type of equipment is included in this priority. - Metrics cover topics about the design, but it is vague. - In terms of urgency. One could consider a stepwise approach, what makes sense for reviewing now vs what can be addressed once more data comes out.
	Ag Water Standards	<p>Review and Update Metrics: The comments collectively emphasize the need to review and update water standards and metrics in anticipation of regulatory changes. There's a recognition of the importance of ensuring water quality assessments are effective and aligned with industry best practices.</p> <p>Highlights to urgency and timelines:</p> <ul style="list-style-type: none"> - The release of the ag water rule - Subpart E shifting the industry away from testing. - 5 years since the LGMA reviewed the water section. <p>Identified concerns:</p>	<ul style="list-style-type: none"> - Combination of well assessment and Ag water standards. Combine or keep separate. (added priority #11 that combines these) - Comments highlight the need to consider the ag water rule timeline for this priority. - Ag water rule remains like what was proposed. Still not as specific as the LGMA requirements. - crop characteristics - The AZ subcommittee put this topic into the priority discussion

		<ul style="list-style-type: none"> - Concerns are raised regarding the clarity and complexity of existing water standards, emphasizing the importance of making them clearer and more manageable for implementation. - The need for science-based water quality assessment and corrective standards for standards and metrics for Type A and Type B to A Water - Incorporation of high-volume sampling following FDA's methodology. <p>Suggestions for Enhancements: Suggestions include integrating high-volume sampling methods following FDA methodology filter sampling (DEUF) These include pre-season filter sampling, on-filter sample per ranch per season, annual distribution system sampling, and analysis</p>	<p>but is not quite sure the timing is right with the FDA metrics looming. They want to make sure the water section is not being changed over multiple revisions. They would prefer if changes were made altogether.</p> <ul style="list-style-type: none"> - Comments highlight the need to look at the type B to A water section and note if these standards are still adequate. - Systems-based approach to testing? A potential could be to move to an observational response criterion. For example, looking at turbidity and responding to that. - A potential reduction in frequency if the initial assessment has been conducted. However, monitor other components (changes in environment/system) and act upon those.
3	Preharvest testing for leafy greens	<p>Preharvest testing requirements: The comments suggest standardization of methods, procedures, and results to make them as relevant as possible. Most of the industry is testing, the industry needs to move forward with having this as a requirement under the LGMA domain.</p> <p>Enhance requirements: Enhance requirements based on what is already accepted practices such as Canada's requirements.</p>	<ul style="list-style-type: none"> - Canadian requirements should not be representative of what the LGMA does. - Comments highlight that it would be helpful to see the results from the LGMA test and learn the program before rolling out any other guidance for the industry.
4	Tissue testing standards	<p>Establishing Tissue testing standards and equivalency across platforms. This would meaningfully improve the usefulness of data aggregation, data analysis, and predictive models.</p>	<ul style="list-style-type: none"> - There is a strong need to establish equivalency of the data. To be comfortable across labs, we need to make sure we are getting something equivalent.
5	Buffer Distances/Adjacent land use	<p>Review current buffer distances for adjacent land use to make sure they are still adequate.</p> <p>Rouge dust from adjacent land activities: review the impact of rouge dust from adjacent land activities to produce farms. There is a need for additional research and communication with the industry</p>	<ul style="list-style-type: none"> - Getting these distances updated from research and science would be great, however, the information may still be limited to make these decisions. - There is ongoing research. These characteristics are location specific. - Additional environmental factors are also drivers and need to be considered. - The priority should be to go over what we know and what we do not know. How do the LGMA and WG with the research community to evaluate this?

CA LGMA Priority Setting Report

			<ul style="list-style-type: none"> - Appendix F: considerations for assessing weather conditions. Could be updated based on the research findings.
6	Flooding	<p>Arizona did not have time to take this topic up during the last review after the special project research was published, largely because of the timing of the release of the research and when our new season began. We'd like the opportunity to reopen that discussion and make necessary updates to that section. Considering the recent wet weather in growing regions over the past 2 seasons, the impact would be significant, and ensure we are applying the recent scientific findings.</p>	<ul style="list-style-type: none"> - AZ LGMA did not have time to add to the metrics last year. And will work on adding them to the AZ LGMA metrics this year. - There are some recommendations that the CA LGMA did not adopt. - Potential need to open this back up for consideration and clarity. - Since AZ will be updating metrics, the LGMA could look at this after and harmonize the metrics.
7	LGMA Metrics Review	<p>The comments suggest that the current LGMA metrics be reorganized and updated. Suggestions include:</p> <ul style="list-style-type: none"> - All the additions have made the document confusing and difficult to interpret. The update needs to clarify what is being asked. - Refresher on how it is sorted. - Organization/reformat to be more user-friendly and easier to read. - Review of best practices and update based on necessity and impact 	<ul style="list-style-type: none"> - This priority could be a special project as well. - Highlight the modernization of the LGMA metrics. Need to consider topics that are covered elsewhere (e.g. GFSI) and determine if they need to stay in the LGMA. There is a need to look at how to make the LGMA metrics relevant today. Look at starting from a clean slate. - Arizona did something similar a few years back.
8	Soil amendments and soil inputs	<p>The comments highlight concerns regarding the potential amplification of zoonotic pathogens using biofertilizers and other inputs in fertigation processes.</p> <ul style="list-style-type: none"> - the need for stringent guidance due to substantial evidence indicating contamination risks associated with these inputs. <p>Other criteria:</p> <ul style="list-style-type: none"> - including EHEC along with STEC and Listeria Monocytogenes as part of certain input requirements - Not allowing 0-day application intervals for some products (no less than 7 days) <p>Sampling depth and moisture content requirements:</p> <ul style="list-style-type: none"> - Integrate a finished compost moisture content minimum as part of processing validation records. - Assure compost sampling requirements for depth of sample meet best practices. 	<ul style="list-style-type: none"> - EHEC/STEC dons that will current metrics where they use one or the other or both. - 0-day allowance, not sure about the information available to update this metric. - Comments indicate it would be wise to revisit what is reflected in COAs, and guide interpretation of these. - Salmonella has been an issue recently with some of these products. - Need to evaluate how these products are handled, stored, and managed in produce environments. There are issues for amplification and blooming of bacteria from this produce or the environment where these are applied. - LGMA should consider making this one of the urgent areas. There is a direct line between these materials and produce/soil contamination. - Process authority would be beneficial for the industry. What

CA LGMA Priority Setting Report

			is necessary to be able to stand behind a COA?
9	Well Assessment	Assure all parts of the well are managed and maintained to prevent contamination of the water. Including: <ul style="list-style-type: none"> - Periodic backflows check valve review when the well is off, or issues are noted. - Well vent assessment to ensure they are properly designed and sloped so they are protected and protect the water source. - *Might include best practice language when the well is possibly compromised by standing water, flooding, or other events 	<ul style="list-style-type: none"> - All wells are different. (variety of results) - It is important to validate that wells are supplying type A water, and having high-volume filtration is also important. Also having a distribution system that still allows to comply with type A water. - Real performance criteria on validation/verification.
10	Alignment with Arizona Metrics	Align requirements for CA and AZ LGMA-accepted food safety guidelines. <ul style="list-style-type: none"> - Remove the requirement to document assigned food safety approved for sign-off documentation. 	<ul style="list-style-type: none"> - AZ backed off from requiring a designative representative because it is already part of the PSR inspection. - CA LGMA does not see non-conformances around this. Not really a problem and does not see it as necessary for it to be there. - Not a huge priority
11	Ag Water Standards + Well Assessment		<ul style="list-style-type: none"> - Consider these two topics together.



6501 Irvine Center Drive, Suite 100, Irvine, CA 92618
949.863.1000 | Fax 949.863.9028 | www.wga.com

