# Regulatory Alignment Study

## Draft Final Recommendations and Implementation Steps

Crowe

September 2025

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# Foreword

California's farmers and ranchers are innovators and problem-solvers. They feed the world while caring deeply for the land, their communities, and future generations.

When the California Department of Food and Agriculture (CDFA) decided to embark on the Regulatory Alignment Study, we sought to answer an important question: *How can our State's food safety and water quality regulations, requirements, and processes work better for agriculture while still delivering on our responsibility to protect the environment and public health?*

CDFA partnered with the California Environmental Protection Agency (CalEPA), the State Water Resources Control Board and Regional Water Quality Control Boards (collectively, Water Boards), and our consulting team to answer that question, not in the abstract, but by listening to the agricultural community and working alongside the public servants who implement these programs every day. What emerged are solutions that are foundational, proactive, and forward-thinking.

The solutions in this report are not about lowering standards. They are about making those standards more transparent, inclusive, and responsive so they serve the diverse needs of California's farms and ranches while advancing our highest environmental and human health goals. This work reflects the State's broader commitment to building programs, including regulatory ones, that are transparent, efficient, effective, and equitable.

To implement many of these solutions, we must continue to invest in strong data governance, modern digital infrastructure, broadband access, and trusted relationships with producers. That means protecting proprietary information, making compliance easier, and demonstrating how regulation contributes to outcomes we all care about – cleaner water, safer food, and thriving farms and communities.

I want to thank the many farmers, ranchers, local leaders and advocates, and agency colleagues who contributed to this work. You have helped us build a roadmap for smarter regulation – one that keeps pace with the complexity of today while preparing for the challenges of tomorrow.

Let's continue this work together with humility, determination, and the deep pride we all share in California agriculture.

**Karen Ross**

Secretary, California Department of Food & Agriculture

# Executive Summary

California agriculture is both a pillar of the economy and a vital steward of its natural resources. With nearly $60 billion in annual sales, California farms produce roughly half of the nation's fruits and vegetables, about 20 percent of its dairy milk, and lead the nation in wine production, all while supporting thousands of jobs across diverse landscapes and communities. Today, California's producers navigate a landscape of rapid change. Climate volatility, shifting market demands, rising input costs, and evolving regulations are converging – posing new challenges, especially for small and mid-sized farms.

Recognizing these challenges and the vital importance of a resilient, sustainable food system, the State funded a Regulatory Alignment Study (Study) in 2022 through the Budget Act. The California Department of Food and Agriculture (CDFA) led the Study in partnership with the California Environmental Protection Agency (CalEPA) and the State Water Resources Control Board and Regional Water Quality Control Boards (collectively, Water Boards). CDFA contracted with Crowe LLP and their partner, Blankinship & Associates (collectively, Crowe) to conduct the Study and identify opportunities to:

- Empower the agricultural community through clearer and more streamlined food safety and water quality regulatory requirements
- Support the State's data collection and information sharing efforts
- Strengthen environmental and public health outcomes.

Through hundreds of conversations with producers, agency staff, and interested parties, Crowe gathered on-the-ground insights and mapped specific areas for opportunity across food safety and water quality regulatory program areas. This report reflects those voices and presents 18 recommendations to enhance *transparency, efficiency, effectiveness, and equity* across California's food safety and water quality regulatory program areas without compromising the high standards that protect the environment and public health.

The State has called for government operations to be more human-centered in how they serve Californians. This Study aligns with that vision. By modernizing regulatory processes and systems, and building stronger alignment across agencies, California can make its food safety and water quality regulatory programs more responsive to the challenges of a changing world.

## Scope of Regulatory Requirements Reviewed

This Study focused on regulatory alignment across three key program areas that involve significant touchpoints with California's producers. These program areas were selected due to their broad reach, evolving requirements, and the opportunity for enhanced coordination:

**Produce Safety Program (PSP)** – Administered by CDFA, implements the federal Produce Safety Rule (PSR) under the Food Safety Modernization Act (FSMA) through education, outreach, and inspections of approximately 20,000 produce farms.

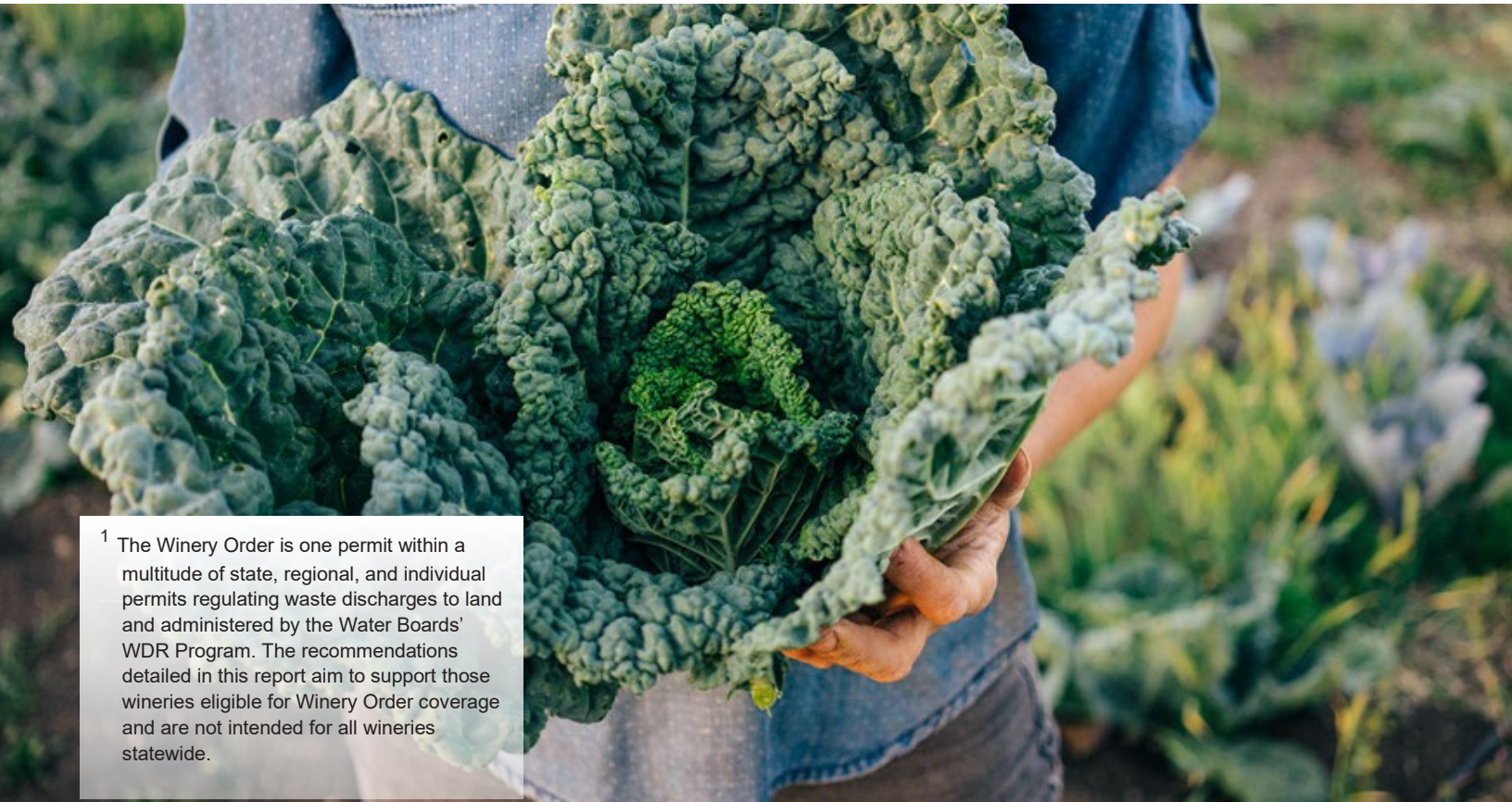
**Irrigated Lands Regulatory Program (ILRP)** – Administered by the Water Boards, regulates water discharges from approximately 6.5 million acres (7.5 million estimated acres eligible for enrollment) of irrigated farmland through general regional Waste Discharge Requirements (WDRs) or conditional waivers of WDRs.

**Confined Animal Facilities (CAF) Program** – Overseen by the Water Boards, regulates manure and wastewater discharges from roughly 1,900 CAFs through general regional Waste Discharge Requirements (WDRs) or conditional waivers of WDRs.

**Winery Order**[1] – Adopted by the State Water Board in 2021 and implemented by the Regional Water Boards, is a statewide general WDR permit that sets tiered compliance requirements and is available for eligible wineries amongst an estimated 2,100 wineries with winery waste (process water and/or process solids) discharges to land.



While these program areas vary in scope and structure, they share common processes, such as enrollment, reporting, monitoring, inspection, and enforcement. These processes collectively represent a significant portion of the food safety and water quality regulatory landscape for California agriculture.



[1] The Winery Order is one permit within a multitude of state, regional, and individual permits regulating waste discharges to land and administered by the Water Boards' WDR Program. The recommendations detailed in this report aim to support those wineries eligible for Winery Order coverage and are not intended for all wineries statewide.

## Regulatory Alignment Study Objectives

This report provides final recommendations and implementation steps for CDFA, CalEPA, and the Water Boards. Crowe did not evaluate whether the food safety and water quality regulations and requirements in scope of the Study should be changed. Instead, Crowe focused on how these regulations are implemented, and how administrative processes and systems could be aligned to better support producers and state agencies alike.

The Study's objectives include:

1. **Evaluate state requirements** within the areas of food safety and water quality for the agricultural community and identify protections to public health and the environment.
2. **Conduct listening sessions** to gather input from the agricultural community relating to their experiences with the reporting requirements and processes in these areas.
3. **Convene with the agricultural community and regulators** to review and map existing regulatory pathways for food safety and water quality to identify opportunities to improve efficiency and information sharing.
4. **Identify and prepare implementation plans** for recommended process improvements to streamline reporting requirements.
5. **Provide recommendations** to CDFA, CalEPA, and the Water Boards for technological enhancements and process improvements to provide regulatory administrative and reporting efficiencies for the agricultural community.

## Structure of the Report

This report presents 18 recommendations organized into three categories based on their scope and complexity. Each recommendation includes a summary of the opportunity, a proposed solution, and specific implementation steps. These recommendations may require additional resources to implement. As a result, implementation will need to be phased and prioritized over time.

### Foundational Opportunities

Short-term, lower-complexity solutions that build momentum and cross-program consistency

### Developmental Opportunities

Medium-complexity solutions that enhance data sharing, reporting, and coordination across systems and agencies

### Transformational Opportunities

Structural solutions that support long-term modernization, such as unified approaches, shared identifiers, and integrated data systems.



## Implementation Guidance

To support implementation, the report also identifies:

- Lead agencies best positioned to champion and operationalize each recommendation
- Cross-agency opportunities to enhance coordination between CDFA, CalEPA, and the Water Boards
- Cross water quality program recommendations that benefit ILRP, CAF Program, and/or Winery Order.

Crowe recommends forming a joint implementation working group and beginning with high-impact Foundational Opportunities. Embedding measurable checkpoints and community feedback loops will help ensure solutions are practical, effective, and aligned with evolving priorities.

These recommendations may not be appropriate to apply statewide, so regional discretion should be exercised for implementation as appropriate.

## Data Governance for Smarter Regulations

Successfully implementing these recommendations depends on shared data transparency and accessibility. Across nearly every solution in this report, data governance emerged as a central enabler of regulatory alignment. For these solutions to be sustainable, they also require additional, permanent staff positions and technical resources, underscoring the importance of careful planning and phased implementation.

The State should continue to assess how agricultural data is governed to fully optimize the value of the information collected through its regulatory programs while also preserving regional flexibility. Whether simplifying reporting templates, sharing datasets, or creating new tools, many of the solutions in this report require agencies to define, manage, and exchange data in consistent, secure, and transparent ways. Strengthening data governance will ensure that the State not only collects valuable information but can also use it responsibly and effectively to enhance program delivery, transparency, and outcomes.

In this context, data governance refers to the rules, structures, and safeguards that guide how agricultural data is collected, shared, and protected. A well-designed, agriculture-focused data governance framework can:

- Protect proprietary and sensitive grower information
- Reduce redundant touchpoints across programs
- Enhance reporting tools for producers and staff
- Support fairness through clear, consistent expectations
- Strengthen trust through transparency between agencies and the agricultural community.

Robust data governance is both a technical and strategic necessity for implementing these recommendations. It can enable CDFA, CalEPA, the Water Boards, and other relevant agencies to collaborate more effectively with the agricultural community to uphold California's shared commitment to environmental and public health while building regulatory programs that are more streamlined, transparent, and accessible for all.



# Regulatory Alignment Opportunities

## Foundational Opportunities

**Recommendation 1**
Establish a Small Farm Regulatory Support Liaison at CDFA

**Recommendation 2**
Expand Coordinated Outreach and Education through Inspectors and Partners

**Recommendation 3**
Develop a Technical Assistance Request Tool that Links to the PSP Portal

**Recommendation 4**
Empower Representative Monitoring Programs to Voluntarily Support Annual CAF Program Reporting

**Recommendation 5**
Support Ongoing Efforts to Become an Authorized Local Agency Oversight Program

## Developmental Opportunities

**Recommendation 6**
Develop a Department-Wide CDFA Farm Inventory

**Recommendation 7**
Allow Producers to Submit Audit Certifications for Risk-Based Inspection Prioritization

**Recommendation 8**
Support Industry Efforts to Establish Water Boards-Accepted Sustainability Programs

**Recommendation 9**
Implement Electronic Reporting for the CAF Program

**Recommendation 10**
Simplify the Irrigation and Nitrogen Management Plan for Small, Diversified Farms Where Applicable

**Recommendation 11**
Invest in GeoTracker System Enhancements for Agricultural Programs

**Recommendation 12**
Develop Agricultural Water Quality Outcomes Dashboards

## Transformational Opportunities

**Recommendation 13**
Establish a California Agriculture Data Exchange Framework

**Recommendation 14**
Develop a Map to Help Track Agricultural Cross-Program Participation and Oversight

**Recommendation 15**
Enhance Agricultural Permit Navigation with a Digital Decision Support Tool

**Recommendation 16**
Modernize CDFA Program Platforms to Align with PSP Portal Architecture

**Recommendation 17**
Validate and Recognize Qualified Third-Party Food Safety Audits to Inform PSP Oversight

**Recommendation 18**
Centralize Nitrogen Data to Advance Groundwater Protection

## Data Governance: A Core Enabler Across All Recommendations

Strong data governance ensures information is accurate, secure, and actionable to support transparency, protect proprietary data, and make smarter, streamlined regulation possible for producers, agencies, and the public.

Inter-Agency | Produce Safety Program (PSP) | Cross Water Quality Program | Irrigated Lands Regulatory Program (ILRP) | Confined Animal Facilities (CAF) Program | Winery Order

# Looking Forward

The 18 recommendations in this report reflect insights from producers, agency staff, and interested parties across California. Together, they provide foundational, developmental, and transformative solutions to streamline the State's food safety and water quality administrative processes while upholding the State's environmental and public health protections.

Several of these solutions can begin now, leveraging existing infrastructure, staff knowledge, and agency coordination efforts already underway. Others will require sustained attention, interagency alignment, and investments.

A consistent theme throughout the engagement process was the need for stronger coordination across agencies and programs, especially as digital tools and artificial intelligence (AI) enabled systems become more prominent. Regulatory alignment is not a one-time study but an ongoing process rooted in continuous improvement and a central question: *How can we implement smarter requirements that are more transparent, efficient, effective, and equitable?*

Sustaining momentum will require committed leadership, cross-sector collaboration, and a shared understanding of what regulatory alignment means and how important it is to the agricultural community, agency staff, and the public.

Whether these recommendations take root will depend on sustained implementation efforts and the ability of state agencies to continue to partner with producers, interested parties, and each other.

# Understanding Regulatory Alignment

California's food safety and water quality regulations and requirements are among the most comprehensive in the nation. They reflect the State's commitment to protecting the environment, public health, and the economic vitality of its largest industry.

Yet for many producers – especially those managing smaller, diversified, or multilingual operations – these strong protections can also present complexity. Navigating multiple permits, agencies, reporting timelines, and digital platforms can be a significant undertaking, especially when layered with market uncertainty, rising input costs, climate-related impacts and other emerging pressures.

These challenges are not limited to food safety or water quality alone. Most producers operate within a broader landscape of regulations across labor, air quality, land use, and market access requirements. While this Study focused specifically on food safety and water quality, producers and partners frequently pointed to a larger aspiration – a comprehensive regulatory system that is more coordinated, more navigable, and more responsive to the realities of agriculture in California.

Importantly, regulatory alignment does not mean reducing standards – it means delivering them in a way that is clearer, more consistent, and more connected across agencies and programs. The input collected in this Study points toward solutions that preserve California's strong protections while also improving how those protections are implemented and experienced on the ground.

The remainder of this section:

- Defines regulatory alignment in the context of this Study
- Presents findings from the evaluation of current food safety and water quality regulatory pressures facing the agricultural community
- Highlights key insights gathered through engagement that shaped the recommendations that follow.

## What is Regulatory Alignment?

In the context of this Study, regulatory alignment refers to the thoughtful coordination of processes and systems across programs and agencies so that regulatory requirements are easier to understand, comply with, and administer. Regulatory alignment *does not* mean reducing environmental or human health standards. Instead, it is about making those standards work better – for the people who must comply with them, for the agencies responsible for oversight, and for members of the public.

Regulatory alignment includes:

- Clarifying roles, requirements, and timelines across programs
- Reducing duplication in data collection and reporting where feasible
- Improving communication and feedback loops between agencies and producers
- Coordinating use of systems, portals, and reporting formats
- Expanding support for producers of all sizes and operation types.

These principles are not new. Since at least 2010, the California State Board of Food and Agriculture called for "smarter regulation" through better agency coordination. The 2023 *Ag Vision Plan* reaffirmed the State's commitment to modernizing permitting, increasing access to support services, and strengthening collaboration across programs.

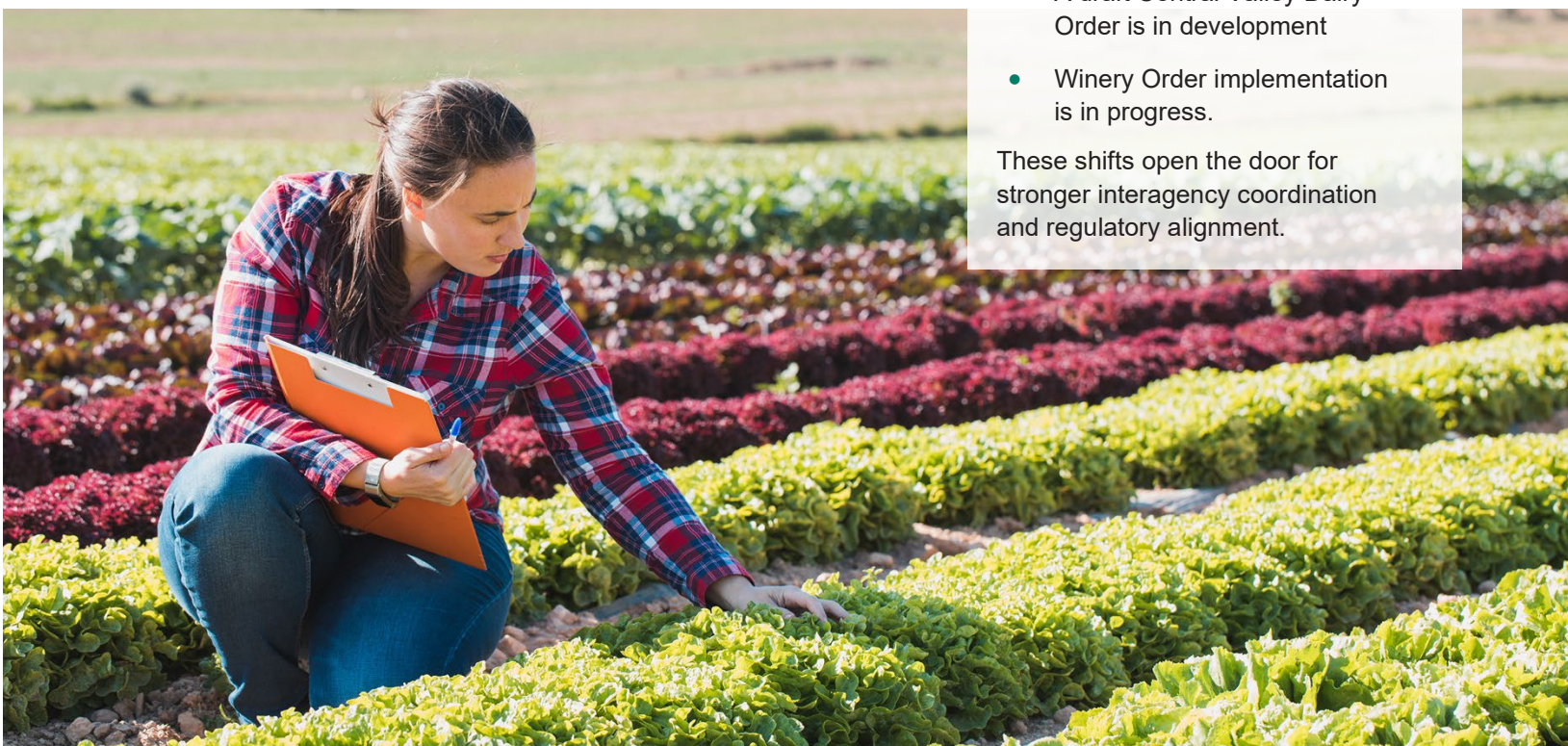
This Study builds on those principles – not to question whether the State's food safety and water quality regulations are necessary, but to explore how they can be implemented more transparently, efficiently, effectively, and equitably for both producers and agencies.

### Evolving Programs Create a Window for Alignment

The timing of this Study coincides with major shifts across the food safety and water quality regulatory landscape:

- The Agricultural Water Rule under FSMA PSR was recently finalized
- Some components of ILRP are under review by the Second Agricultural Expert Panel
- A draft Central Valley Dairy Order is in development
- Winery Order implementation is in progress.

These shifts open the door for stronger interagency coordination and regulatory alignment.



## Compliance Costs are Part of the Picture, but Context Matters

While this Study was not intended to evaluate program fees or cost structures, producers consistently raised the issue of compliance costs – particularly the time and the effort required to meet enrollment, reporting, monitoring, and documentation requirements.

These costs often go beyond dollars. Producers described the need to hire consultants, maintain separate records for regulatory programs, and navigate multiple systems without support. This was especially true for small and diversified farms, where reporting complexity and fragmented systems add strain.

Labor remains the largest cost driver of agricultural expenses. While food safety and water quality compliance costs account for a fraction of total indirect costs for many producers, regulatory requirements continue to evolve, creating continued pressures particularly for producers who lack the time, bandwidth, or support to navigate these evolving regulatory requirements alone.

> *"Increasing costs continue to impact California farmers, ranchers and consumers, alike. What we are observing in the agricultural sector is a multilayered situation compounded by inflation, trade disruptions, commodity pricing and so much more."*
>
> *State Board of Food and Agriculture, July 2025*

At the same time, regulatory alignment has the potential to simplify compliance over the long term by streamlining processes, improving data sharing, and creating more consistent requirements across programs. These improvements not only make it easier for producers to meet regulatory expectations, but also help agencies work more efficiently and deliver greater transparency and protection for the public.



### Factors Impacting Producers

While the economic and regulatory pressures facing producers are not experienced equally, producers highlighted several common and compounding factors:

**Rising Production Costs**
Outpacing commodity prices, and squeezing margins.

**Higher Interest Rates**
Limiting capacity to invest in technology, compliance systems, or infrastructure upgrades.

**Growing Labor Expenses**
Driving up costs to wage increases, insurance premiums, and safety standards.

**Labor Availability**
Creating uncertainty in operations and harvest planning.

**Extreme Weather Events**
Adding volatility through drought, fire, flooding, and temperature extremes.

**Regulatory Requirements**
Increasing administrative and reporting pressures, especially for smaller producers or diversified farms.

## Eight Core Regulatory Processes, Different Pathways

Across the PSP, ILRP, CAF Program, and Winery Order, producers are asked to complete a series of core regulatory processes. These include verifying whether they are covered, enrolling in the program, participating in education requirements, monitoring their operations, submitting reports, undergoing inspections, resolving violations, and contributing to program evaluation.

While these steps share a common purpose – protecting the environment, human health, and market integrity – their implementation varies significantly across programs and regions. Each program uses its own systems (e.g., PSP Portal, GeoTracker), timelines, terminology, and reporting templates. For example:

- A produce farm may be required to provide an agricultural water assessment during a PSP inspection
- A small farm may report fertilizer use per crop in an Irrigation and Nitrogen Management Plan (INMP) Summary Report to their approved third-party group's custom portal or through GeoTracker as part of the ILRP
- A CAF may upload groundwater monitoring data to GeoTracker
- A winery may submit a Notice of Intent and technical report for the Winery Order through the California Integrated Water Quality System (CIWQS).

For producers engaged in more than one program, especially those with diverse crops or practices, these differences can be time-intensive and add complexity. Producers may need to enter similar data into multiple systems, follow different reporting timelines, or seek outside assistance to understand what is expected. Agency staff noted that these systems are not always connected internally, making it harder to coordinate inspections or evaluate trends across programs.



### Core Regulatory Processes Across Programs

The table below shows the eight core regulatory processes observed across the programs in scope of the Study:

| | Verify | Enroll | Educate | Monitor | Report | Inspect | Enforce | Evaluate |
|---|---|---|---|---|---|---|---|---|
| **Food Safety** | | | | | | | | |
| **Produce Safety Program** | ● | | ● | ● | | ● | ● | ● |
| **Water Quality** | | | | | | | | |
| **Irrigated Lands Regulatory Program** | ● | ● | ● | ● | ● | ● | ● | ● |
| **Confined Animal Facilities Program** | ● | ● | | ● | ● | ● | ● | ● |
| **Winery Order** | ● | ● | ● | ● | ● | ● | ● | ● |

Understanding these shared processes, and the differences in how they are implemented provides an opportunity. With thoughtful coordination and system enhancements, the State can make these processes more intuitive, consistent, and accessible for producers, agency staff, and the public.

## Producers and Agencies Both See Opportunities for Alignment

In listening sessions and workshops, both producers and agency staff identified areas where regulatory alignment could be enhanced. Producers pointed to common opportunities, including:

- More consistent support or guidance across regions and programs
- Greater confirmation or feedback after submitting reports
- Increased clarification about which systems or portals to use
- Better templates or formats that reflect how diversified or organic farms operate.

Agency staff described challenges managing fragmented systems, coordinating across agencies and programs, and providing tailored assistance with limited resources. Together, these perspectives point to a shared vision of making regulatory systems more coordinated, transparent, and accessible for producers and agencies alike.

## Diverse Operations Require Flexible Implementation Tools

Many smaller and diversified farms, especially those enrolled in multiple programs, shared examples where current reporting templates or guidance did not fully reflect how they farm. For example, tracking nitrogen inputs across intercropped fields or managing records for third-party audits alongside state inspections created confusion and increased administrative time.

Highlighting this feedback is not a critique of any one program, but a reflection of California agriculture's diversity and complexity, and a demonstration of the need for tools and resources that can adapt to that diversity and build on existing investments made by the State and the agricultural community.

### 75% of California farms are small

According to the United States Department of Agriculture (USDA), around 75% of California farms are small (earning less than $350,000 in annual gross income), over 40% grow multiple crops or specialty products, and there are more than 4,000 certified organic operations statewide.

## Examples from the Field

The following profiles illustrate how food safety and water quality regulations may be experienced by producers of different sizes, crops, and regions. These real-world experiences highlighted opportunities and informed many of the recommendations that follow. These examples do not encompass all regions or programs areas, highlighting the importance of maintaining regional flexibility.

### Mid-size leafy greens grower, Salinas Valley

This grower undergoes annual third-party audits through the Leafy Greens Marketing Agreement (LGMA), which aligns closely with the PSR. Despite this, they received a PSR inspection from CDFA.

***"It felt redundant and frustrating. We have already demonstrated compliance through LGMA."***

### Small-scale, multi-crop grower, Central Valley

This farmer grows over 40 specialty crops on 10 acres and participates in both the State Organic Program (SOP) and ILRP. Although they track fertilizer use for organic certification, ILRP requires per-crop nitrogen application and yield data to be reported in the INMP.

***"I spend more time guessing and formatting than actually managing nutrients."***

### Large dairy operator, Central Valley

This operator submits an Annual Report with groundwater monitoring data and waste management updates, currently by email as a Portable Document Format (PDF) to the Regional Water Board.

***"It takes hours to compile and submit the same information every year and I don't know if anyone actually looks at it. There's no confirmation or feedback."***

### Small family-run winery, Sonoma County

This winery learned it may need to enroll in the Winery Order but was unclear on how to proceed. Even after hiring a consultant, they submitted an incomplete report, resulting in delays.

***"We tried to follow the instructions, but every time we thought we had the right information, we were told something else was missing. It felt like we were always one step behind, and it delayed our enrollment."***

# Study Approach

The recommendations in this report reflect nearly three years of coordinated research, comprehensive analysis and mapping of regulatory requirements, and extensive input from the agricultural community, program staff, and interested parties. Since November 2022, CDFA, CalEPA, and Water Boards staff, in partnership with Crowe, undertook a phased Study to identify administrative and regulatory pressures and co-develop solutions to enhance regulatory alignment.

## Study Activities

### Requirements, Processes, and Systems Review

Crowe assessed existing regulatory requirements, processes, and reporting systems to identify areas of overlap and inefficiency.

### Engagement

Crowe gathered insights through interviews, workshops, and field visits with producers, agency staff, and members of the broader agricultural community to understand real-world pressures.

### Solutions Development

Crowe developed targeted recommendations and implementation strategies based on findings and input.

## Requirements, Processes and Systems Review

Crowe analyzed and mapped over 80 requirements across the PSP, ILRP, CAF Program, and the Winery Order. Crowe reviewed federal rules, such as the United States Food and Drug Administration (FDA) FSMA PSR and United States Environmental Protection Agency's Clean Water Act (CWA), and state laws, such as the California Water Code (CWC), Food and Agricultural Code (FAC), and specific permits and orders.

Crowe also documented what each program requires producers to do, including what data must be reported, how often, and through which system. Crowe diagrammed step-by-step workflows for how producers verify, enroll, report, monitor, receive inspections, and so forth, including the role of third-party entities, such as ILRP approved third-party groups (occasionally referred to as Coalitions), labs, and food safety auditors. Lastly, Crowe documented how internal processes are carried out and coordinated by program staff.

## Engagement

Crowe facilitated interviews, listening sessions, workshops, and field visits involving a wide range of members of the agricultural community. This included farmers and ranchers spanning different sizes, commodities, and regions, industry association representatives, regulatory staff from state and regional agencies, academics, and community and environmental group representatives. These conversations provided real-world perspectives on how processes and systems are working or not working. The team heard directly from producers and agency staff about their current and emerging pressures. Dozens of specific examples from the field were documented, some of which are highlighted in this report.



**Engagement by the Numbers**

**30** **Interviews with subject matter experts**
Helped Crowe identify and map food safety and water quality regulatory requirements, including reporting and compliance processes.

**8** **Public workshops**
Communicated feedback on proposed regulatory pathways described in the Concept Paper.

**70+** **Listening sessions**
Provided experiences with the State's food safety and water quality regulatory programs and requirements.

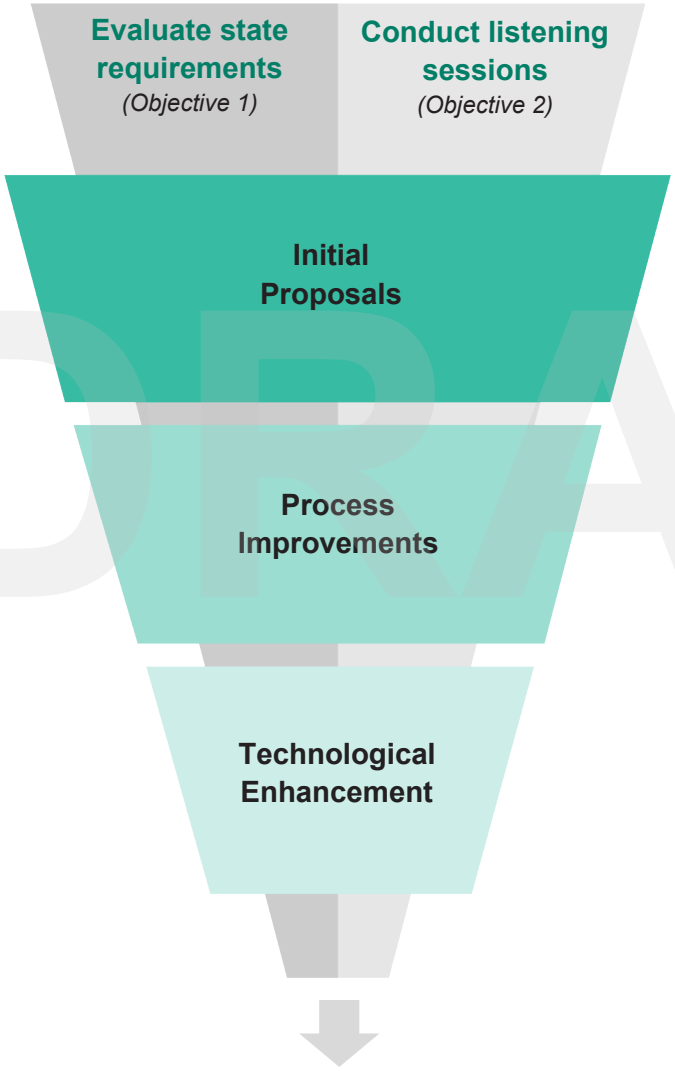
**17** **Submissions of written feedback**
Communicated feedback on proposed regulatory pathways described in the Concept Paper.

**40+** **Interviews with agency staff**
Provided essential insights into program implementation, processes, and technology.

**20** **Interviews with agricultural technology experts**
Informed the feasibility of incorporating specific technologies into the final recommendations.

## Solution Development Process

The solution development process, illustrated below, outlines the steps Crowe followed to deliver the Study's objectives. Throughout this process, Crowe assessed root causes behind regulatory and administrative pressures, analyzed solutions to address pressures for feasibility and impact, and refined recommendations through discussions with the agricultural community and agencies to fine-tune their scope and implementation steps. While the Study focused specifically on food safety and water quality, Crowe remained attentive to the broader regulatory landscape, recognizing that most producers must navigate a range of overlapping requirements, from air quality and water rights to labor laws and land use permitting.




### Development Process

**Public Concept Paper:** Documentation of initial proposals, based on outcomes from Objective 1 and 2, to review with the agricultural community and regulators *(Objective 3)*

Documentation of recommended process improvements to streamline regulatory administrative and reporting processes, including internal program processes *(Objective 4)*

Documentation of recommended technological enhancements to streamline regulatory and administrative reporting processes *(Objective 5)*

### Draft Final Solutions

**Draft Final Recommendations and Implementation Steps:** Synthesis of draft final solutions for CDFA, CalEPA, and the Water Boards' consideration.

# Foundational Opportunities

These recommendations focus on immediate actions that support alignment across food safety and water quality programs. Each recommendation strengthens coordination across regulatory programs and helps ensure that systems, outreach efforts, and support services are easier to use, more consistent across regions, and work well for both the people submitting information and the people responsible for using it.

By advancing these opportunities first, CDFA, CalEPA, and the Water Boards could:

- Make early progress visible to producers and staff
- Strengthen coordination across agencies and programs
- Expand access to technical assistance and program participation
- Build the operational foundation for more complex solutions in later phases.

These recommendations represent the starting point for aligning regulatory programs in a way that works better for agriculture and for the agencies responsible for oversight.



Inter-Agency PSP CAF Program Winery Order

## Foundational Opportunities

Recommendation 1

# Establish a Small Farm Regulatory Support Liaison at CDFA

## Opportunity

California's food safety and water quality regulations continue to evolve. New and forthcoming requirements, such as the Agricultural Water Rule under FSMA, the Draft Central Valley Dairy Order, and ongoing nitrogen reporting updates through the Second Agricultural Expert Panel continue to reshape expectations for producers. Many of these changes might require producers to adopt new monitoring and reporting practices.

While these regulatory changes are intended to improve environmental and human health outcomes, they can often place disproportionate pressures on small and historically underserved farms, particularly those with diversified operations or limited English proficiency. Many small-scale producers often lack access to technical assistance, broadband internet, funding, and other resources to help them meet evolving regulatory requirements.

California is investing in long-term enhancements to streamline programs, optimize data collection, and align processes across agencies. To ensure that small farms are included in this transition, and not left behind by it, dedicated, trusted support is needed to help producers understand, comply with, and contribute to regulatory requirement changes that are fair, practical, and culturally responsive.

**Voices From the Field**

"Things certainly would be simpler if one state department had all the answers and means to provide a would-be farmer with everything."

*Small Farmer, Central Valley Region*

## Solution

CDFA should establish a Small Farm Regulatory Support Liaison within its Farm Equity Office to serve as a dedicated coordinator and advocate for small-scale, socially disadvantaged producers navigating food safety, water quality, and related regulations. The Liaison would act as a trusted partner to help producers stay informed, respond to evolving requirements, and engage in the design and implementation of new tools, systems, and programs. Similarly, the Liaison would expand upon existing interagency relationships to further strengthen communication between agencies and other key collaborators.

This role should be designated to strengthen, not replace, existing partnerships with groups like, University of California Cooperative Extension's (UCCE) advisors, Resource Conservation Districts (RCDs), approved third-party groups, Regional Water Boards, and other trusted collaborators that already provide outreach and support to small farms. By coordinating closely with these established networks and the Water Boards, the Liaison can fill gaps, amplify effective practices, and ensure consistent communication across agencies and programs while also maintaining regional flexibility.

In the near term, the Liaison could provide direct support with enrollment, inspections, monitoring, and reporting under programs such as PSP, ILRP, CAF Program, and the Winery Order.

Over the long term, this role would help operationalize broader recommendations in this report, ensuring that small farms are actively included in implementation efforts.

To be effective, the Liaison should hold a position equivalent to program leads or regional managers, with authority to represent small farm perspectives in cross-agency working groups, identify and elevate systemic challenges, and promote equitable, inclusive implementation across regulatory programs.

## Implementation Steps

- **Define Role and Responsibilities:** Position the Small Farm Regulatory Support Liaison within CDFA's Farm Equity Office with a non-enforcement role. Define responsibilities and create duty statement.
- **Identify and Secure Funding:** Identify potential funding sources within CDFA or partner agencies. If additional resources are needed, prepare a Budget Change Proposal (BCP) outlining the role's purpose, alignment with CDFA's Strategic Plan, and long-term benefits.
- **Recruit and Onboard Strategically:** Develop a recruitment plan that prioritizes candidates with demonstrated experience working with culturally diverse, historically underserved, and/or small-scale producers.
- **Establish Strategic Partnerships:** Build a cross-functional network that includes regulatory program areas (e.g., ILRP, PSP, CAF Program, and others), local organizations, and trusted intermediaries including UCCE Small Farm Advisors and staff, RCDs, approved third-party programs and nonprofit technical assistance providers.
- **Develop Outreach Materials and Resources:** Producers need to know the Liaison exists and how to reach them. The Liaison should ensure outreach strategies include in-person visibility (e.g., attendance at workshops or local meetings) and direct contact channels through trusted intermediaries like Farm Bureaus.
- **Track Impact and Report Outcomes:** Develop performance metrics to evaluate the Liaison's effectiveness, such as the number of producers reached, resources distributed, or increase in the number of producers completing regulatory enrollment or submitting timely reports.
- **Sustain and Scale:** Plan for long-term integration of the Liaison role within CDFA's organizational structure. As the role matures and demand for support grows, consider expanding the Liaison model into a team-based structure with regionally focused staff. This could include an inter-agency team that incorporates positions housed not only within CDFA, but other agricultural regulatory agencies, such as the Water Boards.

### How the Liaison Differs From Existing Roles

The Small Farm Regulatory Support Liaison would serve under the Farm Equity Advisor at CDFA and fulfill a distinct and complementary role.

While the Advisor provides strategic leadership and the Small Farm Business Liaison connects producers to economic resources, the Regulatory Support Liaison would act as a dedicated coordinator, helping small and socially disadvantaged farms navigate complex regulatory landscapes, including food safety, water quality, and emerging compliance requirements.

This position would be responsible for implementing the solutions recommended in this report and aligning regulatory programs across agencies. Unlike existing roles, the Liaison would focus on direct, full-time regulatory support, interagency coordination, and proactive problem-solving—serving as both a navigator for producers and an operational partner across government entities.

Recommendation 2

# Expand Coordinated Outreach and Education through Inspectors and Partners

## Opportunity

California's producers regularly interact with a wide range of agencies and partners, such as CDFA food safety inspectors, Water Boards field staff, County Agricultural Commissioners (CACs), and organizations like ILRP approved third-party groups, UCCE, and RCDs. Each interaction is an opportunity to deliver clear, consistent, meaningful, and timely information that helps producers understand and meet food safety, water quality, and other requirements.

Without a shared strategy or messaging across agencies and partners, producers may receive fragmented or inconsistent guidance, leading to confusion, missed deadlines, or duplicated efforts. This challenge is particularly important for small-scale, socially disadvantaged producers who may be less connected to traditional compliance channels or technical support.

Producers who participated in the Study emphasized the importance of receiving timely, plain-language information from trusted messengers. As food safety and water quality regulations continue to evolve, improving coordination across existing outreach efforts would help producers stay informed and meet their responsibilities more effectively, efficiently, and equitably.

### What This Might Look Like in Practice

During a PSP inspection, the inspector hands a producer a one-page resource, such as the State Water Board's ILRP Overview or the Central Valley Regional Water Board's Determining Coverage handout, to introduce the ILRP requirements. This helps the producer understand what the ILRP is and determine if the operation is subject to it.

If the producer has questions, the inspector can refer them to:

- Additional ILRP outreach materials or contacts
- The CDFA Small Farm Regulatory Support Liaison (*Recommendation 1*)
- The Digital Decision Support Tool (*Recommendation 15*).

By using existing interactions to share clear, cross-program information, inspectors can help producers receive timely, consistent regulatory guidance – making outreach more impactful.

## Solution

CDFA and the Water Boards should enhance the coordination of existing regulatory outreach efforts by equipping inspectors and local partner organizations with shared messages, tools, and strategies while maintaining regional flexibility. They should also coordinate cross-programmatic communication to reduce or eliminate recommendations that may conflict with other agency requirements. These efforts would create a more unified regulatory outreach process that ensures producers receive clear, consistent, and timely information regardless of which agency or partner they engage with.

This solution could include cross-training state and local inspectors, developing outreach materials in coordination with Water Boards and regional partners that reflect current and evolving regulations across programs, and building stronger partnerships with trusted community-based organizations. Together, these actions would help producers better understand and meet regulatory requirements while reinforcing a supportive, education-first approach.

## Implementation Steps

- **Cross-Training Inspectors:** Develop a training module to teach CDFA and Water Boards field personnel (and their county counterparts) about each other's basic requirements and key messages. All outreach, especially through inspectors, should emphasize education and support, not penalties. When delivered consistently and positively, outreach builds trust and long-term compliance.
- **Assess Resource Needs to Develop Unified Outreach Materials:** Determine resource needs to create multilingual handouts and digital content that clearly distinguish the roles and requirements of program areas like PSP, ILRP, CAF Program, Winery Order, and other relevant program areas (e.g., SOP). This may include additional resources for the Water Boards' Office of Public Engagement, Equity, and Tribal Affairs, CDFA's Public Affairs, or utilization of the Liaison from *Recommendation 1.* Staff should develop outreach materials, such as printed flyers and brochures, that are easy to distribute during field visits and reflect the most current regulatory guidance. Both digital and non-digital formats should be available to reach producers with varying levels of internet or smartphone access.
- **Strengthen Partnerships with Local Organizations:** Convene regular meetings with RCDs, UCCE offices, CACs, farmworker-serving nonprofits, and commodity groups to align outreach calendars, co-host events, and share resources.
- **Center Outreach on Socially Disadvantaged Farmers and Ranchers:** Make sure outreach strategies specifically address producers who are hard to reach. Outreach strategies could include translating materials into common languages including, Spanish, Hmong, Punjabi, and Mandarin, and partnering with organizations like the Small Farm Resource hubs, or minority farmer associations. The Small Farm Regulatory Support Liaison, as proposed in *Recommendation 1*, could lead some of this coordination. Outreach should coincide with key compliance deadlines or new requirements. By aligning outreach cycles with reporting periods, agencies can help producers act early and with confidence.
- **Monitor, Adapt, and Share Lessons Learned:** Track outreach activities and their impact, including workshop frequency and attendance, follow-up actions taken by producers, and observed improvements in compliance. Staff should get feedback from farmers on what information was useful or what remains confusing and use this to refine the messaging and methods.

### Example of Support: Clarifying Riparian Zone Management

Riparian zones (vegetated areas adjacent to waterways) are important for protecting water quality by filtering sediment, nutrients, and other agricultural runoff. However, these areas could also raise food safety concerns regarding wildlife intrusion.

Under the PSR Subpart I, farms are required to monitor and, when necessary, mitigate the risks posed by animals entering production areas. This may involve measures such as fencing, deterrents, or changes to field layout. These actions could appear to conflict with conservation-oriented practices encouraged by water quality programs.

The on-site inspector or partner may help a grower assess risk from adjacent riparian zones specific to their farm, identify cost-effective mitigation options that do not conflict with regulatory expectations, and connect them with technical assistance if needed.

Recommendation 3

# Develop a Technical Assistance Request Tool that Links to the PSP Portal

## Opportunity

CDFA's Technical Assistance Program (TAP) plays a critical role in helping small-scale and historically underserved producers understand and comply with the FSMA PSR. Established through the 2019 Budget Act, TAP delivers tailored support through multilingual trainings, on-farm visits, compliance tools, and partnerships with UCCE and community advisors.

Today, producers access TAP services through a patchwork of email requests, in-person outreach, and informal referrals. This decentralized model can create inconsistent access and response times, particularly for producers with limited English proficiency, digital access, or familiarity with who to contact or what help is available.

CDFA should launch a simple, public-facing Technical Assistance Request Form that allows users to easily request support in their preferred language and format. This tool could be hosted on the PSP website and designed to work on mobile devices, reducing access barriers while helping TAP staff coordinate and track responses. This tool would strengthen the connection between producers and TAP support, while reinforcing the State's "education before regulation" commitment.

**Voices From the Field**

"I'm not always sure what resources are out there or what trainings I should take. If there was a simple way to ask questions or get pointed in the right direction, I'd feel a lot more confident about doing things right."

*Small Produce Grower*

## Solution

CDFA should build a Technical Assistance Request Tool to help producers request a wide range of support services, such as on-farm visits, food safety consultations, and PSR training sign-ups through a simple, multilingual interface designed for producers with emerging digital literacy and limited connectivity.

The tool should be:

- Publicly accessible, hosted on the PSP website
- Mobile-responsive, low-bandwidth compatible, and designed for emerging digital literacy
- Available in multiple languages, such as Spanish, Hmong, Punjabi, and Mandarin
- Confidential, with all submissions routed only to TAP staff.

By centralizing support requests, the tool would make TAP services more accessible while also improving internal tracking and response coordination. The tool also aligns with other recommendations, including the Small Farm Regulatory Support Liaison (*Recommendation 1*), who could coordinate follow-ups for underserved producers and Coordinated Outreach (*Recommendation 2*), which would create additional entry points to access the tool in the field.

## Implementation Steps

- **Design a Streamlined Request Form:** Develop a clear, user-friendly form that allows producers to select their preferred language, enter contact information (phone, text, email), and select requested technical assistance (e.g., On-Farm Readiness Review [OFRR], PSR training, recordkeeping help).
- **Host the tool on the PSP website:** Make the tool publicly available through the PSP website. Consider using a Microsoft Form that connects to the PSP Portal, allowing TAP staff to receive and organize requests efficiently. Staff should conduct usability testing with UCCE, trusted community partners, and producers directly to ensure the interface is mobile-friendly and intuitive.
- **Establish a Response Workflow:** Develop and implement internal workflows to ensure requests are assigned promptly to TAP staff based on topic area, region, or language. Automatic confirmation emails or texts should be used to acknowledge the receipt of request, provide estimated response time, and include a link or reference number that allows producers to track the status of their request and follow up if needed.
- **Maintain Confidentiality Through Access Controls:** Ensure request information can only be seen by approved TAP staff. This separation helps protect grower privacy and avoids concerns about regulatory use. Staff and online portals should clearly communicate that all requests are confidential and non-regulatory to maintain grower trust. The communication should clarify that requesting technical assistance would not trigger additional inspection or enforcement.
- **Prioritize Requests Strategically:** Develop internal processes to identify and prioritize urgent or time-sensitive requests, allowing for timely triage and equitable response.
- **Build Tracking and Analytics Functions:** Integrate analytics tools to track request volume, response times, resolution rates, and service trends. This data could support improvement in PSP implementation, help identify outreach gaps, and inform future resource planning.
- **Promote the Tool Through Targeted Outreach:** Launch a coordinated outreach campaign to promote the tool through multiple trusted channels, including the Water Boards, UCCE, RCDs, nonprofit partners, and grower associations. Guidance should clearly explain how to use the tool, what services are available, and where to seek assistance if questions arise.

Recommendation 4

# Empower Representative Monitoring Programs to Voluntarily Support Annual CAF Program Reporting

## Opportunity

CAF operators are required to submit Annual Reports with data on waste generation, storage, land application, and nutrient management. For many operators, particularly those from smaller or underserved facilities, meeting these requirements demands significant time and, in many cases, financial resources to hire consultants. Most submissions are completed manually and sent via email in static formats, leading to inconsistencies in data quality and additional workload for both producers and Water Boards staff.

In some regions and for some CAFs, Representative Monitoring Program (RMP) groups conduct group groundwater monitoring on behalf of CAFs. These programs built trusted relationships with producers and are well-positioned to take on broader roles in regulatory support. By expanding the responsibilities of RMPs (where supported by industry organizations), the Water Boards could enhance the consistency and quality of submitted reports, while reducing the administrative load for both producers and staff.

This shift would move CAF reporting toward a more structured and scalable model, similar to the ILRP approved third-party group structure, while maintaining appropriate oversight mechanisms. In regions such as the Central Valley, where many CAFs are also enrolled in CV-SALTS, leveraging RMPs could also help clarify overlapping data requirements and reduce reporting duplication.

Expanding RMP responsibilities could:

- Enhance report accuracy and consistency through additional data quality review and controls
- Reduce compliance time for CAF operators, especially small or disadvantaged producers
- Provide Regional Water Boards with more insights into CAF groundwater trends and management practices.

**Voices From the Field**

"Within the Central Valley, we recommend that [a third-party] be authorized to expand its responsibilities as a third-party coalition... Such authority would empower the coalition to standardize data collection from dairies in the region, better manage that data and report to various authorities on water quality protection trends, adoption of improved practices and other key metrics."

*Dairy Industry Association*

This model aligns with the ILRP, where approved third-party groups provide similar compliance assistance by standardizing data collection and submitting aggregated information on behalf of members.

## Solution

The Water Boards should support an expanded role for existing RMPs, such as the Central Valley Dairy Representative Monitoring Program (CVDRMP) or Central Valley Bovine RMP, to assist CAF operators with data preparation and Annual Report submission. These responsibilities would mirror the ILRP third-party group model, enabling RMPs to assist with standardized data formatting, enrollment verification, and streamlined submission to the Water Boards. Participation should remain fully voluntary, with operators retaining the option to report independently.

One important distinction from the ILRP third-party group model is this recommendation does not change individual reporting obligations. Operators would still be required to submit individual Annual Reports or otherwise comply with requirements. The development and submission of Group Annual Reports would supplement individual Annual Reports, similar to Group Groundwater Monitoring Reports.

## Implementation Steps

- **Assess Existing RMP Capacity:** In collaboration with existing RMPs (e.g., CVDRMP, Central Valley Bovine RMP), staff should evaluate current roles and determine the scope of additional responsibilities. Staff should identify any technical or resource needs required to support expanded duties. RMPs would support data preparation and submission only; the Water Boards would retain full authority over review, enforcement, and regulatory interpretation.
- **Update Monitoring and Reporting Requirements:** Regional Water Boards may need to revise Monitoring and Reporting Program (MRP) requirements to formally authorize RMP support for Annual Report preparation, quality checks, and data submission. The format and method for RMPs submitting data to the Water Boards (e.g., GeoTracker) should be clearly specified. For consistency, data submitted through RMPs and individual CAF operators (not participating in RMPs) should be aligned in the same format and system.
- **Standardize Templates and Tools:** In partnership with RMPs, develop or approve standardized regional Annual Report templates and validation tools to ensure data quality, consistency, and compatibility with Water Boards systems, including electronic reporting platforms such as GeoTracker (*Recommendation 9*).
- **Establish Formal Agreements:** RMP groups should develop agreements with participating operations that outline roles, responsibilities, data handling protocols, and expectations for reporting timelines.
- **Provide Training and Support:** Staff should work with RMPs, industry groups, and technical assistance providers to offer training and outreach to CAF operators on the new reporting process, including how to use tools, templates, and RMP support services.
- **Pilot the Model:** Launch a pilot with one or two RMPs, ideally covering a diversity of producers and regions, to test tools, workflows, and reporting support. The pilot feedback should be used to refine tools and finalize protocols before broader rollout.

### CAF Diversity

The CAF sector is highly diverse, with dairies, poultry operations, equestrian facilities, feedlots, and more. Each have their own operational structures and levels of industry organization.

This diversity means the RMP model may not be immediately feasible or readily available for all CAF types. Successfully expanding RMP responsibilities would require tailored, region-specific strategies and close collaboration with industry groups that have the capacity and willingness to organize and support their respective sectors.

Recommendation 5

# Support Ongoing Efforts to Become an Authorized Local Agency Oversight Program

## Opportunity

With the large number of wineries statewide that may be eligible to enroll or transition to the Winery Order, the Water Boards have the opportunity to streamline Winery Order implementation by authorizing a local agency to oversee winery process water activities. The Local Agency Oversight Program was developed so that local agencies with the capability and local authority to provide oversight responsibilities consistent with Winery Order requirements could become authorized by the Water Boards to administer the Winery Order.

Napa County, which has a high density of wineries and an existing winery waste regulatory program through their county Environmental Health Program, is a natural fit for this oversight role. The benefits of coordinating regulatory oversight responsibilities were recognized early in Winery Order development and Napa County is already actively working towards becoming a Local Agency Oversight Program with ongoing support from the San Francisco Bay Regional Water Board.

## Solution

The Water Boards should continue to support ongoing efforts for local agencies to become authorized Local Agency Oversight Programs. The Winery Order details the expectations, roles, and responsibilities of an authorized local agency and the wineries enrolled in a Local Agency Oversight Program.

Wineries are required to enroll for Winery Order coverage and comply with all permit requirements. Under the Local Agency Oversight Program, the local agency administers the Winery Order, including evaluating winery compliance, carrying out inspections, and providing progress updates to the Water Boards. The Water Boards assess enrollment applications, issue Notices of Applicability to wineries, and retain enforcement authority related to the Winery Order.

### What are Designated Local Agencies?

According to the Winery Order (WQ 2021-0002-DWQ), Attachment E, page E-1, footnote 1:

*"A local agency may be any governmental organization that can provide oversight of implementing [the Winery] Order requirements and has the authority to develop and implement an ordinance providing administrative authority consistent with the requirements of [the Winery] Order."*

### Opportunity for Annual Fee Reduction

The Winery Order provides a 50% annual fee reduction for wineries enrolled in a Local Agency Oversight Program.

## Implementation Steps

- **Identify Need and Feasibility:** Local agencies could evaluate the level of winery participation in existing local and/or state wastewater regulatory programs and their own capacity to provide oversight in order to determine the need and feasibility of establishing a Local Agency Oversight Program. Local agencies should use the criteria listed in Attachment E, Section B – Local Agency Qualifications of the Winery Order, to help determine eligibility.
- **Work with Regional Water Boards to Apply:** A local agency can confer with Regional Water Boards staff to prepare and apply for Local Agency Oversight Program authorization. Local agencies should refer to Attachment E in the Winery Order for application procedures. Water Boards staff can provide support with understanding the Local Agency Oversight Program intent, expectations, and requirements.
- **Provide Outreach:** While not a requirement of the Winery Order, local agencies could perform outreach to wineries on the benefits of joining the Local Agency Oversight Program and how to join.
- **Submit Annual Reports:** Local agencies should refer to Attachment E in the Winery Order for annual reporting requirements. Local agencies can confer with Regional Water Board staff to ensure reporting formats are appropriate. The Water Boards should develop a process to use annual reports to verify winery program participation, and any apply associated fee adjustments accordingly.
- **Engage in Ongoing Communication:** Regional Water Boards staff and local agencies should engage in regular communication to provide progress updates and provide support for Winery Order administration and oversight.
- **Evaluate and Adjust, as Needed:** Water Boards staff should monitor Local Agency Oversight Program implementation through regular progress updates and enrollment trends. Feedback and discussions between the Regional Water Boards and the local agency could be used to identify Local Agency Oversight Program improvements and additional resources that may be needed.

# Developmental Opportunities

These recommendations propose more complex solutions that strengthen alignment across food safety and water quality programs by improving data infrastructure, simplifying reporting pathways, and supporting regional implementation models. Each recommendation addresses issues that require deeper coordination, system design, or interagency collaboration, but offer long-term value by making compliance clearer, oversight more consistent, and outcomes more measurable.

By advancing these opportunities, CDFA, CalEPA, and the Water Boards could:

- Enhance how regulatory data is collected, shared, and used
- Simplify participation for producers engaged in multiple programs
- Support localized implementation through trusted partnerships
- Create the tools and infrastructure needed to track outcomes over time.

These recommendations are not quick fixes, but they are feasible programmatic next steps and considerations that build on foundational work and could be successful if regional flexibility is maintained. Together, they create a connective framework that could align regulatory programs in a way that strengthens service delivery, supports public health and environmental protection, and builds trust across California's agricultural community.

PSP

Cross Water Quality

ILRP

CAF Program

Winery Order

## Developmental Opportunities

**Recommendation 6**
Develop a Department-Wide CDFA Farm Inventory

**Recommendation 7**
Allow Producers to Submit Audit Certifications for Risk-Based Inspection Prioritization

**Recommendation 8**
Support Industry Efforts to Establish Water Boards-Accepted Sustainability Programs

**Recommendation 9**
Implement Electronic Reporting for the CAF Program

**Recommendation 10**
Simplify the Irrigation and Nitrogen Management Plan for Small, Diversified Farms Where Applicable

**Recommendation 11**
Invest in GeoTracker System Enhancements for Agricultural Programs

**Recommendation 12**
Develop Agricultural Water Quality Outcomes Dashboards

Recommendation 6

# Develop a Department-Wide CDFA Farm Inventory

## Opportunity

CDFA has an opportunity to strengthen how it delivers services to producers by building on existing infrastructure to create a department-wide view of farm participation across its programs. Today, CDFA maintains separate farm records within programs like the PSP, SOP, Direct Marketing Program (DMP), and Animal Health and Food Safety Services (AHFSS). While each of these inventories supports its respective mission, they are not connected – making it difficult for the department to coordinate inspections, align outreach, or support farms and ranches comprehensively.

A unified inventory could enable CDFA staff to better understand which farms are already enrolled in one or more programs and where additional engagement, support, or technical assistance might be helpful. For example, a farm participating in both the SOP and PSP could receive more coordinated communication, reducing paperwork and improving the overall experience. A centralized inventory could also support the department's ability to respond quickly in emergencies, such as during wildfires, droughts, or disease outbreaks.

This is also a strategic moment to act. CDFA's modernization efforts, including the PSP Portal and ongoing work around traceability, climate-smart agriculture, and digital permitting, create a strong foundation for building an internal, department-wide inventory. The inventory would not be public-facing, but it would enhance coordination, support farm equity initiatives, and improve the department's readiness to partner across agencies, such as with the Water Boards or other CalEPA agencies.

By creating a shared inventory of farms, CDFA can enhance service delivery, reduce administrative touchpoints, and strengthen the department's ability to support producers, particularly those navigating multiple programs.

## Solution

CDFA should develop and maintain a department-wide Farm Inventory that consolidates records across selected programs into a secure, internal system and serves as an authoritative registry of agricultural operations. The department-wide Farm Inventory would:

- Consolidate existing farm records across CDFA programs, in a manner that aligns with legal authorities and data privacy requirements (e.g., FAC § 42653)
- Exclude direct sharing of PSP data with any other entities including other CDFA programs
- Support internal coordination and communication, cross-program analytics, and outreach, as needed
- Enable future data sharing opportunities with CalEPA, the Water Boards, and other relevant entities as described in *Recommendation 13* (CalAgX framework), in alignment with legal authorities and data privacy requirements (e.g., FAC § 42653).

Importantly, the Farm Inventory would not share any PSP data with other programs. Instead, PSP may be able to securely access selected records already housed in the inventory, such as a farm's SOP or DMP enrollment status, to support verification and outreach coordination. All access would comply with existing legal authorities and statutory privacy requirements.

To start, CDFA should pilot this solution with programs within CDFA that collect farm contact information data, such as CDFA's various grants and incentives programs related to climate smart agriculture, circular economy initiatives, and farm to fork initiatives.

## Implementation Steps

- **Determine Legal Feasibility:** Review existing confidentiality statutes (e.g., FAC §42653), especially for sensitive data such as small farm locations, personal contact details, or proprietary production information. Data fields with restricted access, such as PSP data, should be stored separately or tagged with role-based permissions to ensure appropriate handling.
- **Establish Cross-Program Governance:** Based on legal feasibility, set up a governance framework with representation from each participating program to define data ownership, update protocols, and ensure consistent interpretation of farm profiles.
- **Scope and Gather Data:** Inventory existing CDFA programs and data currently collected (e.g., Farm name, location, compliance).
- **Design Database:** Develop a centralized database structure to assist in consolidating lists and linking operations that may be covered under multiple CDFA programs to one central profile.
- **Integrate Data and Identify Duplicates:** Merge datasets, as applicable, and eliminate duplicates. Leverage shared identifiers, geolocation, and ownership data to reconcile records.
- **Develop Internal Interface:** Create a secure interface for authorized staff to view consolidated farm profiles, including a summary of program participation and compliance status. Ensure PSP data is limited to PSP staff access only. The inventory could also be designed to flag or filter farms by size, language needs, or underserved designation (per AB 1348) to support targeted program delivery and outreach.
- **Develop and Implement Maintenance Plan:** As farms frequently change names, ownership, or operational status, implement a process for regular verification, duplicate resolution, and cross-system updates to ensure the inventory remains current and accurate. Staff should plan for long-term technical maintenance, user access controls, and versioning to ensure the inventory evolves with the department's broader digital modernization efforts. The maintenance plan should include a structure to align with upcoming FSMA traceability requirements.

### Emergency Response Readiness

A department-wide farm inventory would strengthen CDFA's ability to quickly and effectively respond to emergencies such as disease outbreaks, natural disasters, or food safety events. For example, in response to recent concerns about highly pathogenic avian influenza (HPAI), CDFA needed to identify and contact dairy operations statewide, which involved a process that highlighted the importance of having a centralized, up-to-date record of farm locations and operational types.

With a shared inventory, CDFA could rapidly map and coordinate responses across programs, enabling faster outreach, improved situational awareness, and more efficient deployment of resources.

Recommendation 7

# Allow Producers to Submit Audit Certificates for Risk-Based Inspection Prioritization

## Opportunity

PSP receives an annual inspection goal from the FDA under the Cooperative Agreement Program (CAP) but retains discretion in how inspections are prioritized and scheduled within its farm inventory. CDFA uses the Produce Decision Analysis Tool (PDAT) to support inspection planning based on factors such as farm size, commodity type, and compliance history. While PDAT includes a risk-reduction factor for "Participation in a Food Safety Audit," through a “Yes/No” basis, PSP does not currently collect audit participation data in advance or use audit findings when calculating risk, limiting the tool’s ability to fully account for this factor during inspection prioritization and planning.

**Voices From the Field**

“As a participant in third-party audits, we already go above and beyond FSMA requirements.”

*Organic Central Coast Producer*

Many producers in California undergo routine third-party food safety audits to meet buyer requirements and demonstrate compliance with standards that closely align with the PSR. This creates an opportunity for PSP to enhance its risk-based approach by allowing producers to voluntarily submit audit certifications. Doing so would enable PSP to more effectively identify farms that maintain strong food safety systems and prioritize inspections accordingly.

By facilitating voluntary submission of audit certificates and consideration of audit findings in risk-based inspection prioritization, PSP can better target its limited inspection resources toward operations without independent verification mechanisms. For producers, this offers an option to maintain and share high standards of food safety. For regulators, it introduces a new layer of risk differentiation, enhancing oversight without adding touchpoints to operations already subject to rigorous market-driven audits.

This recommendation would support transparency, efficiency, and mutual trust. It also would provide a foundation for more formal audit alignment in the future by encouraging producers to opt in and by helping PSP gather data on audit quality and coverage.

## Solution

CDFA should establish a voluntary option within the PSP Portal for producers to share third-party food safety audit certifications, in consultation with FDA, USDA, and industry partners. This pathway would allow PSP to consider verified audit participation as a risk-reducing factor during annual inspection planning. However, PSP inspection equivalency and/or replacement would still need to be determined through the audit alignment work under *Recommendation 17*.

The submission process should be simple and secure, requiring only summary-level documentation, such as a certificate of completion or audit outcome letter, and would not trigger additional review or enforcement. The request to upload a third-party audit certificate could be included in the annual email growers receive to verify and update their farm information. Over time, the program would allow CDFA to gather information on audit participation and performance, which could inform future audit alignment work under *Recommendation 17*.

This effort would not replace regulatory inspections or alter CDFA's inspection authority. Instead, it would enhance inspection planning by recognizing credible, market-based audit systems and directing limited inspection resources toward operations without independent verification mechanisms.

## Implementation Steps

- **Determine Legal Feasibility:** As many farms treat audit documentation as proprietary, determine the legal feasibility of allowing producers to voluntarily submit audit certifications at a summary-level (e.g., audit date, certifying body, certification status). Staff should determine how the data would be used. All data must be securely stored and managed in accordance with relevant confidentiality laws, including FAC § 42653.
- **Create a Submission Channel:** Based on legal feasibility, update PSP Portal to allow producers to voluntarily submit audit certifications through the system. Collected information should include audit scheme, date, certifying body, and pass/fail status (not detailed reports). Once a certification expires, it should no longer be factored into the farm's PDAT inspection ranking until a new, valid certificate is submitted.
- **Define and Communicate Recognition Criteria:** Publish a list of recognized audits that align with PSR standards. This list should be informed by the Audit Alignment Working Group (see *Recommendation 17*) and reflect commonly used schemes such as GLOBALG.A.P. + FSMA Add-on, PrimusGFS, USDA GAP, and LGMA. The criteria should be revisited periodically in collaboration with industry partners.
- **Engage and Educate Producers:** Conduct outreach to producers to explain the benefits and voluntary nature of this opportunity. Communication should clarify that submitting an audit certificate would not trigger additional inspection or enforcement.
- **Develop a Tracking and Planning Tool:** Submitted audit certifications should be logged in a secure database and linked to each producer's farm account. This database should be used during annual inspection planning to adjust inspection schedules where appropriate.
- **Conduct Periodic Spot-Check Inspections:** To validate assumptions and maintain system integrity, CDFA should periodically inspect a sample of producers who submitted certifications. These inspections could help assess the consistency between audit results and observed compliance with PSR standards.
- **Monitor and Evaluate:** Evaluate the program's performance over multiple inspection cycles and use insights to inform the potential development of formal audit equivalency pathways under *Recommendation 17*. If successful, this approach may be transitioned into a more formalized recognition system.

### Enhancement to Risk-Based Inspection

PSP currently uses the PDAT to assign inspection priority based on risk factors such as farm size, commodity type, and inspection history. While PDAT includes a criterion for "Participation in a National Food Safety Audit," PSP does not actively collect audit data from producers in advance of inspection planning.

Allowing producers to voluntarily submit audit certifications could make this existing risk factor actionable—enabling PSP to more accurately reflect current farm practices and allocate limited inspection resources where they are needed most.

Recommendation 8

# Support Industry Efforts to Establish Water Boards-Accepted Sustainability Programs

## Opportunity

As part of the Winery Order, wineries are subject to ongoing monitoring requirements that vary by discharge method, disposal system, and tier (i.e., total volume of process water discharged per year). For Tiers 2, 3, and 4 facilities, certain monitoring results and/or direction from the Regional Water Boards may trigger additional compliance actions, including the preparation and submittal of a site-specific Salt Control Plan or Nitrogen Control Plan. Developing these plans requires wineries to evaluate their onsite process water treatment and disposal operations for salt and/or nitrogen handing and treatment, water quality impacts, and control measures, report findings and analyses, and potentially implement facility improvements.

The Winery Order provides an alternate compliance pathway to preparing a Salt Control Plan or Nitrogen Control Plan under certain site-specific situations. Wineries may choose to participate in a Water Boards accepted sustainability program and certify implementation of the identified best management practices to control salt and/or nitrogen instead of developing facility-specific control plans.

Establishing an accepted, industry-run sustainability program could:

- Improve Water Boards staff workload by streamlining review of site-specific plans
- Provide an annual fee discount for participating wineries
- Improve water quality protection by educating and assisting winery operators in identifying and implementing salt and nitrogen control measures and best management practices (BMPs).

The California Sustainable Winegrowing Alliance expressed interest and has begun expanding their program to include salt and nitrogen control measures and incorporate the Winery Order sustainability program requirements. The Water Boards support their efforts to become an accepted sustainability program.

### Embracing Sustainability

According to the Wine Institute's 2025 Wine Profile, more than 80% of California wine is produced at a Certified California Sustainable Winery. While this certification is not currently an accepted sustainability program under the Winery Order, its prevalence underscores the industry's commitment to environmental stewardship. Aligning industry sustainability efforts with Winery Order requirements could build on existing participation, broaden understanding of salt and nitrogen impacts, and streamline reporting.

### Opportunity for Winery Order Annual Fee Reduction

The Winery Order provides a 10% annual fee reduction for wineries participating in an approved sustainability program.

## Solution

The Water Boards should support industry efforts to establish Water Boards-accepted sustainability programs. Winery participation in sustainability programs is voluntary. Wineries required to prepare a Salt Control Plan and/or Nitrogen Control Plan can choose to develop one independently that is tailored to their facility. Regional Water Boards have the authority to direct Tier 3 and Tier 4 facilities to prepare a site-specific Salt Control Plan and/or Nitrogen Control Plan if it is determined to be more protective than the general sustainability program measures.

The purpose and criteria for becoming a Water Boards accepted sustainability program are detailed in the Winery Order. These sustainability requirements include best management practices to manage and minimize salt and nitrogen in winery operations and the winery waste discharged to land and also certification and inspection processes to verify winery participation and compliance with the sustainability program.

## Implementation Steps

- **Assess and Modify Sustainability Programs, as Needed:** Industry groups should review sustainability program design and identify any gaps relative to Winery Order requirements. Programs should be updated as needed to include clear water quality protection measures, monitoring expectations, and reporting protocols that demonstrate compliance with the Winery Order.
- **Review and Acceptance:** The Water Boards should evaluate a proposed sustainability program for its ability to demonstrate water quality protection and for compliance with the Winery Order criteria and requirements to determine program acceptance.
- **Promote Outreach and Education:** Industry groups should build awareness of accepted sustainability programs. Outreach should include clear explanations of program benefits, compliance pathways under the Winery Order, and contact points for more information. A list of accepted programs could be added to the State Water Board Winery Order website to ensure transparency and easy access to more information.
- **Set up Process to Verify Winery Participation:** The sustainability programs should establish a process, in coordination with industry groups, for Regional Water Boards to receive and verify lists of participating wineries on an annual basis (ideally aligned with the billing cycle). The Water Boards should incorporate this information into existing enrollment or billing systems so that program participation and any associated fee adjustments can be applied accordingly.
- **Evaluate and Modify, as Needed:** Once a sustainability program that addresses salt and nitrogen control for winery waste is accepted by the Water Boards and is being implemented for wineries, feedback from participating wineries could be used to identify future areas for sustainability program improvements.

Recommendation 9

# Implement Electronic Reporting for the CAF Program

## Opportunity

CAF operators regulated under the CAF Program are required to submit information such as Notices of Intent (NOIs), nutrient management plans, groundwater monitoring data, and Annual Reports. These reports are typically submitted via email, scanned PDFs, or handwritten forms, with limited regional standardization or centralized storage.

This decentralized, paper-based approach limits the Water Boards' ability to conduct timely reviews, analyze trends, or verify completeness across facilities. For CAF operators, the lack of a structured system creates uncertainty around submission status, complicates recordkeeping, and increases administrative touchpoints particularly for those operating under multiple programs or across multiple regions, each with their own reporting processes and timelines.

## Solution

The Water Boards should implement electronic reporting for the CAF Program through a phased, collaborative transition. This process should include active engagement with producers, consultants, and technical assistance providers to ensure usability and adoption. As part of this transition, the Water Boards should:

- Select a reporting platform, such as GeoTracker or a compatible third-party system, in consultation with program participants, to support electronic reporting, data validation, and streamlined analysis
- Develop standardized, regionally adaptable digital report forms on the selected platform
- Provide comprehensive technical support and training to producers and program participants.

This shift would not change what information producers are required to submit, but it would modernize how that information is collected, organized, and used. By improving data quality and accessibility, electronic reporting would enhance program oversight and coordination across related efforts, including CV-SALTS and future regulatory updates, and make data more accessible and transparent for the public.

Shifting to electronic reporting would ease any transition for reporting requirements in future orders, by supporting consistent and scalable data fields.

### Who This Could Help

About 1,900 CAF operators statewide could benefit from transitioning to electronic reporting. Many currently rely on paper forms or email submissions to meet compliance requirements.

A successful transition will require clear guidance, training, and flexibility, especially for smaller or resource-limited operations that may face digital access constraints or limited broadband connectivity.

### Voices From the Field

"The first one to two years [transitioning to electronic reporting] were difficult, but now all of our growers greatly prefer the tool to paper reporting. It is a big time save for both us and them."

*ILRP Approved Third-Party Representative*

### Electronic Reporting Comparison Schedule

The table below compares current CAF Program reporting formats with recommended electronic submission methods:

| Key Reporting Requirements | Current Format | Recommended Format |
|---|---|---|
| **NOI / Form 200** | Scanned PDFs or emailed forms | GeoTracker live form, with CV-SALTS enrollment integration, as appropriate |
| **Management Plans** | Kept on-site or emailed as PDFs | When submitted, uploaded on GeoTracker in standardized template |
| **Annual Reports** | PDF upload to GeoTracker or emailed forms | GeoTracker live form and/or structured industry-tool upload |

## Implementation Steps

- **Select and Design Platform:** Determine whether to build the forms in GeoTracker or build from third-party systems already used by industry groups. The platform should support version control, form validation, secure access, and be able to incorporate future program requirements. The platform should also include confirmation receipts and allow producers to access and download previously submitted reports for their own records.
- **Allocate Funding for Development and Ongoing Maintenance:** Allocate dedicated development hours to support the creation, integration, and ongoing maintenance of electronic reporting forms. If GeoTracker is selected as the solution, estimated programming hours for the development of report forms are between 30 to 50 hours per form. This could be between 270 to 450 hours for Annual Reports across the regions.
- **Develop Standardized Templates:** Collaborate with Regional Water Boards staff, industry partners, and technical programmers to develop standardized but regionally flexible digital report forms. Fields should reflect current reporting needs while remaining adaptable to potential future program changes. Explore shared templates or linked fields across programs.
- **Pilot with Producer Engagement:** Test digital forms with a representative group of CAF operators and consultants. The pilot should focus on ensuring usability, compatibility with farm recordkeeping, and clarity of submission process. Staff should use findings to refine templates and support tools.
- **Training and Support:** Partner with UCCE, industry groups, and local Farm Bureau chapters to provide training. Staff should develop written guides, multilingual video tutorials, and a help desk for real-time assistance. Reporting systems should be accessible, with mobile-friendly interfaces, language access where needed, and the ability to connect to consultant or industry tools.
- **Phase-In and Transition:** For the first one to two reporting cycles, allow producers to submit either electronically or through existing processes. Staff should strongly encourage digital reporting while continuing to support those who may need additional time or assistance to transition.
- **Demonstrate Use of Data:** Use the data submitted to generate aggregated insights that are shared with producers and communities. Examples could include land application maps or well exceedance summaries. This reinforces transparency and shows how reporting supports better water management and accountability.

Recommendation 10

# Simplify the Irrigation and Nitrogen Management Plan for Small, Diversified Farms Where Applicable

## Opportunity

Under the State Water Board's precedential Eastern San Joaquin (ESJ) Order (Order No. WQ 2018-0002), producers enrolled in the ILRP must submit an annual INMP Summary Report documenting nitrogen applied and removed by crop and field. While this format is well suited for large-scale, single-crop operations, the reporting format could potentially be disproportionately complex for small, diversified farms – particularly those growing dozens of specialty crops in small acreages using rotations, intercropping, and organic methods

These operations may not have routine access to certified crop advisors or consultants and often manage diverse cropping systems that do not fit easily into a one-size-fits-all reporting format. The current structure of the INMP, especially its per-crop data entry, can present challenges for small, multilingual, or organically certified operations if extensive outreach is not conducted. In many cases, the information requested overlaps with records already maintained for organic certification or other programs, creating opportunities to better align and streamline reporting.

Pending recommendations from the Expert Panel, a simplified INMP reporting template may be considered to allow more producers to participate meaningfully in the ILRP and generate more accurate, usable data by asking the questions in an alternative format and that may better reflect on-the-ground realities.

## Solution

The Water Boards should consider the recommendations from the Expert Panel to evaluate if a simplified INMP Worksheet and Summary Report template should be tailored for small, highly diversified farms where appliable. For example, a standardized template could be developed that aligns with the direction in the ESJ Order. As permitted under Section II.A.5.c of the ESJ Order, the Regional Water Boards could authorize the use of a simplified template for designated producers.

This optional version could allow producers to report nitrogen use at the farm or crop-group level and describe their nutrient management practices through simplified checklists, while still capturing essential groundwater protection data required by the regulatory frameworks of each region.

Each Regional Water Board must retain discretion in whether and how the template is applied based on local permit requirements and program structures.

### Voices From the Field

"The complexity and challenges for small, highly diversified farmers results in difficulties reporting accurate and meaningful data."

*Technical Assistance Provider from Central Valley Region*

"There are many small growers using multiple crop rotations and very basic record keeping… making it difficult to calculate accurate data."

*Water Boards Staff*

The alternative template should:

- Align with existing ESJ Order allowances that state eligible farms could report nitrogen applied (A) only, with nitrogen removed through crop yield (R) estimation or omission as appropriate
- Include a field for the number of distinct crops or rotations per year
- Include an optional field for attestation by an organic certifier, verifying compliance with organic input tracking requirements
- Be available in multiple languages to reflect the primary languages spoken by small farm operators (e.g., Spanish, Hmong, Mandarin, Punjabi).

## Implementation Steps

- **Collaborate with Industry:** Continue to work across Water Boards, approved third-party groups, Farm Bureaus, consultants, small farm advisors (e.g., UCCE), growers, and other program participants to discuss the viability, applicability, and potential benefits of simplified INMP reporting. Determine what tools and training would be needed to integrate the alternative template into existing workflows and reporting tools.
- **Define Eligibility:** The Water Boards should define a "*small, highly diversified*" operation for this purpose, in collaboration with industry groups and interested parties. Definitions should be flexible across regions and align with any recommendations from the Expert Panel. Criteria from the ESJ Order may be included.
- **Develop Template:** The design process should consider Expert Panel recommendations, especially those focused on whether data collected under existing INMP formats is sufficient to prioritize risk and target oversight (Question 5). Convene ILRP program experts and industry groups, along with representatives from small farm organizations (UCCE, etc.) to design the simplified template, which could be tailored (e.g., optional fields for certain farmers). The minimum information needed should be determined to be sufficient for the Water Boards' needs and should be in line with the recommendations from the Expert Panel. Additionally, the template should be a user-friendly form, and available in multiple languages given many diversified farmers may have Spanish, Hmong, Mandarin, Punjabi, etc., as primary languages.
- **Determine Reporting Process:** Work with approved third-party groups and small farm advisors to identify how the simplified INMP form could be incorporated into existing third-party (i.e., Coalition) systems. Regional Water Boards staff should define standardized data procedures to ensure that the information reported through the simplified forms is compatible with existing Water Boards systems, such as GeoTracker.
- **Enable Certification Alternatives:** Continue to work with CDFA's Fertilizer Research and Education Program (FREP) to develop accessible certification pathways that account for barriers such as limited English proficiency, low digital literacy, and lack of access to internet or devices. Pathways for producers to self-certify using proof of attendance at an ILRP-approved nitrogen training could be established in applicable regions.

- **Obtain Approval:** The Regional Water Boards would need to approve the use of alternative templates as a way for certain groups to meet the ILRP reporting requirements. Ideally, the State Water Board should develop an optional template for the Regional Water Boards to adopt at their discretion for eligible farms, to encourage consistency and decrease the amount of work needed for Regional Water Boards to develop their own separately. The State Water Board should highlight that this is consistent with achieving the program's goals while reducing reporting pressures.
- **Pilot and Iterate:** Test use of the draft template with a pilot group of farmers and ranchers and gather feedback from the farmers and ranchers, technical assistance providers, and approved third-party groups. The pilot group should compare the effort required against the standard form to see if the data collected seems sufficient, then adjust if necessary.
- **Rollout and Conduct Outreach:** Publicize the availability of the alternative INMP template before a reporting cycle begins. Communication should make it clear which farms could use the form. Training should be provided, including visual walkthroughs, annotated samples, or short videos to help producers complete the form accurately. Water Board staff should coordinate with CDFA's Small Farm Regulatory Support Liaison (*Recommendation 1*) to work with agricultural commissioners, Farm Bureaus, small farm networks, third-party groups and nonprofit technical advisors to spread the word.
- **Monitor and Evaluate:** After the first year or two, review how many farms opted for the simplified form and gather feedback from farmers, program staff, technical advisors, approved third-party groups, and industry groups on its use.

### Relevant Precedent

The Kings River Watershed Coalition Authority developed and received approval from the Central Valley Regional Water Board for alternative INMP Worksheet and Summary Report templates tailored to small, highly diversified farms. Eligibility criteria include:

- Total acreage of 45 acres or less
- Gross annual sales of less than $350,000
- Crop diversity greater than 0.5 crops per acre (one crop for every two acres)
- Crop yields difficult to quantify
- Production of specialty crops or mixed vegetables.

This precedent shows that a simplified, yet technically credible nitrogen reporting format is both feasible and acceptable to regulators if conducted on a regional basis. It provides a concrete model that could inform the development of a standardized alternative for small, diversified farms across other regions and approved third-party groups while considering regional requirements.

▲ Recommendation 11

# Invest in GeoTracker System Enhancements for Agricultural Programs

## Opportunity

As more producers enroll in water quality regulatory programs, the need for digital tools that enable reliable, user-friendly reporting is becoming increasingly apparent. GeoTracker, the Water Boards' primary platform for groundwater data management, plays a growing role in supporting agricultural program areas, including the ILRP, CAF Program, and enrollees under the Winery Order general permit of the WDR Program.

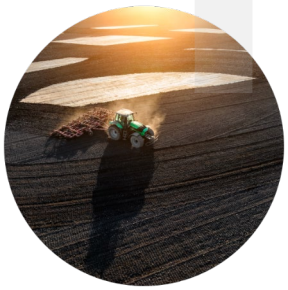
While originally designed for environmental cleanup activities, GeoTracker has shown flexibility to support agricultural programs and provides a stable foundation for continued development. However, as more producers, approved third-party group staff, and consultants increasingly rely on the platform, it must evolve to meet the needs of a broader and more diverse user base.

Participants in this Study highlighted several recurring challenges with GeoTracker, including the inability to easily transfer user accounts with staff turnover, enrollment forms that do not reflect operational field structures, and outdated, unintuitive interfaces that lack features like "save progress."

Targeted investment in dedicated development and enhancements could make GeoTracker more intuitive, efficient, and effective.

### Who This Could Help

An estimated 5,000+ active agricultural producer and consultant user accounts currently rely on GeoTracker to submit compliance reports under ILRP, CAF Program, and the Winery Order permit. With additional ILRP regions transitioning to electronic reporting and the Winery Order continuing enrollment efforts, this user base will continue to grow.



### Voices From the Field

"Strongly recommend that any reporting portal change actually be beta tested by end users so that meaningful changes could be made prior to releasing."

*Agricultural Industry Association*

## Solution

The Water Boards should invest in enhancements to GeoTracker that will improve the system's functionality, user experience, and long-term sustainability for the agricultural community, other program areas currently using GeoTracker, Water Boards staff, and the public. Resources should go to developing user-centered features, including auto-fill, validation rules, batch uploads, save-without-submit options, and mobile-friendly interfaces should be tested by end users. A more intuitive system would:

- Save users time and reduce reporting errors
- Increase submission rates and data quality
- Minimize the need for follow-up or enforcement due to technical noncompliance
- Enhance transparency by allowing users to easily track what was submitted and when, while providing the public with more real-time access to information.

## Implementation Steps

- **Identify Key Enhancements:** Gather user feedback to identify the most common constraints in reporting to enhance GeoTracker's functionality and user experience. Emphasis should be placed on enhancements that would deliver the greatest value or are frequently requested by users. This is also an opportunity to explore features that support cross-program coordination, such as the ability to look up parcel information and see coverage status across multiple program areas (e.g., ILRP, CAF Program, Winery Order) in a single, centralized location.
- **Develop an Improvement Plan:** Collaborate with the GeoTracker development team to scope out potential enhancements or fixes. Some enhancements might be quick wins (like changing on-screen instructions or adding tooltips), while others might require more effort (like building a new module or simplifying an upload process). GeoTracker enhancements should align with the Water Boards' data governance objectives and keep data accurate, secure, and usable across programs.
- **Assess Resource Needs and Secure Funding:** Estimate the level of programming hours required to complete key system enhancements. Resource availability should be assessed to determine if a BCP or the Project Approval Lifecycle (PAL) process is necessary. Water Boards may consider identifying alternative funding sources through existing state grants or programs, such as the Technology Modernization Fund under California Department of Technology (CDT). To ensure continuity, funding should be ongoing and distinct from existing program fees, which were not designed to support long-term IT system development. Current system limitations, the goals of proposed improvements, and how they align with state technology and streamlining priorities should be documented.
- **Implement Iteratively:** Develop and roll out improvements in phases and get feedback. For example, a new "dashboard" page could be developed for users where they could see all their past submissions and upcoming deadlines in one place. This iterative development supports system stability and minimizes the risk of introducing unintended issues or user confusion.
- **Enhance Training and Communication:** The Water Boards should develop clear, accessible support tools, such as video tutorials, annotated screenshots, or multilingual guides tailored to agricultural users. All changes should be communicated widely so that users know what is improved.
- **Maintain the Feedback Loop:** Review any new issues that come up, especially as more producers and program areas are brought onlin

### Existing Enhancement Needs for GeoTracker

GeoTracker currently needs around 200 programming hours to complete high-priority enhancements that directly support reporting under ILRP, CAF Program, and Winery Order. These updates are not yet implemented due to limited resources.

Examples of needs include:

- Updating forms to reflect current program structures
- Updating electronic reporting modules (e.g., Central Coast Regional Water Board's Total Nitrogen Applied Report)
- Improving bulk upload and submission tracking
- Enhancing navigation, prompts, and multilingual support.

▲ Recommendation 12

# Develop Agricultural Water Quality Outcomes Dashboards

## Opportunity

An outcome-based dashboard addresses several needs. For the public and policymakers, it provides greater accessibility and transparency about what these regulatory programs are achieving. Rather than flipping through hundreds of pages of annual reports, someone could quickly see, for example, if nitrate concentrations in domestic wells are improving in a region over time or how many acres of farmland are meeting certain nitrogen efficiency targets. For regulators and researchers, the dashboard is a tool for data-driven decision making – highlighting where problems persist or where certain practices correlate with better outcomes. For producers, it could demonstrate the positive changes they are making (or conversely, to see where more work is needed).

In listening sessions throughout the Study, producers asked questions like, "*Is all this reporting making a difference?*" and "*What is the Water Boards doing with the data?*" Dashboards help answer those questions by visualizing collective progress and illustrating collaboration toward shared outcomes such as cleaner water and healthier soil.

This recommendation builds on the data integration efforts described in *Recommendation 6* (CDFA Farm Inventory) and *Recommendation 13* (Data Exchange Framework) by transforming backend systems into a front-facing tool for transparency and adaptive program management.

Dashboards could help highlight areas with consistently low risk for specific water quality constituents, enabling the Water Boards to scale reporting requirements appropriately while maintaining protection goals. For example, past data from areas like Goose Lake and Upper Feather River supported exemptions from ILRP requirements. Dashboards would make this type of information more visible and actionable for decision-making.

## Solution

The Water Boards should create or build upon public-facing dashboards that visualize key environmental performance indicators from the ILRP, CAF Program, and Winery Order. The dashboards could help answer the question: *Are we seeing progress toward cleaner water?* The focus would be on outcomes and showing progress toward environmental goals rather than reporting compliance activities (who is enrolled or not, etc.). The table below highlights example use cases of program specific outcomes-based dashboards:

| Program Area | Use Case | Example of Information Shared |
|---|---|---|
| **ILRP** | Statewide or Regional Nitrogen Dashboard(s) | Median nitrogen applications by crop type and region;<br>Nitrate concentrations across basins, watersheds, or domestic wells |
| **CAF Program** | Statewide or Regional Dashboard(s) | Areas receiving manure and process water applications;<br>Volume of wastewater produced and land-applied annually |
| **Winery Order** | Statewide Water Quality Dashboard | Trends in fixed dissolved solids (FDS), nitrogen, and biochemical oxygen demand (BOD) concentrations from land application areas and subsurface discharge systems |

## Implementation Steps

- **Identify Key Performance Metrics:** Determine which outcome indicators are most meaningful for these programs. This should involve input from program staff, program participants, and other interested parties. Metrics should reflect environmental outcomes, such as nitrogen efficiency, water quality readings, etc. and display data that is meaningful and relevant to each region.
- **Gather and Prep Data:** Inventory what data is currently collected and in what form. A lot of data exists but may be scattered across systems or formats. Staff could leverage the data exchange framework (*Recommendation 13*) to pull data into one place. Clean and standardize the data for consistency (e.g., units of measurement, etc.). This may require significant upfront effort to assemble historical data, but going forward, it could be automated. Data availability may continue to evolve as program areas adopt new orders and requirements (e.g., ESJ order) and staff should adapt dashboard metrics to incorporate these changes over time.

**Relevant Precedent**

The Central Coast Region's Irrigated Lands Program (ILP) Dashboard demonstrates how complex regulatory data can be translated into a clear, interactive public tool.

The dashboard displays regional water quality trends, enrollment status, and monitoring results in a format accessible to producers, policymakers, and the public. It supports transparency, shows how program data informs management decisions, and helps visualize outcomes over time many of the same goals envisioned for a statewide dashboard.

- **Assess Need for Additional Resources and Training:** Expand training opportunities for Water Board staff to build skills in data analysis, dashboard design, and interpretation. This may require additional business intelligence (BI) licenses (like Power BI, Tableau, or open-source alternatives), analyst support, and IT resources to ensure dashboards are maintained effectively. Water Boards should identify potential funding sources if additional funding is required.
- **Develop Prototype Dashboards:** Using BI tools, create initial prototypes for internal review that are built upon existing Regional dashboards as applicable. Examples include a nitrogen dashboard that shows median fertilizer application rate efficiency per acre by county, or a groundwater dashboard that charts average nitrate concentrations by year. The design should be user-friendly, using clear labels (avoiding too much technical jargon), including context (like regulatory standards or goals to compare against), and making it visually appealing. The prototypes can be tested with a small group of intended users (e.g., some farmers, non-governmental organization [NGO] representatives, and agency staff) for feedback on clarity.
- **Launch:** Host the dashboards on a state website (such as the Water Boards' platform or a dedicated agricultural performance portal). Each dashboard should include plain-language explanations of indicators, data sources, and context to support accurate interpretation. Dashboards should be accompanied by accessible explanations of what each indicator means, how data was collected, and how to avoid misreading variability or trends.
- **Use in Program Management:** Encourage agency staff to use the dashboards in their own work. For example, Regional Water Boards can look at their dashboard results to help set priorities for inspections or outreach (focusing on areas needing improvement). Likewise, CDFA and CalEPA leadership can use it in reports to the legislature or the public to illustrate progress.
- **Iterate and Sustain:** Over time, update the dashboards with new data and add new metrics as needed. Occasionally, Water Board staff should solicit feedback from users on what they find useful or what is missing. Funding and staff capacity should be secured to maintain this tool long-term, as data visualizations require continual upkeep and enhancement.

# Transformational Opportunities

These recommendations offer long-range solutions to strengthen California's ability to manage agricultural food safety and water quality regulations in a way that is proactive, data-informed, and accessible to all. While more ambitious in scope, each recommendation builds on foundational work and existing investments underway across state agencies. These solutions position the State to proactively meet future needs, ensuring California's regulatory landscape evolves with advances in technology, and shifts in environmental policy and agricultural production. By advancing these transformational opportunities, CDFA, CalEPA, and the Water Boards could:

- Create integrated systems that are easier to navigate and more efficient to administer
- Make regulatory outcomes more transparent and data-driven
- Enable smarter alignment between environmental stewardship and agricultural productivity
- Build durable infrastructure that supports statewide goals for clean water, climate resilience, and equity.

These recommendations require vision and sustained coordination, but they offer the potential to transform how California delivers on its commitment to protect both human and environmental health, while supporting a thriving, diverse agricultural economy for the next generation.

Inter-Agency PSP

## Transformational Opportunities

**Recommendation 13**
Establish a California Agriculture Data Exchange Framework

**Recommendation 14**
Develop a Map to Help Track Agricultural Cross-Program Participation and Oversight

**Recommendation 15**
Enhance Agricultural Permit Navigation with a Digital Decision Support Tool

**Recommendation 16**
Modernize CDFA Program Platforms to Align with PSP Portal Architecture

**Recommendation 17**
Validate and Recognize Qualified Third-Party Food Safety Audits to Inform PSP Oversight

**Recommendation 18**
Centralize Nitrogen Data to Advance Groundwater Protection

Recommendation 13

# Establish a California Agricultural Data Exchange Framework

## Opportunity

CDFA and the Water Boards collect a wide range of agricultural data to support food safety and protect water quality. The PSP, ILRP, CAF Program, and the Winery Order under the WDR Program collect robust datasets on enrollment, compliance, inspection outcomes, and monitoring results. These efforts have resulted in rich program area-specific datasets that support public health, environmental stewardship, and regulatory compliance.

As collaboration continues to deepen across agencies and programs, there is a growing opportunity to enhance how agencies coordinate and use the information they already collect. While each program area developed data tools tailored to its specific authority, these tools often operate independently, which can lead to duplicated efforts or missed connections. For example, the ability for one program to view relevant enrollment data – where appropriate – could streamline verification processes, enhance risk-based prioritization, and reduce requests for information.

Strengthening data availability would also benefit agricultural operations, particularly those participating in multiple regulatory programs. By reducing redundant requests and improving consistency across program communications, data sharing could help clarify compliance expectations and support a more cohesive experience for producers statewide.



## Solution

CDFA, the Water Boards, and other relevant agencies should collaboratively develop the California Agricultural Data Exchange Framework (CalAgX), a secure, legal approach to interagency data coordination. CalAgX does not replace agency-specific platforms but sets up the data governance structure for better system interoperability and data exchange. It would provide the legal and technical foundation for coordinated data exchange between them. This should not change regional regulatory frameworks.

This framework would support specific use cases, such as enabling one program to verify enrollment or compliance status using data already submitted to another while ensuring that privacy, confidentiality, and statutory requirements are respected. Over time, CalAgX could serve as a foundation for integrated regulatory services, supporting more coordinated inspections, better data quality, and reduced administrative effort for both agencies and producers.

Potential pilot use cases that demonstrate how CalAgX could strengthen coordination between CDFA and the Water Boards include:

- The Water Boards share ILRP enrollment information with PSP to support farm verification and outreach
- CDFA shares CDFA Farm Inventory data (related to *Recommendation 6*) to support ILRP enrollment
- The Water Boards share CAF Program land application areas and inspection results to support PSP inspection risk prioritization.

## Implementation Steps

- **Set up a Work Group:** Establish a Standing Agricultural Regulatory Data Governance Council between CDFA, the Water Boards, and other relevant departments to oversee CalAgX implementation. This body would define data-sharing priorities, coordinate updates, and resolve operational or policy questions.
- **Amend the CDFA and Water Boards Memorandum of Understanding (MOU):** Draft amendments to the existing MOU between CDFA and the Water Boards, committing to collaborate on data exchange. This should identify key data that each agency considers critical to prioritize for improved efficiency. Legal review may be required to ensure compliance with laws like the California Public Records Act (PRA), FAC § 42653, and applicable privacy statutes.
- **Conduct Data Inventory and Legal Review:** Each agency should inventory the data it collects and classify it by sensitivity level (e.g., public, confidential, etc.). Identify legal and policy constraints for each category. This process should also highlight opportunities to improve data collection, consistency, and transparency, where appropriate.
- **Develop Technical Infrastructure and Standards (As Needed):** Design the technical means for data sharing. Options may include Application Programming Interfaces (APIs) for real-time, query-based access between systems, or a shared data warehouse with strict access controls. Define common data standards so core elements, such as “farm location” or “crop type,” are consistently formatted and labeled across systems.
- **Implement Privacy and Security Measures:** Ensure robust protections for proprietary data. This might include user authentication for any data portal or restricted access for sensitive data. Educate staff on proper handling of shared data, and ensure producers are informed about what data is being shared, why it is being shared, and how it is protected.
- **Expand and Operationalize:** Expand CalAgX to cover more programs over time. The framework could serve as the backbone for multi-agency alignment.

### Relevant Precedent

Under AB 133, the California Health & Human Services Agency (CalHHS) implemented the Data Exchange Framework (DxF) to enable secure, standardized information sharing across independent health programs while preserving privacy and agency autonomy.

This precedent illustrates that interagency data exchange can be both operationally feasible and legally sound. The DxF offers one example that can be adapted to agricultural regulatory programs, enabling cross-agency coordination without requiring centralized systems or changes to existing statutory authority.

Recommendation 14

# Develop a Map to Help Track Agricultural Cross-Program Participation and Oversight

## Opportunity

California's producers routinely interact with a wide range of state and regional programs, each requiring some form of enrollment, reporting, or verification. Over time, these programs created separate systems and identifiers, resulting in fragmented records. A single farm may be linked to many identifiers across agencies and programs without a way to reconcile them across programs.

For example, a farm might hold:

- An Operator ID from the California Department of Pesticide Regulation (DPR)
- A Certified Producer's Certification ID from CDFA
- A Waste Discharge Identification (WDID) number from the State Water Board
- A third-party group (i.e., Coalition) member ID under the ILRP
- One or more IDs associated with cost-share, conservation, or certification programs (e.g., Organic Certification, Environmental Quality Incentives Program [EQIP]).

### Avoiding Duplicate Enrollment for Covered Parcels

A cross-program map would allow agencies to verify when parcels are already covered under one program and may not need separate coverage under another (e.g. ILRP and CAF Program). This would reduce duplicate enrollment requirements, minimize confusion for operators managing multiple permits, and create a unified view of regulated parcels across programs.

This fragmentation creates limitations for producers, agencies, and the public:

- Producers often must re-submit the same basic farm information (e.g., location, contact information) to multiple agencies
- Agency staff cannot easily track whether a farm is covered under multiple programs, making oversight and verification inefficient
- The public lacks transparency and accessibility.

The issue is further complicated by the fact that landownership does not always follow the business entity. Many farming operations lease land or manage multiple sites under one umbrella, but there is currently no simple pathway to connect those relationships across agency records. As a result, some businesses are effectively invisible in certain datasets, while others appear fragmented across multiple profiles.

A map-based solution could offer a way to connect the dots without forcing agencies or producers to change their existing identifiers or workflows. By layering program participation onto a shared geospatial platform, agencies could more easily see which parcels, facilities, or fields are covered by which programs, improving verification, oversight, and emergency response, while potentially reducing duplication.

## Solution

CDFA, the Water Boards, and other relevant agencies should collaborate to create a California Agricultural Regulatory Program Participation Map – a geospatial tool that consolidates information on agricultural operations by parcel or field location. Rather than replacing existing data structures or processes, the map would serve as a common visualization layer that links regulatory program participation for verification, oversight, and transparency.

Key features could include:

- **Program layering:** Display participation in key program areas (e.g., ILRP, CAF Program, Winery Order) at the parcel or facility level
- **Relationship mapping:** Show how leased parcels, common ownership, or multiple facilities connect to a single operation
- **Emergency response support:** Allow agencies to quickly identify affected operations within a geographic area during contamination events or natural disasters
- **Transparency:** Provide a public-facing version with appropriate privacy protection
- **Cross-Agency Utility:** Allow for a search query or quick look up to see whether a parcel or facility is covered under other regulatory program(s).

The map should be developed with input from the Regional Water Boards, producers, technical service providers, and system administrators to ensure it is practical, privacy-protective, and aligned with existing datasets and technical capabilities. Existing databases used by Regional Boards should not be replaced or made inefficient by the development of this tool.



## Implementation Steps

- **Inventory Existing Data Sources:** Catalog current program area datasets (e.g., ILRP enrollments, CAF facility maps, etc.) and identify the geospatial data fields available (e.g., assessor parcel number [APN], coordinates, addresses). Staff should document data quality, data collection frequency, and confidentiality constraints. This would establish a clear baseline of information that can be layered into the map and where gaps exist.
- **Develop Mapping Framework:** Establish standards for layering program datasets by parcel or facility. Compatibility with existing GIS tools, reporting systems, and data structures should be upheld. The framework would serve as the backbone of the map, allowing for layering without requiring changes to existing data structures.
- **Secure Resources for Pilot:** Identify and obtain the funding, staffing, and technical expertise needed to launch a pilot project. Resources should support map development, data integration, staff and producer engagement, and evaluation activities, ensuring the pilot can be effectively tested and scaled if successful. Potential funding sources could include CDT's Technology Modernization Fund (finances smaller-scale efforts to improve state business processes) or United States Geological Survey (USGS) Cooperative Matching Funds (for groundwater and geospatial data integration projects).

- **Pilot Project:** Launch a pilot in a high-density agricultural region (e.g., Central Valley or Central Coast) to test integration of program layers. Identify technical or governance challenges. A successful pilot would provide proof of concept, build agency confidence, and generate feedback from producers and staff before statewide rollout.
- **Assign Resources and Set up Governance:** Assign staff resources from relevant state agencies to steward the map through a joint interagency team, with staff from CDFA and the Water Boards as leads. This group should define roles, responsibilities, and protocols for maintaining the map, resolving discrepancies, and ensuring data privacy.
- **Determine Public Access:** Define which layers can be made publicly accessible (e.g., program participation status, not contact information or compliance status) to balance transparency and confidentiality.
- **Provide Training & Outreach:** Provide staff training on using the tool for verification and oversight, and work with industry groups to communicate the benefits to producers.
- **Expand Coverage:** Gradually incorporate additional programs (e.g., air quality permits, farmworker housing, conservation programs) to create a comprehensive map of agricultural program participation statewide. Expansion should follow a phased approach, prioritizing programs where data is already structured and where overlap with existing layers is highest.
- **Set up Ongoing Maintenance:** Establish a schedule for data refreshes (e.g., annual or quarterly) and protocols for reconciling discrepancies. The map should be updated on a scheduled basis with refreshed datasets from each participating program area. The interagency team should establish protocols for identifying and resolving data discrepancies, reconciling ownership changes, and ensuring ongoing system interoperability.

### Support for Emergency Response

During emergencies like wildfires, floods, or contamination events, agencies need to quickly determine which farms and facilities are located in affected areas. Currently, fragmented farm lists and disconnected systems slowdown that process.

A mapping tool, similar to the California Water Watch Portal, demonstrates how geospatial data can be aggregated into a clear, public-facing format to aid emergency response without exposing proprietary farm details.

This precedent shows that a geospatial approach could improve response time, coordination, and public safety while maintaining producer confidentiality.

Recommendation 15

# Enhance Agricultural Permit Navigation with a Digital Decision Support Tool

## Opportunity

California producers must navigate a complex network of permits and regulatory requirements spanning multiple agencies, including CDFA, the Water Boards, and other state and local entities. For new, small-scale, and historically underserved producers, the lack of a clear entry point often leads to confusion, missed deadlines, and challenges with compliance. These challenges were repeatedly raised during engagement sessions, especially among producers unfamiliar with the permitting process or those operating in multiple jurisdictions.

California currently offers CalGOLD (California Government Online to Desktops) as a centralized website to help businesses identify applicable permit requirements. However, the current platform is limited in its agricultural utility – it provides static search results and does not include farm-specific information or permit descriptions updated with current language. There is an opportunity to expand and tailor this existing tool to better support producers in identifying relevant food safety and water quality requirements.

A modernized, agriculture-specific decision support tool could provide guided pathways for regulatory enrollment based on a producer's operation type, location, and activities. This would not only help producers, particularly those with limited regulatory familiarity, understand which permits apply to them, but also enhance the consistency and clarity of information shared across agencies.

**Voices From the Field**

"As a new small farmer trying to do the right things, I found myself pushed into a corner by regulations… I have been sent to different state agencies and local departments without an answer for what permits I need."

*Small Farmer, Central Valley Region*

## Solution

CDFA, the Water Boards, and other relevant agencies should partner with the Governor's Office of Business and Economic Development (GO-Biz) to expand the existing CalGOLD: Gold Standard for Permit Assistance website with a dedicated, agriculture-specific digital decision support tool. The enhanced tool should:

- Provide guided prompts to help producers determine which state permits apply to them
- Deliver clear, plain-language summaries, next steps, and contact information on relevant permits and regulatory programs
- Provide direct links to enrollment systems, technical assistance, and program websites, including region-specific information
- Built with user-friendly design and engagement to bridge digital and literacy barriers.

## Implementation Steps

- **Establish Partnership with GO-Biz to Define Scope:** Establish a formal MOU between CDFA, the Water Boards, and GO-Biz to define roles and responsibilities, governance, and shared objectives. The agreement should clarify which permits and/or regulatory programs would be included, platform goals, tool ownership (likely GO-Biz or CDFA for agricultural specific module) and the ongoing collaboration model.
- **Develop Guided Logic Pathways:** Build dynamic guides on permit information based on key farm attributes (e.g., operation size, crop or livestock type, discharge method, location). Responses could generate tailored outputs showing which permits may apply, what agency issues them, and where to go next.
- **Compile and Integrate Cross-Agency Content:** Work across CDFA, the Water Boards, and other CalEPA agencies to compile verified permit descriptions, submission requirements, and contact details. The content should include links to forms, enrollment tools, and help desks to ensure the user could act immediately on what they learn. All permit descriptions and requirements should reflect current agency guidance to avoid sharing outdated information and recreating forms or instructions.
- **Ensure Accessibility and Mobile Optimization:** Design the tool for mobile devices and low-bandwidth conditions. The site should use plain language, icon-based navigation, and multilingual support (starting with Spanish, Hmong, and Punjabi) to ensure accessibility for all users, regardless of digital literacy.
- **Pilot with Socially Disadvantaged Farmers and Ranchers:** Test the tool with representative small farms to refine usability, terminology, and logic flow. Staff should gather feedback on content clarity, language access, and overall experience to ensure cultural and operational fit.
- **Launch and Provide Ongoing Support:** Publicly launch the tool through webinars, industry associations, UCCE, and CDFA's communication channels (e.g., Small-Scale Producer Advisory Committee or Small Farm Regulatory Support Liaison from *Recommendation 1*). A support model (e.g., chatbot, email help desk) should be developed to answer questions and integrate the tool into CDFA and CalEPA outreach activities.
- **Maintain and Update Regularly:** Establish a recurring process to review and update content based on regulatory changes, feedback, or agency restructuring. Dedicated staff should be assigned to coordinate updates and ensure the tool remains accurate and trustworthy over time.
- **Expand Over Time:** Consider opportunities to expand coordination across local agencies to incorporate local permitting requirements and relevant federal, state, or local programs. This expansion could include integration with certification and incentive programs such as organic certification. Expanding the platform's scope over time would help streamline compliance for producers managing multiple overlapping regulatory and voluntary obligations, and support a more holistic, one-stop approach to agricultural permitting and certification.

### Technology Enablement in the Long Term

Future phases could integrate AI-powered features to create a more intuitive, conversational experience. Instead of relying on static research functions, users could navigate permitting requirements through guided prompts and interactive assistance, making the tool more responsive, personalized, and accessible especially for new or underserved producers.

In line with Executive Order N 12 23, this tool should be designed with ethical, transparent, and risk-aware measures, especially if AI features (e.g., assisted chat) are incorporated.

Recommendation 16

# Modernize CDFA Program Platforms to Align with PSP Portal Architecture

## Opportunity

Over the last decade, CDFA made significant strides in modernizing service delivery. The PSP Portal offers a well-tested, cloud-based foundation that could inform future portal development. While PSP's regulatory intent is distinct, the portal's success in managing enrollment, inspection scheduling, and producer communication provides a useful model for modernizing other program platforms.

Many CDFA programs, such as the SOP, DMP, and others have developed digital systems tailored to their needs over time. However, as producer expectations evolve and digital service delivery becomes a statewide priority, there is growing opportunity to align program platforms around a shared, modern infrastructure. Streamlining interfaces, reducing duplicative entry, and enhancing navigation can make compliance easier for producers and support program delivery for staff.

These siloed platforms result in redundant data entry, disconnected workflows, and inefficiencies for both producers and agency staff, especially for operations that interact with multiple CDFA programs. As reporting and compliance requirements evolve, producers increasingly seek tools that are accessible, consistent, and streamlined.

At the same time, CDFA developed foundational plans, such as its Technology Roadmap, Enterprise Architecture Plan, and business cases submitted through the PAL, that call for improved self-service functionality, system interoperability, and consistent digital experience across programs. This recommendation builds on that groundwork and proposes a path forward to adopt shared digital architecture, modeled on the PSP Portal's core features, that allows individual programs to retain their autonomy while benefiting from standardized design, streamlined workflows, and consistent user experience.

**Voices From the Field**

"We have noticed we are often asked to submit the same basic farm information to different CDFA programs. I even keep a whiteboard to help track all the details I need to stay on top of for each one."

*Small Farmer at an In-Person Listening Session*

## Solution

CDFA should adopt a common architectural framework, aligned with the PSP Portal, to modernize digital platforms across agricultural programs. This would not mean merging all portals into one system but rather creating shared infrastructure and design standards that reduce duplication, enhance usability, and enable long-term scalability.

The updated architecture should:

- Support common workflows, such as enrollment, inspections, document uploads, certification renewals, etc.
- Maintain program-specific controls and firewalls, such as those required under FAC § 42653
- Enhance user experience through modern user interfaces and consistent navigation
- Position CDFA to integrate with broader state data-sharing infrastructure, including CalAgX (*Recommendation 13*).

## Implementation Steps

- **Conduct Feasibility Assessment and Planning:** Work with CDFA's Information Technology Services Division (ITSD) and program leads to evaluate which legacy systems are candidates for modernization. Staff should assess current business processes, data structures, and regulatory requirements to inform design. The team should engage outside experts as needed to support technical planning and procurement.
- **Design System Architecture and Secure Funding:** Develop a system architecture that allows each program to operate independently while benefiting from shared infrastructure components (e.g., login, dashboards, document uploads). Templates for common workflows (e.g., enrollment, inspection tracking), should be mapped and opportunities for integration with the CalAgX framework (*Recommendation 13*) should be identified.
- **Secure Funding and Project Support:** Identify and pursue funding sources, such as department budget allocations, technology modernization initiatives, or grant funding, for platform development and maintenance. Where feasible, the team should leverage existing licenses and infrastructure to reduce costs and promote consistency across CDFA programs.
- **Develop and Test Program-Specific Portals:** Partner with a skilled development team to build new portals or update existing ones using the modernized architecture. The team should configure functionality to match each program's specific regulatory requirements, language needs, and data privacy standards. Internal testing should be conducted to ensure functionality, data accuracy, and system stability.
- **Pilot with Program Staff and External Users:** Launch limited pilots for each program with a small group of internal and external users. The team should collect feedback on usability, navigation, and workflow alignment, and adjust designs based on user experience before broader release.
- **Launch and Support Full Implementation:** Roll out the updated platforms in phases, prioritizing programs with overlapping producers. Training resources, help desk support, and updated guidance documents should be provided to ease the transition. The team should monitor adoption, feedback, and support trends to identify additional opportunity areas.
- **Measure and Report Impact:** Track system usage, user satisfaction, and reductions in duplicative effort across programs. The team should use this data to document return on investment, support budget justifications, and inform future modernization phases.

Recommendation 17

# Validate and Recognize Qualified Third-Party Food Safety Audits to Inform PSP Oversight

## Opportunity

Many California produce farms already undergo rigorous third-party food safety audits to meet buyer requirements. These audits often address core requirements of the FDA's FSMA PSR, and in some cases, exceed them. Despite this alignment, audited farms remain subject to inspections by CDFA's PSP.

California has an estimated 20,000 PSR-covered farms – by far the largest number of any state. CDFA currently has the capacity to conduct approximately 1,000 inspections annually. This resource gap highlights the need to update PSP's risk-based inspection model, so that limited resources can be strategically focused on operations without reducing regulatory standards or oversight authority.

Validating and recognizing qualified third-party audits as aligned with FSMA PSR requirements would offer an opportunity to streamline and enhance PSP's oversight. It would:

- Enable CDFA to better focus on priority operations
- Strengthen collaboration with regulators, audit scheme owners, and the agricultural community
- Support continued adoption of food safety best practices.

Many producers already invest significant time and resources in passing third-party food safety audits to maintain market access. Recognizing these efforts would not only reduce unnecessary inspection duplication but would also better integrate the realities of modern supply chains into the State's regulatory approach – strengthening trust, reducing audit fatigue, and promoting shared responsibility for food safety.

### Who This Could Help

Approximately over 5,300 California producers voluntarily participate in one or multiple third-party food safety audits. These audits often closely mirror the PSR but are not currently recognized by FDA as equivalent to PSP inspections. Estimated participation by organization is as follows, based on Crowe's analysis.

- **LGMA:** 84 Members accounting for 90% of the leafy greens grown in the U.S.
- **CCAB:** 22 Members (75% of cantaloupes grown in the U.S.)
- **GLOBALG.A.P.:** Approximately 1,100 producers
- **PrimusGFS:** Approximately 4,000 producers
- **USDA:** Approximately 20,000 producers annually.

## Solution

CDFA, in partnership with FDA, USDA, and the agricultural community should co-develop a transparent pathway for recognizing qualified third-party food safety audits as aligned with FSMA PSR requirements.

All farms would remain enrolled in PSP and subject to oversight, but validated third-party certifications could contribute to prioritization decisions, such as inspection frequency or scope, especially for low-risk operations.

This would support more strategic deployment of inspection resources, while reinforcing standards and incentivizing strong on-farm practices.

Importantly, this solution would respect the diversity of California's producers by being voluntary, risk-based, and aligned with regulatory goals – not a compliance shortcut. It also builds on work already done by FDA through its pilot evaluation of GLOBALG.A.P. with FSMA Add-On and other schemes.

### Alignment of Selected Third-Party Food Safety Audits with FSMA Produce Safety Rule Subparts

The table below summarizes how selected third-party food safety audit schemes align with FSMA PSR subparts based on Crowe's initial assessment. The information is based on publicly available documentation and FDA's 2020 Third-Party Audit Alignment Pilot.

As audit schemes continue to evolve, CDFA, FDA, USDA, and audit scheme owners should collaborate on continuous review. This coordination will help ensure that recognized audit standards remain current, science-based, and consistent with public health and regulatory goals.

| PSR Subpart | LGMA | CCAB | GLOBALG.A.P. + FSMA Add-on | PrimusGFS | USDA Harmonized GAP |
|---|---|---|---|---|---|
| **Subpart C:** Personnel Qualifications and Training §112.21 - §112.30 | ☑ | ☑ | ☑ | ☑ | ☑ |
| **Subpart D:** Health Hygiene §112.31 - §112.33 | ☑ | ☑ | ☑ | ☑ | ☑ |
| **Subpart E:** Agricultural Water §112.41 - §112.50 | ☑ | ☑ | ☑ | ☑ | ☑ |
| **Subpart F:** Biological Soil Amendments of Animal Origin and Human Waste §112.51 - §112.60 | ☑ | ☑ | ☑ | ☑ | ☑ |
| **Subpart I:** Domesticated and Wild Animals §112.81 - §112.84 | ☑ | ☑ | ☑ | ☑ | ☑ |
| **Subpart K:** Growing, Harvesting, Packing, and Holding Activities §112.111 - §112.116 | ☑ | ☑ | ☑ | ☑ | ☑ |
| **Subpart L:** Equipment, Tools, Buildings, and Sanitation §112.121 - §112.140 | ☑ | ☑ | ☑ | ☑ | ☑ |
| **Subpart O:** Records §112.161 - §112.167 | ☑ | ☑ | ☑ | ☑ | ☑ |

**Key:** ☑ Aligned with Requirements | ☑ Still Incorporating Requirements

## Implementation Steps

- **Form an Alignment Workgroup:** Establish a CDFA-led working group with FDA consultation and broad participation from USDA, audit scheme owners, industry partners (e.g., LGMA, CCAB, Western Growers), and buyer representatives. The workgroup's objective should be to identify which audit standards are sufficiently robust and define a process for validating them. The workgroup should leverage FDA's pilot results, which already identified one produce audit standard (GLOBAL G.A.P. with FSMA add-on) that aligns with core FSMA PSR subparts. While FDA initiated this alignment process, it currently lacks the resources to continue reviewing additional audit programs. With the majority of the nation's produce farms located in California, CDFA is well-positioned to facilitate continued evaluation and national coordination, potentially helping to resource this work in partnership with FDA and industry representatives.
- **Determine Equivalency Criteria:** Develop transparent, consensus-driven criteria for what qualifies an audit scheme as "aligned" with FSMA PSR requirements. Criteria should likely include coverage of all substantive PSR elements and verification that the audit process, including frequency and auditor qualifications, meets credibility standards.
- **Develop Formal Recognition Pathway:** Establish eligibility criteria for audit recognition that account for crop type, risk-level, geographic region or water source context, audit type (e.g., unannounced), audit frequency (e.g., annual or biannual rather than every five years), and alignment with core PSR subparts (e.g., Subpart E: Agricultural Water). The workgroup should establish a mechanism for CDFA, in consultation with FDA, to formally recognize specific audit certifications. This effort may include establishing Mutual Recognition Agreements outlining each aligned audit scheme between FDA, CDFA, and third-party audit programs.
- **Develop an Accountability and Enforcement Strategy:** To help ensure compliance, a subset of audited farms could be subject to random validation inspections to verify audit integrity. The State should also establish MOUs with audit bodies to enable "opt-in" information sharing from their participants, including prompt notification if a critical food safety issue is identified. These safeguards help ensure accountability while reducing duplicative oversight.
- **Enhance the PSP Portal:** Enable voluntary upload of third-party certifications into Farm Profiles to lower the inspection priority of audit-certified producers (*Recommendation 7*).
- **Continuously Monitor Equivalency:** Implement a protocol for ongoing audit program review to re-evaluate aligned audits in response to:
    - Changes to or finalization of PSR subparts (e.g., Subpart E Agricultural Water)
    - Recalls or food safety events linked to certified farms
    - Buyer-driven changes to audit standards
    - Emerging food safety science or field-level discrepancies.

### Relevant Precedent

In 2023, the FDA completed a pilot program determining GLOBALG.A.P. audit standards were aligned with PSR requirements. While this pilot program did not include the Subpart E: Agricultural Water final rule, it shows that FDA has considered an alternative compliance pathway.

FDA acknowledged that using third-party audit programs could create efficiencies and help target regulatory resources, but also stated audits are not outright substitutes for inspections yet.

Building on these findings, California could pioneer a framework to use audit results in its enforcement strategy, with FDA's approval, and industry support.

Recommendation 18

# Centralize Nitrogen Data to Advance Groundwater Protection

## Opportunity

Nitrate contamination remains one of California's most complex water quality challenges. The 2024 Safe and Affordable Funding for Equity and Resilience (SAFER) Drinking Water Needs Assessment estimates that about 170,000 Californians, mostly in rural farming communities, rely on drinking water systems impacted by nitrate contamination. This legacy contamination stems largely from decades of fertilizer and manure use in agriculture, of which only 30% to 50% of applied nitrogen is absorbed by crops according to the 2016 California Nitrogen Assessment.

Over the last two decades, California has responded with an array of regulatory and planning programs to monitor, manage, and reduce nitrate loads. These programs collect significant data:

- ILRP requires reporting nitrogen applied and removed through INMP Summary Reports
- Some CAFs report manure nutrient balances and groundwater monitoring reports
- The Winery Order under the WDR Program includes nitrogen monitoring for winery waste discharged to land
- CV-SALTS Nitrate Control Program tracks treatment actions, source assessments, and well monitoring
- Additional nitrogen-related data flows through pesticide use reports obtained by DPR, fertilizer sales reports by CDFA, on-farm organic plans, and groundwater quality trend monitoring through the Sustainable Groundwater Management Act (SGMA).

**Voices From the Field**

"There's significant need to gather nitrogen application data from many discharger types. At some point getting all that information in one system may be beneficial for statewide nitrogen accounting and supporting various programs, such as CV-SALTS."

*Water Boards Staff*

These program areas represent significant investments by producers, approved third-party groups, and state agencies. However, much of the nitrogen-related data they generate remains siloed – reported in different formats, stored across disparate platforms, and in some places defined by inconsistent terminology. This limits the State's ability to assess cumulative impacts, communicate progress, or support region-wide planning.

Key information, such as nitrogen applied (A), removed (R), nitrate concentrations in wells, and local water quality outcomes, may be reported inconsistently, using different units and platforms, and in some places may be difficult to integrate even within the same regions or basins. Notably, California lacks a standardized definition for "crop," making it difficult to compare nitrogen use or efficiency across operations and regions by crop type or group.

With the convening of the Second Statewide Agricultural Expert Panel and the continued rollout of regional nitrate strategies, California has a timely opportunity to optimize its nitrogen data management efforts – not by replacing existing systems, but by first increasing data management consistency within programs into a centralized Water Boards data management system, and then partnering with external agencies to build an interactive interagency data platform based on the centralized data management system that provides greater transparency to agencies, growers, and the public.

## Solution

**Stage 1:** The Water Boards should collect nitrogen information in a central data collection system using or building upon existing data systems (e.g., GeoTracker). Increasing the consistency in which data is collected, stored, and managed would make it easier to collaborate and align cross-agency nitrogen data in the future. Since some Regional Water Boards already utilize GeoTracker for data collection and analysis, the centralized data system should build on best practices from these regions to leverage existing expertise and avoid duplicating efforts.

**Stage 2:** After Water Boards centralizes their own nitrogen data internally, they should consider collaborating with CDFA and other relevant agencies to develop a tool or process that pulls nitrogen data from multiple existing datasets into one central platform. This platform would not replace the existing data collection processes within each agency but would instead create a shared interactive dashboard to view nitrogen data across agencies, similar to the California Open Data Portal.

Centralized nitrogen data could enhance coordination across programs and make it easier for producers, approved third-party groups, and communities to understand nitrogen use trends and groundwater outcomes. The approach does not change what data is collected or how it is collected; instead, it brings together existing data to enhance transparency, support targeted outreach, and strengthen decision-making at both local and state levels.

Entering data into a centralized system could facilitate:

- Developing an interactive platform that consolidates anonymized, aggregated data
- Enabling township and basin-level integration of nitrogen use and groundwater quality data to support risk analysis, transparency, and coordination
- Providing public-facing tools for growers, approved third-party groups, and other interested parties to visualize nitrogen efficiency and identify performance opportunities
- Supporting technical assistance delivery by helping agencies identify where support could have the greatest impact.

In future phases, the Water Boards' centralized data management system could incorporate climate-smart and groundwater sustainability metrics, such as water savings, cover crop adoption, and soil health indicators, to reflect the multi-benefit role of nitrogen management in California agriculture. If using GeoTracker, these could be in the form of map layers.

By aligning nitrogen-related data management, the State can strengthen coordination, enhance transparency, and reduce redundancy. This framework will allow producers and regulators alike to better understand and manage nitrogen use in ways that support groundwater protection and the long-term sustainability of California agriculture.

## Implementation Steps

The following implementation steps are for **Stage 1:**

- **Determine the Best Method to Centralize Water Boards Nitrogen Data:** Water Boards should assess existing data platforms and workflows (e.g., GeoTracker, internal databases) to identify the most effective approach for centralizing nitrogen data across programs and regions. This includes evaluating whether to expand an existing system or develop a new platform. This internal consistency is a critical step for enabling any future cross-agency collaboration related to nitrogen data sharing.
- **Charter the Centralized Water Boards Data Management System and Governance Structure:** Designate executive sponsors from the Water Boards. Form a technical working group with representatives from Regional Water Boards, UCCE, California State University, Water Resources and Policy Initiatives (CSU WRPI), CV-SALTS coordinators, ILRP approved third-party groups, environmental NGOs, producers, and industry advisors. The team should establish a three-year roadmap identifying integration phases, milestones, and outputs. A centralized Water Boards data management system may need to pivot or expand data collection based on any recommendations or insights from the Second Agricultural Expert Panel.
- **Secure Resources for Pilot Implementation:** Identify and obtain the necessary funding, staffing, and technical expertise to support the pilot project. Resources should cover database development, public engagement, training, and evaluation activities, ensuring the pilot can be effectively tested and scaled.
- **Develop and Pilot the Water Boards Centralized Data Management System:** Build or expand a secure data platform (e.g., through GeoTracker or new cloud infrastructure). Pilot the system for Water Boards program areas such as ILRP, CAF Program, CV-SALTS, and Winery Order data. Anonymization protocols, as applicable, and test access should be applied.
- **Finalize and Publish the Nitrogen Data Standard (v1.0):** Define core variables and metadata (e.g., N applied, removed, irrigation source, nitrate concentration units). Staff should provide implementation guidance and crosswalk tools for legacy formats.
- **Deliver External-Facing Dashboards and Tools:** Develop or build upon existing dashboards which could visualize nitrogen trends and nitrate concentrations. Optional grower benchmarking tools for nitrogen efficiency (A/R) and voluntary comparison to regional norms could be developed. Tools and training should be provided in multiple languages.
- **Evaluate, Update, and Expand:** Consider expanding centralized data management system scope to include SAFER Program data. Review management system processes for refinement and improvements.

The following implementation steps are for **Stage 2:**

- **Charter Inter-Agency Dashboard Platform:** Designate executive sponsors from the Water Boards and the CDFA. Form a technical working group with representatives from Regional Water Boards, UCCE, CSU WRPI, CV-SALTS coordinators, ILRP approved third-party groups, environmental NGOs, producers, and industry advisors. The team should establish a three-year roadmap identifying integration phases, milestones, and outputs.
- **Secure Resources for Pilot Implementation:** Identify and obtain the necessary funding, staffing, and technical expertise to support the pilot project. Resources should cover dashboard development, public engagement, training, and evaluation activities, ensuring the pilot can be effectively tested and scaled.
- **Develop and Pilot the Inter-Agency Nitrogen Platform:** Build or expand a secure data platform (e.g., through GeoTracker or new cloud infrastructure). Pilot the platform building upon the centralized Water Boards data management system and incorporating inter-agency nitrogen data.
- **Deliver Dashboards and Tools:** Develop or build upon existing dashboards which could visualize nitrogen trends and nitrate concentrations. Tools and training should be provided in multiple languages.
- **Collaborate with Other Agencies:** In later phases, explore integration of data from other agencies that collect nitrogen data not already captured to be able to evaluate a more holistic understanding of agricultural sustainability and environmental protection.



# Enabling Long Term Regulatory Alignment

Crowe conducted the Study during a period of rapid change in California's agricultural, environmental, and digital landscape. As the State continues to advance priorities in climate resilience, regenerative agriculture, and streamlined government operations, the 18 recommendations in this report provide input-driven opportunities and solutions to enhance alignment across food safety and water quality regulatory programs.

Each recommendation outlines a distinct opportunity identified through engagement with producers, agency staff, and interested parties. Collectively, they reflect a broader need for enhanced data governance, integrated digital tools, and coordinated support, especially for producers navigating multiple regulatory programs.

Not all recommended solutions will provide immediate results. Some solutions, particularly those focused on data governance and electronic reporting, will take time and resources to provide streamlining benefits for producers. However, these developmental and transformative solutions lay the groundwork for achieving greater regulatory alignment in the long term.

Throughout this Study, a central theme emerged – the importance of consistent and transparent data governance. Establishing a shared, agriculture-focused framework for defining, managing, and protecting data will be critical to realizing the benefits and enabling long-term regulatory alignment while strengthening trust across the agricultural community.

Moving forward, a cross-agency implementation effort, supported by continued collaboration with the agricultural community, could help translate these recommendations into action. Tracking progress and refining implementation steps over time will help ensure solutions remain feasible and aligned with regulatory requirements and evolving priorities.

Crowe appreciates the opportunity to conduct this work and thanks the many individuals who contributed their insights. The recommendations presented in this report provide a forward-looking path to enable long-term regulatory alignment. Investment from the State and continued coordination across CDFA, CalEPA, and the Water Boards are needed to act on the opportunities detailed in this report.



# Appendix A: Glossary of Terms

**Table 1** provides a glossary for the acronyms, abbreviations, and commonly described terms in the report. Definitions are in reference to the context of the report.

**Table 1**
**Glossary of Terms**

| Acronym / Abbreviation / Term | Definition |
|---|---|
| AB | Assembly Bill |
| Agricultural Producer | Farmers, ranchers, dischargers, growers, and other agricultural operators impacted by the regulatory programs in scope of the Study, |
| Agricultural Water Rule | Produce Safety Rule Subpart E |
| AHFSS | Animal Health and Food Safety Services |
| AI | Artificial Intelligence |
| API | Application Programming Interface |
| APN | Assessor Parcel Number |
| BCP | Budget Change Proposal |
| BI | Business Intelligence |
| BMP | Best Management Practice |
| BOD | Biochemical Oxygen Demand |
| CAC | County Agricultural Commissioners |
| CAF Program | Confined Animal Facilities Program |
| CalAgX | California Agricultural Data Exchange |
| CalEPA | California Environmental Protection Agency |
| CalGOLD | CalGOLD: Gold Standard for Permit Assistance |
| CalHHS | California Health and Human Services Agency |
| CAP | Cooperative Agreement Program |
| CCAB | California Cantaloupe Advisory Board |
| CDFA | California Department of Food and Agriculture |
| CDT | California Department of Technology |
| CIWQS | California Integrated Water Quality System |
| Concept Paper | Regulatory Alignment Concept Paper |
| CSU WRPI | California State University, Water Resources and Policy Initiatives |
| CVDRMP | Central Valley Dairy Representative Monitoring Program |
| CV-SALTS | Central Valley Salinity Alternatives for Long-Term Sustainability |
| CWA | Clean Water Act |
| CWC | California Water Code |
| Discharger | Entity that discharges waste to land. Refers to the regulated communities under the ILRP, CAF Program, and the Winery Order. Discharges of waste result from different activities performed under these programs. |

| Acronym / Abbreviation / Term | Definition |
|---|---|
| DMP | Direct Marketing Program |
| DPR | California Department of Pesticide Regulation |
| DWQ | Division of Water Quality |
| DxF | Data Exchange Framework |
| EQIP | Environmental Quality Incentives Program |
| ESJ Order | Eastern San Joaquin Water Quality Order (Order No. WQ 2018-0002) |
| FAC | Food and Agricultural Code |
| FDA | Food and Drug Administration |
| FDS | Fixed Dissolved Solids |
| FSMA | Food Safety Modernization Act |
| GO-Biz | Governor's Office of Business and Economic Development |
| GSA | Groundwater Sustainability Agency |
| HPAI | Highly Pathogenic Avian Influenza |
| ILP | Irrigated Lands Program (in relation to Central Coast only) |
| ILRP | Irrigated Lands Regulatory Program |
| INMP | Irrigation and Nitrogen Management Plan |
| IT | Information Technology |
| LGMA | Leafy Greens Marketing Agreement |
| MOU | Memorandum of Understanding |
| MRP | Monitoring and Reporting Program |
| NGO | Non-Governmental Organization |
| NOI | Notice of Intent |
| OFRR | On-Farm Readiness Review |
| PDAT | Produce Decision Analysis Tool |
| PDF | Portable Document Format |
| PrimusGFS | Primus Global Food Safety Initiative |
| PRA | Public Records Act |
| PSP | Produce Safety Program |
| PSR | Produce Safety Rule |
| RCD | Resource Conservation District |
| Regional Water Board | Regional Water Quality Control Board |
| RMP | Representative Monitoring Program |
| SAFER | Safe and Affordable Funding for Equity and Resilience |
| SGMA | Sustainable Groundwater Management Act |
| SOP | State Organic Program |
| SQF | Safe Quality Food |
| State Water Board | State Water Resources Control Board |
| Study | Regulatory Alignment Study |

| Acronym / Abbreviation / Term | Definition |
|---|---|
| SWEEP | State Water Efficiency and Enhancement Program |
| TAP | Technical Assistance Program |
| Third-party Audit Programs | Refer to USDA GAP Audit, USDA Harmonized GAP, USDA Harmonized GAP Plus+, National Organic Program, State Organic Program, GlobalG.A.P., and PrimusGFS. |
| UCCE | University of California, Cooperative Extension |
| USDA | United States Department of Agriculture |
| USGS | United States Geological Survey |
| Water Boards | Collectively, State Water Resources Control Board and Regional Water Quality Control Boards |
| WDID | Waste Discharger Identification |
| WDR or WDRs | Waste Discharge Requirements |
| Winery Tiers | **Exempt:** <10,000 gallons of process water per year<br>**Tier 1:** 10,000 – 30,000 gallons of process water per year<br>**Tier 2:** 30,001 – 300,000 gallons of process water per year<br>**Tier 3:** 300,001 – 1,000,000 gallons of process water per year<br>**Tier 4:** 1,000,001 – 15,000,000 gallons of process water per year |
| WQ | Water Quality |

# Appendix B: Engagement Summary

**Table 2** summarizes input provided by Study participants and identifies how the input was incorporated into this report. **Table 3** lists the organizations Crowe met with through the course of the Study and how they were engaged.

**Table 2**
**Regulatory Alignment Study Participant Input**

| Study Participant Input | How It Was Incorporated |
|---|---|
| Reporting duplicative data across multiple regulatory systems and programs creates additional administrative workload. | Recommendations 13, 14, and 16 |
| Third-party certifications should be recognized as equivalent to PSR requirements. | Recommendations 7 and 17 |
| Current systems can be difficult to navigate and lack user friendly features, making it challenging to use efficiently for annual reporting processes and for public accessibility and transparency. | Recommendations 5 and 12 |
| There is interest in a centralized, cross-agency portal. | Recommendations 13, 14, 15, 16, and 18 provide a foundation for a potential cross-agency agricultural portal. |
| There should be more opportunities to collaborate across regulators, industry, technical assistance providers, and producers. | Recommendations 4, 5, 7, 8, and 17 |
| There is a lack of feedback or transparency about how collected data is used. | Recommendations 9, 12, and 18 |
| Producers have concerns over maintaining data privacy. | Recommendation 13 identifies a need to set up proper data governance across agencies; however, all recommendations include provisions for data protection and alignment with legal confidentiality requirements. |
| Regulatory systems do not scale equitably for small and mid-sized producers, especially those that face language and digital access barriers. | Recommendations 1, 3, 10 |
| Small producers face challenges navigating regulatory programs and requirements. | Recommendations 1, 3, 10, 15 |
| Food safety and water quality are only part of the regulatory requirements that producers face. Study participants want better coordination between all agricultural regulatory programs. | Recommendations 2, 6, 13, 14, 15 offer additional opportunities where solutions may apply to program areas or requirements outside the scope of the Study. |
| There is a need to retain regulatory flexibility in program requirements and/or implementation due to variances in growing patterns, geology, hydrology, etc. | Recommendations 9, 10, and 12 offer flexibility in how program areas or regions can apply recommendations. |

**Table 3**
**Regulatory Alignment Study Participant List**

| No. | Organization | Method of Engagement |
|---|---|---|
| 1 | Agricultural Council of California | Listening Session, Comment Letter |
| 2 | Agriculture and Land-Based Training Association | Listening Session |
| 3 | AgWorld | Interview |
| 4 | Almond Board of California | Listening Session |
| 5 | Andrew & Williamson Fresh Produce | Listening Session |
| 6 | Association of California Water Agencies | Workshop |
| 7 | Buena Vista Water Quality Coalition | Listening Session, Comment Letter |
| 8 | CA Roundtable on Agriculture and the Environment | Listening Session |
| 9 | Cal Poly Pomona – Department of Plant Science | Listening Session |
| 10 | California Alliance of Family Farmers | Comment Letter |
| 11 | California Almond Stewardship Program | Interview |
| 12 | California Association of Resource Conservation Districts | Listening Session |
| 13 | California Association of Winegrape Growers | Comment Letter |
| 14 | California Central Valley Water Quality Preservation | Interview |
| 15 | California Certified Organic Farmers | Listening Session, Comment Letter |
| 16 | California Citrus Mutual | Listening Session |
| 17 | California Coastkeeper Alliance | Listening Session |
| 18 | California Coffee Collective | Listening Session |
| 19 | California Dairy Quality Assurance Program | Listening Session |
| 20 | California Farm Bureau Federation | Listening Session, In-person Presentation, Comment Letter, Workshop |
| 21 | California Fresh Fruit Association | Listening Session |
| 22 | California Rice Commission | Comment Letter |
| 23 | California Strawberry Commission | Listening Session, Workshop |
| 24 | Cawelo Water District Coalition | Listening Session, Comment Letter |
| 25 | CDFA Information Technology Services Division | Interview |
| 26 | Centeno's Nursery & Landscaping | Listening Session |
| 27 | Central Coast Regional Water Boards, ILRP and CAF Program | Listening Session |
| 28 | Central Coast Vineyard Team | Listening Session |
| 29 | Central Coast Water Quality Preservation Inc. | Listening Session |
| 30 | Central Valley Dairy Representative Monitoring Program | Listening Session |
| 31 | Central Valley Regional Water Boards, ILRP and CAF Program | Listening Session |
| 32 | Cogent Consulting and Communications, Inc | Workshop |

| No. | Organization | Method of Engagement |
|---|---|---|
| 33 | Colorado River Regional Water Boards, ILRP | Listening Session |
| 34 | Community Alliance for Family Farmers | Listening Session, Workshops |
| 35 | Community Water Centers | Workshop |
| 36 | Covering Ground Farm | Listening Session, Email |
| 37 | CropManage (UCANR) | Interview |
| 38 | Dairy Cares | Listening Session, Comment Letter |
| 39 | Delta Conservancy | Workshop |
| 40 | Dixon Resource Conservation District | Interview |
| 41 | Earth Bound Farm Organic | Listening Session |
| 42 | Earth Riders | Comment Letter, Workshop |
| 43 | East San Joaquin Water Quality Coalition | Listening Session, Comment Letter |
| 44 | EJ Gallo Winery | Workshop |
| 45 | Environmental Law Foundation | Listening Session |
| 46 | GLOBALG.A.P. | Interview |
| 47 | GoodFarms | Listening Session |
| 48 | Grower Shipper Association of Central California | Comment Letter |
| 49 | Grower Shipper Association of Central Coast | Listening Session |
| 50 | Imperial Valley Irrigated Lands Coalition | Listening Session |
| 51 | Imperial Valley Vegetable Growers Association | Listening Session |
| 52 | Innovative Ag Services | Listening Session |
| 53 | Jackson Family Wines | Workshop |
| 54 | Kahn, Soares & Conway, LLP | Listening Session |
| 55 | Kaweah Basin Water Quality Association | Listening Session, Comment Letter |
| 56 | Kern River Watershed Coalition Authority | Listening Session, Comment Letter, Workshop |
| 57 | Kings River Watershed Coalition Authority | Listening Session, Comment Letter, Workshop |
| 58 | Lahontan Region | Listening Session |
| 59 | LandIQ | Workshop |
| 60 | Leadership Counsel for Justice and Accountability | Listening Session |
| 61 | Los Angeles Irrigated Lands Group | Comment Letter, Workshop |
| 62 | Los Angeles Regional Water Board, ILRP | Listening Session |
| 63 | Monterey County Farm Bureau | Listening Session |
| 64 | Napa County Farm Bureau | Listening Session |
| 65 | Napa County Resource Conservation District | Listening Session |
| 66 | North Coast Regional Water Boards, ILRP and CAF Program | Listening Session |
| 67 | Northern California Water Association | Comment Letter |
| 68 | Nursery Growers Association | Workshop |
| 69 | People, Food, and Lands | Comment Letter |

| No. | Organization | Method of Engagement |
|---|---|---|
| 70 | Provost and Pritchard | Workshop |
| 71 | Rincon Farms Inc | Listening Session, Workshop |
| 72 | Rio Farms | Listening Session |
| 73 | Sacramento Valley Water Quality Coalition | Listening Session |
| 74 | San Diego Regional Water Boards, ILRP | Listening Session |
| 75 | San Francisco Bay Regional Water Boards, ILRP and CAF Program | Listening Session |
| 76 | San Jacinto Coalition | Listening Session |
| 77 | San Joaquin Farm Bureau | Listening Session |
| 78 | San Joaquin County and Delta Water Quality Coalition | Comment Letter |
| 79 | San Miguel Produce, Inc. | Listening Session |
| 80 | Santa Ana Regional Water Board, ILRP and CAF Program | Listening Session |
| 81 | SLR Consulting | Workshop |
| 82 | Sonoma County Farm Bureau | Listening Session |
| 83 | Sonoma County Resource Conservation District | Listening Session |
| 84 | Stanislaus County Farm Bureau | Listening Session |
| 85 | State Board Waste Discharge Requirements Program | Listening Session |
| 86 | State Water Resources Control Board | Listening Session |
| 87 | Sustainable Conservation | Listening Session, Workshop |
| 88 | Taylor Farms | Listening Session |
| 89 | The Wine Group | Workshop |
| 90 | The Wonderful Company | Listening Session |
| 91 | Tule Basin Water Quality Coalition | Comment Letter |
| 92 | Tutti Frutti Farms | Listening Session |
| 93 | University of California Sustainable Agricultural Research and Education Program | Comment Letter |
| 94 | United States Department of Agriculture | Interview |
| 95 | University of California Agriculture and Natural Resources | Listening Session, Comment Letter |
| 96 | University of California, Davis - School of Veterinary Medicine | Listening Session, Workshop |
| 97 | Ventura County Agricultural Irrigated Lands Group | Listening Session |
| 98 | Ventura County Farm Bureau | Listening Session |
| 99 | Vineyard Team | Workshop |
| 100 | Water Boards CV-SALTS Program | Listening Session |
| 101 | Water Boards' GeoTracker Maintenance Team | Interview |
| 102 | Water Boards Office of Information Management and Analysis | Interview |

| No. | Organization | Method of Engagement |
|---|---|---|
| 103 | Water Boards Office of Sustainable Groundwater Management | Listening Session |
| 104 | West Coast Advisors | Listening Session, Workshop |
| 105 | Western Growers Association | Listening Session, Interview, Comment Letter |
| 106 | Western Plant Health | Workshop |
| 107 | Western Resource Strategies, LLC | Listening Session |
| 108 | Western United Dairies | Listening Session |
| 109 | Westside San Joaquin River Watershed Coalition | Comment Letter |
| 110 | Westside Water Quality Coalition | Listening Session, Comment Letter |
| 111 | Wine Institute | Listening Session, Email, Comment Letter |
| 112 | Yolo County Farm Bureau | Email |
| 113 | Zwitter Co | Listening Session |