

EXPOSED AND AT RISK

Opportunities to
Strengthen Enforcement
of Pesticide Regulations
for Farmworker Safety

Olivia N. Guarna



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AUTHORS & ACKNOWLEDGMENTS

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This report was produced by the [Center for Agriculture and Food Systems](#) at [Vermont Law and Graduate School](#), in partnership with [Farmworker Justice](#). The lead author of this report is **Olivia N. Guarna**, Summer Honors Intern and JD candidate at New York University School of Law. The report was written in partnership with **Laurie J. Beyranevand**, Professor of Law and Director of the Center for Agriculture and Food Systems, **Lihlani Skipper Nelson**, Associate Director and Research Fellow, Center for Agriculture and Food Systems, and **Tessa Pulaski**, Legal Fellow at Farmworker Justice, all of whom served as thought partners, writers, editors, and reviewers.

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Finally, and most importantly, we express our sincere gratitude to the farmworkers across the country who put themselves and their families at risk to feed, nourish, and sustain us.



About CAFS

Vermont Law and Graduate School's Center for Agriculture and Food Systems (CAFS) uses law and policy to build a more sustainable and just food system. In partnership with local, regional, national, and international partners, CAFS addresses food system challenges related to food justice, food security, farmland access, animal welfare, worker protections, the environment, and public health, among others. CAFS works closely with its partners to provide legal services that respond to the needs and develop resources that empower the communities they serve. Through CAFS' Food and Agriculture Clinic and Research Assistant program, students work directly on projects alongside partners nationwide, engaging in innovative work that spans the food system. Please visit www.vermontlaw.edu/cafs to learn more.



About Farmworker Justice

Farmworker Justice (FJ), founded in 1981, is a national nonprofit organization that seeks to empower farmworkers to improve their living and working conditions, immigration status, health, occupational safety, and access to justice. Based in Washington, D.C., FJ engages in advocacy, litigation, administrative monitoring, capacity-building, health promotion, public education, and coalition building. FJ works closely with national, state, and local partners, including legal services organizations, community-based organizations, and labor unions. Please visit www.farmworkerjustice.org to learn more.



PREFACE

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In May 2021, the Center for Agriculture and Food Systems published [Essentially Unprotected: A Focus on Farmworker Health Laws and Policies Addressing Pesticide Exposure and Heat-Related Illness](#) as a companion report to the Johns Hopkins Center for a Livable Future’s report [Essential and in Crisis: A Review of the Public Health Threats Facing Farmworkers in the US](#). Both reports focused on the public health threats facing farmworkers in the United States. *Essentially Unprotected* specifically addressed pesticide exposure and heat-related illness, highlighting the gaps in federal law in addition to state efforts to fill those gaps.

This report was conceived by farmworker advocates to expand on the research and analysis contained in *Essentially Unprotected*. In continued partnership with Farmworker Justice, CAFS seeks to create resources to support the expansion of laws and policy that can improve conditions for workers throughout the food system. This report is part of a series that spotlights various issues affecting farmworkers where law and policy can play a role in offering protection.

The direction of this report was influenced heavily by interviews with farmworker advocates in various states. Through these conversations, it became clear that the legal and regulatory landscape of pesticide law enforcement is complex given the cooperative relationship between federal and state governments and the myriad agencies involved at both levels. This resource is intended to provide clarity on pesticide regulation enforcement efforts to enable advocates and law and policymakers to identify opportunities for improvement. It concludes with a set of recommendations to better protect the health and safety of the farmworkers who comprise an integral part of our food system.



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I. INTRODUCTION

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THE USE OF PESTICIDES IS UBIQUITOUS IN OUR FOOD SYSTEM. In the United States, approximately 1 billion pounds of pesticides are applied annually across sectors.¹ Nearly 90 percent of conventional pesticides are applied in the agricultural sector.² As a result, farmworkers are routinely exposed at unusually high rates to chemicals that pose substantial risk to human health and safety. These risks are exacerbated by insufficient worker training and frequent improper handling and application.³

Vermont Law and Graduate School's Center for Agriculture and Food Systems released a report in 2021 entitled *Essentially Unprotected*,⁴ which contains a detailed overview of the landscape of pesticide laws at the federal and state level. As demonstrated in the report, there are still key gaps in existing law to sufficiently protect farmworkers. Given these significant gaps, it is particularly alarming that compliance with current protections appears woefully low. The failure to adequately enforce pesticide laws leaves farmworkers unprotected and at continued risk of injury and illness.

The system of pesticide law enforcement is complex and varies widely between states. This report seeks to explain some of the nuance reflected in the regulatory structure of enforcement while highlighting recommendations for consistency and improved health and safety outcomes. However, it is essential to note that poor compliance and enforcement are symptomatic of other issues, many of which plague farmworkers beyond pesticide exposure. For example, enforcement is considerably affected by workers underreporting exposure incidents and suspected violations due to fear of retaliation by their employers.⁵ Many farmworkers are undocumented or on an H-2A guestworker visa and thus face fears of deportation or blacklisting if they speak out against employer abuse.⁶

Additionally, farmworkers often do not have access or resources to seek out medical attention after exposure. If they do, doctors may not be aware that their symptoms indicate pesticide poisoning or may not know how and to whom to report the incident.⁷ Even when doctors can draw the connection, not all states require that doctors notify health authorities or the state agency responsible for enforcement.⁸

THE H-2A VISA TEMPORARY AGRICULTURAL PROGRAM

The composition of the American farm workforce is changing as longtime workers in the industry age and the undocumented population shrinks. Rather than raising wages and improving conditions to attract other workers already in the US, agricultural employers are increasingly turning to temporary foreign workers on H-2A visas. The H-2A temporary agricultural program allows growers in the US to apply for visas to hire foreign workers for temporary or seasonal work on their farms.⁹ This workforce is extremely vulnerable because their status in the US is completely dependent on their employers, meaning they are very unlikely to raise issues related to working conditions for fear of deportation.¹⁰ The program is widely criticized for insufficient regulation and inadequate enforcement that has, in the most egregious cases, led to the trafficking of hundreds of workers.

Each year over the past decade has set a record for H-2A positions certified by the Department of Labor and visas issued by the Department of State. Last year, the Department of Labor certified more than 317,000 positions for the H-2A program. Quarterly numbers indicate that the department is on track to easily surpass that number in fiscal year 2022.¹¹

When H-2A visa holders arrive in the United States, they frequently experience exploitation but have little chance of legal recourse. H-2A workers are often reluctant to raise complaints or report violations of their rights because their visas are tied to their employers.¹² While many farmworkers are vulnerable, H-2A workers are particularly so for a host of reasons. Many arrive in the US and may already be in debt after paying for travel or unlawfully charged recruitment fees.¹³ This means that if they find that the job is too dangerous or that their employer is violating their workplace rights, they are often left with little choice but to continue working. If they quit or complain and get fired, they risk getting deported or blacklisted from the H-2A program without any realistic opportunity to pay back fees paid to recruiters for H-2A employers.¹⁴ As a result, many workers silently continue working even when conditions are not what they were promised.

As the H-2A program continues to rapidly expand, advocates are concerned that these dynamics discourage workers from stepping forward with complaints about pesticide exposure.



David Bacon

The stakes of pesticide misuse are higher still for farmworkers, as climate change continues to heighten health and safety risks. Increased temperatures enable chemicals to more easily penetrate personal protective equipment (PPE) and skin.¹⁵ Plus, the escalated threat of heat stress makes PPE more difficult to wear.

The persistent realities of systemic racism and the routine dehumanization of noncitizen workers exacerbate these issues. Given President Biden's executive orders directing federal agencies to address racial and environmental justice when developing, implementing, and enforcing federal programs and regulations, these issues are particularly relevant.¹⁶

The system of pesticide law enforcement is built primarily around the Federal Insecticide, Fungicide, and Rodenticide Act¹⁷ (FIFRA), a federal statute passed in 1947 to regulate the use of pesticides. The US Environmental Protection Agency (EPA) is the federal agency charged with the authority to administer FIFRA.¹⁸ Before distribution or sale, all pesticides must be registered and approved by EPA. One metric for approval requires that the pesticide “will not generally cause unreasonable adverse effects on the environment,”¹⁹ which includes “any unreasonable risk to man.”²⁰ Under the agency's broad authority to create regulations carrying out the purposes of FIFRA, EPA promulgated a federal regulation called the Worker Protection Standard (WPS).²¹ The WPS provides certain protections for workers who could be vulnerable to pesticide exposure or misuse.

“The Federal Government should pursue a comprehensive approach to advancing equity for all, including people of color and others who have been historically underserved, marginalized, and adversely affected by persistent poverty and inequality... Because advancing equity requires a systematic approach to embedding fairness in decision-making processes, executive departments and agencies (agencies) must recognize and work to redress inequities in their policies and programs that serve as barriers to equal opportunity.”

- Executive Order on Advancing Racial Equity and Support for Underserved Communities Through the Federal Government²²



Laws: laws (or statutes) are enacted by Congress or state legislative bodies. **FIFRA** is a federal law enacted by Congress that addresses the requirements for pesticide use in the United States.



Regulations: regulations (or rules) are promulgated by agencies within the executive branch at the federal or state level. Federal agencies—which are created by Congress through laws—can be authorized through legislation to make detailed regulations for the purpose of implementing and enforcing a law. This authorization can be granted either by the law that created the agency or by subsequent laws that name an existing agency as an administrator. Regulations carry the force and effect of law. The **Worker Protection Standard** is a federal regulation promulgated by EPA for the purpose of implementing FIFRA.

The legal authority to protect farmworkers from pesticide misuse is found in FIFRA’s provision prohibiting the use of “any registered pesticide in a manner inconsistent with its labeling.”²³ Labeling requirements are detailed in federal regulations²⁴ promulgated by EPA to implement the labeling requirements included in FIFRA. However, a fundamental purpose of labels is to provide directions for safe use. During the process of registration, EPA determines the content of the label, including requirements and restrictions on use. EPA also requires that labels on agricultural pesticide products refer to the Worker Protection Standard, which makes it enforceable under the labeling provision.²⁵

Although the WPS is a federal regulation, it is largely administered by the states. As with many environmental laws in the United States, the federal government sets broad national standards and works cooperatively with states to enforce them. In addition, states may enact laws regarding the use of pesticides, with the caveat that FIFRA expressly preempts states from creating supplemental or different labeling requirements.²⁶ However, FIFRA provides only the floor of protection for the issues states are not preempted from regulating.²⁷ This means, for example, that states can prohibit use of a pesticide that EPA would otherwise allow, but it cannot allow use of a pesticide that is prohibited by EPA.

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EPA 122012/Rev A

AUTHORITY GRANTED TO EPA TO DEVELOP REGULATIONS EXCERPT OF 7 U.S.C. § 136W

(a) In General.

(1) Regulations. The Administrator is authorized in accordance with the procedure described in paragraph (2), to prescribe regulations to carry out the provisions of this Act. Such regulations shall take into account the difference in concept and usage between various classes of pesticides, including public health pesticides, and differences in environmental risk and the appropriate data for evaluating such risk between agricultural, nonagricultural, and public health pesticides.

(c) Other Authority. The Administrator, after notice and opportunity for hearing, is authorized...

(2) to determine any pesticide which contains any substance or substances in quantities highly toxic to man;

(3) to establish standards [...] with respect to the package, container, or wrapping in which a pesticide or device is enclosed for use or consumption, in order to protect children and adults from serious injury or illness resulting from accidental ingestion or contact with pesticides or devices regulated by this subchapter as well as to accomplish the other purposes of this subchapter;

(4) to specify those classes of devices which shall be subject to any provision of section 136(q)(1) or section 136e of this title upon the Administrator's determination that application of such provision is necessary to effectuate the purposes of this subchapter;

(5) to prescribe regulations requiring any pesticide to be colored or discolored if the Administrator determines that such requirement is feasible and is necessary for the protection of health and the environment; and

(6) to determine and establish suitable names to be used in the ingredient statement.

When considering how FIFRA is implemented, it is important to consider how the duties delegated to state lead agencies for pesticide regulation enforcement can be misaligned with workers' interests. For example, the agency tasked with protecting the vulnerable farmworker population is also commonly tasked with promoting the economic interests of the agriculture industry. Amidst the context of racial and socioeconomic inequity, this tension has dire consequences for farmworker health and safety.

This report will explore how the agencies charged with pesticide regulation at the state and federal level may not be the best suited for this role. Further, because the current enforcement system lacks capacity to inspect all farms, the likelihood of catching violators is low, resulting in frequent violations by growers. Though there are many incremental steps that can be taken to improve the regulatory structure of enforcement, it is worth considering how fundamental aspects of the system as a whole work against farmworkers. This report spotlights the pesticide programs of four states: California, Washington, Illinois, and Florida, given their regional diversity and the fact that they are home to substantial agricultural production. Although not indicative of the entire array of enforcement systems across US jurisdictions, these four programs illuminate some of the complexities and possibilities of state-level enforcement.



II. THE STRUCTURE OF ENFORCEMENT OF PESTICIDE USE LAWS AND REGULATIONS

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A. The Federal Government's Role in Enforcement

CONGRESS DELEGATED RESPONSIBILITY FOR IMPLEMENTATION AND ENFORCEMENT OF FIFRA TO EPA.²⁸

However, EPA delegates nearly all use enforcement responsibilities to individual states by giving them “primacy.”²⁹ This occurs when a state and EPA enter into a cooperative agreement granting the state “authority to cooperate in the enforcement” of a federal law.³⁰ Cooperative agreements are negotiated by EPA’s regional offices, using triennial guidance issued by EPA headquarters to inform the process.³¹ The guidance is aimed at helping regional offices and grantees craft an agreement to meet national standards while also tailoring a program to regional needs.

“Program areas listed in this Guidance reflect both national and regional pesticide concerns. However, the degree to which a particular pesticide issue, program area or activity is of concern in a particular state, tribe, or territory may vary. This Guidance attempts to recognize that reality and balance support for National Pesticide Program priorities, goals, and performance measures, by providing grantees flexibility to focus on those national program areas which present the greatest concerns locally.”

- Joint OPP/OECA FY2022-2025 FIFRA Cooperative Agreement Guidance and Future Priority Discussions³²

EPA attempts to achieve the balance between national and regional priorities through categorization of program areas—education, outreach training, technical assistance, compliance assistance, and enforcement—as either “required” or on the “pick-list.” From the pick-list, grantees must include activities from one program area to be funded by EPA’s Office of Pesticide Programs and one program area to be funded by EPA’s Office of Enforcement and Compliance Assurance.³³ Although all required program areas must be included in the cooperative agreements, the “level of effort invested in each required program area and activity is negotiable between the grantee and EPA region.”³⁴ Consequently, states may address pesticide regulation very differently, creating inconsistencies across the country.

COOPERATIVE AGREEMENT GUIDANCE – REQUIRED VERSUS PICK-LIST PROGRAM AREAS³⁵	
<p>Required Program Areas</p> <ul style="list-style-type: none"> ✓ Basic Pesticide Program ✓ Pesticide Worker Safety: Worker Protection Standard ✓ Pesticide Worker Safety: Pesticide Applicator Certification ✓ Pesticides in Water ✓ Product Integrity ✓ Border Compliance 	<p>Pick-List Program Areas</p> <ul style="list-style-type: none"> ✓ Fumigants and Fumigation ✓ Endangered Species Protection ✓ Bed Bugs ✓ Pollinator Protection ✓ Integrated Pest Management ✓ Spray Drift ✓ State and Tribal Coordination and Communication ✓ Emerging Public Health Pesticide Issues

Despite granting states primacy, EPA maintains a role in pesticide regulation enforcement. Under FIFRA, EPA’s Office of Enforcement and Compliance Assurance must oversee state pesticide programs. Regional EPA offices are “substantially involved” in their implementation.³⁶ Additionally, EPA retains authority to conduct its own inspections, although federal data suggests the agency rarely takes advantage of this ability. By way of example, EPA is responsible for overseeing approximately 346,000 commercial handler and agricultural facilities with employees protected by the WPS.³⁷ Between 2015 and 2019, EPA conducted an average of 13 inspections per year.³⁸ Anecdotally, state practitioners have noted that EPA has little to no presence on the ground.³⁹

Additionally, states are eligible to receive federal funding through congressional appropriations for the State and Tribal Assistance Grant (STAG) program—these appropriations are not limited to FIFRA-related programs.⁴⁰ State pesticide programs are eligible for a few different types of federal grants through the STAG program, including Performance Partnership Grants (CFDA # 66.605),⁴¹ Consolidated Pesticide Enforcement Cooperative Agreements (CFDA # 66.700),⁴² and Multipurpose Grants to States and Tribes (CFDA # 66.204).⁴³ Annually, EPA awards more than \$30 million in FIFRA assistance funding to states, Tribes, and territories.⁴⁴

Current Federal Grant Awards for State Pesticide Programs

STATE	GRANT TYPE	AMOUNT	PERIOD
California	Performance Partnership Grants (Cooperative Agreement)	\$4,688,278	July 1, 2019–June 30, 2022
		Description: funding for “ensuring that pesticides are manufactured, sold, used and stored according to federal and state law. This agreement aims to improve the understanding and compliance with pesticide laws and regulations, protecting human health and the environment by implementing activities related to compliance, certification and training, and field program activities related to endangered species, water quality and worker safety.” ⁴⁵	
Washington	Consolidated Pesticide Enforcement Cooperative Agreements (Program Grant)	\$748,500	October 1, 2021–September 30, 2022
		Description: funding for “implementation of [WSDA’s] pesticide regulatory and enforcement programs, including, but not limited to, activities such as: compliance monitoring, enforcement, certification and training for pesticide applicators, and outreach and education. The agreement will result[] in enhanced protection of human health and environment (e.g. reduced pesticide exposure to agricultural workers and handlers, protection of water resources from pesticides, and protection of endangered species).” ⁴⁶	
	Multipurpose Grants to States and Tribes (Formula Grant)	\$56,024	December 2, 2019–December 31, 2022
		Description: funding to “complement existing environmental program grants” and to be used to “conduct a coordinated pesticide stewardship partnership (PSP) approach utilizing a WSDA team approach combined with local expertise to assess pesticide management and encourage voluntary changes in pesticide use and practices for the protection of water quality, endangered species, and human health.” ⁴⁷	
Multipurpose Grants to States and Tribes (Formula Grant)	\$31,922	October 1, 2020–September 30, 2023	
	Description: funding to “complement existing environmental program grants” and to be used to “conduct a coordinated pesticide stewardship partnership (PSP) approach utilizing a WSDA team combined with local expertise to assess pesticide management and provide education and training on proper pesticide applications to encourage voluntary changes for the protection of water quality, endangered species, and human health.” ⁴⁸		
Illinois	Performance Partnership Grants (Cooperative Agreement)	\$1,183,380	October 1, 2021–September 30, 2023
		Description: funding for “implementation of [Illinois Department of Agriculture’s] pesticide regulatory and enforcement programs, including, but not limited to, activities such as: compliance monitoring, enforcement, certification and training for pesticide applicators, and outreach and education. This agreement will result in enhanced protection of human health and the environment (e.g. reduced pesticide exposure to agricultural workers and handlers, protection of water resources from pesticides, and protection of endangered species).” ⁴⁹	

STATE	GRANT TYPE	AMOUNT	PERIOD
Florida	Performance Partnership Grants (Cooperative Agreement)	\$2,340,459	October 1, 2019–September 30, 2022
		Description: funding for “statewide programs to: provide a comprehensive program of registration, labeling, training, certification, inspections and enforcement to prevent unnecessary exposure to humans and the land and water by ensuring that pesticides are used and disposed of in the manner specified on each product. Inspections and enforcement will deter non-compliance with product requirements.” ⁵⁰	

Table 1. See [Appendix A](#) for notes and methodology.

Distribution of enforcement funding is determined using national formulas. These formulas are based on factors prescribed by statute or EPA regulation. States may receive funds to cover up to 50 percent of the anticipated cost of implementing the terms of their cooperative agreements.⁵¹



Factors that inform the national formulas for enforcement funding include:

1. “The State’s population,
2. The number of pesticide-producing establishments,
3. The number of certified private and commercial pesticide applicators,
4. The number of farms and their acreage, and
5. As appropriate, the State’s potential farm worker protection concerns.”⁵²

However, once allotments are calculated, funds are sent to EPA regional offices to be dispersed. Regional offices are then authorized to “shift funds between grantees and across non-enforcement pesticide programs to address local conditions, priorities and special projects not considered in the national formulas.”⁵³ As a condition of STAG funding, states are required to report to EPA on their federally funded enforcement activities. Reporting requirements are governed by EPA assistance regulations or as negotiated with the regions.⁵⁴ While EPA “encourages” states to report inspection and enforcement activities completed with state funds as well, those disclosures are not mandatory.⁵⁵ If a state voluntarily elects to share its state-funded enforcement activities with EPA, it does so using a standard form—Form 5700-33H—which is also used to report federally funded activities.⁵⁶ However, since the disclosures are not mandatory, there are gaps and inconsistencies in state enforcement data, making it difficult to measure a state’s compliance with the WPS.

B. State Government's Role in Enforcement

In the process of negotiating cooperative agreements with EPA, states designate a lead agency with primary responsibility for enforcing FIFRA. State lead agencies tend to be departments of agriculture, but this varies. Given the flexibility permitted by the federal government, pesticide programs look quite different across states. Variation can occur based on which agency is designated as the lead, the other agencies that may share jurisdiction in pesticide-related regulation, the amount of funding received by the pesticide program, and individual state laws and regulations, among other issues.



For further research on state pesticide laws and regulations, refer to the Vermont Law and Graduate School's Center for Agriculture and Food Systems' 2021 report, *Essentially Unprotected: A Focus on Farmworker Health Laws and Policies Addressing Pesticide Exposure and Heat-Related Illness*, and its companion [Airtable database](#).

1. Funding for state pesticide programs

Despite their receipt of federal grants, at least half, and often much more, of state pesticide program funding is intended to come from state budgets.⁵⁷ Consequently, states have vast discretion to determine how much they allocate to their pesticide programs and where those funds are directed within the program (e.g., training, registration, enforcement, etc.).⁵⁸ Although regional EPA offices collaborate with states to set priorities in the states' workplans "that reflect the [state's] needs, concerns and resources,"⁵⁹ EPA has little additional recourse to control how states fund their programs. EPA regulations technically provide for the option to rescind primacy⁶⁰ but this appears to be an empty threat. In the history of FIFRA, a state's primacy has never been revoked.⁶¹

A comparison between **California's** and **Illinois'** state budgets illuminates the discretion exercised by states in making funding decisions. The size of the agricultural industry is similar in the two states: California has 69,000 farms comprising 24.2M acres of farmland;⁶² Illinois has 70,900 farms comprising 27.0M acres of farmland.⁶³ However, in fiscal year 2019–2020, California's state appropriations for its pesticide program were \$108,870,000,⁶⁴ whereas Illinois' were \$7,150,900.⁶⁵ This discrepancy may be partially attributable to the fact that California has a significantly larger farmworker population than Illinois.

Budget is an important factor in pesticide regulation enforcement, but it is not the only indication of the overall quality of a state's program. Evaluating how states use their funds to develop their programs is also key. For example, **California's** program reflects some unique components that other states have failed to establish. The Kern County Department of Agriculture launched a "Pilot Project to Protect Agricultural Workers."⁶⁶ This agricultural neighbor notification program requires 48-hour notice of intent to apply pesticides, with the goal that increased communication between farms will reduce the risk of pesticide drift. Neighboring farms are notified via an emailed GIS permit map, which indicates adjacent application sites and includes contact information.⁶⁷

Since the pilot program was launched, incidents of drift in Kern County have decreased.⁶⁸ Due to its success, the program was expanded in 2018 to apply to all of Kern County.⁶⁹ Currently, the state is investing in the development of a statewide application notification system⁷⁰ (although advocates worry that the scope of the developing state system is too narrow, particularly in that it does not plan to include information on the specific field location of application⁷¹). Advocates in **Washington** sought to institute a similar notification system, but their state agency has concluded that such a project is not feasible, claiming it would be too cumbersome to replicate Kern County’s system.⁷² The initiative has also failed to gain traction in the Washington legislature despite advocates’ efforts.⁷³

2. State agencies involved in pesticide regulation

STATE	LEAD AGENCY	COOPERATING STATE AND COUNTY AGENCIES
California	Dep’t of Pesticide Regulation	<ul style="list-style-type: none"> ▪ Dep’t of Food and Agriculture ▪ County Agricultural Commissioners ▪ University of California, Statewide Integrated Pest Management Program ▪ Structural Pest Control Board⁷⁴ ▪ Office of Environmental Health Hazard Assessment⁷⁵
Washington	Dep’t of Agriculture	<ul style="list-style-type: none"> ▪ Dep’t of Labor & Industries ▪ Dep’t of Health⁷⁶
Illinois	Dep’t of Agriculture	<ul style="list-style-type: none"> ▪ Dep’t of Public Health ▪ Environmental Protection Agency⁷⁷
Florida	Dep’t of Agriculture & Consumer Services	<ul style="list-style-type: none"> ▪ Dep’t of Health

As mentioned above, it is typical for state departments of agriculture to be designated as the state lead agency for pesticide regulation. Other common agencies with some degree of involvement are state departments of health and departments of labor. **California** has departed somewhat from this convention in that its lead agency, the Department of Pesticide Regulation, is solely dedicated to pesticides. Local-level enforcement is delegated to County Agricultural Commissioners. These commissioners carry out most of the pesticide use inspections in California,⁷⁸ including field worker safety inspections, and have the authority to issue enforcement actions.



California's Unique Regulatory Structure

California's regulatory structure is unique in two significant ways. First, California's legislature created a state agency dedicated solely to pesticide regulation, the Department of Pesticide Regulation. Second, enforcement is substantially delegated to the counties. The division of responsibilities among the primary agencies involved in California's pesticide regulation includes:

- **The Department of Pesticide Regulation** is in charge of developing regulations relating to pesticides and worker safety.⁷⁹ It handles licensing of pesticide applicators, environmental monitoring, and maintaining pesticide use, illness, and monitoring databases. It leads state-level enforcement.
- **County Agricultural Commissioners** have been delegated local authority for pesticide regulation enforcement and collection of pesticide use records.⁸⁰
- **The Office of Environmental Health Hazard Assessment (OEHHA)** develops regulations relating to pesticides and worker safety jointly with the Department of Pesticide Regulation. The OEHHA also conducts peer review of pesticide risk assessments and pesticide education for healthcare providers. This authority was originally delegated by California's legislature to the State Department of Health Services,⁸¹ but was transferred to OEHHA upon its creation.⁸²

The County Agricultural Commissioners entered into an interagency agreement with the Department of Pesticide Regulation, which is memorialized in a 2005 memorandum of understanding between the Commissioners, the Department of Pesticide Regulation, and US EPA.⁸³ It is currently in the process of being updated. An advantage of this agency collaboration is the efficiency of utilizing the existing infrastructure at the county level to implement and enforce the Department of Pesticide Regulation's programs. It is especially helpful to have "boots on the ground" that can respond promptly to complaints.

However, there are some serious drawbacks to the arrangement. First, the Department of Pesticide Regulation issues recommendations for enforcement practices, provides technical support, and conducts program reviews of the counties' enforcement programs. Yet, when individual counties fail to conduct adequate inspections or issue appropriate enforcement actions, worker and community advocates have found the Department of Pesticide Regulation unwilling or unable to require improvements.⁸⁴

Second, there is an inherent tension between the County Agricultural Commissioners' duties to ensure safe use of pesticides and their duties to promote the agricultural industry. County Agricultural Commissioners are appointed by the County Board of Supervisors. Agricultural producers have strong political influence in counties where agriculture is a major industry.⁸⁵

In **Washington**, the three agencies that share jurisdiction for pesticide regulation entered into a memorandum of understanding (MOU) to define responsibilities, facilitate cooperation, and eliminate redundancies. While there are important functional reasons to separate authority related to pesticide regulation, shared responsibility has the potential to lead to gaps in enforcement. The Department of Agriculture administers FIFRA and state pesticide laws and regulations, including the WPS.⁸⁶ The Department of Labor and Industries administers the Washington Industrial Safety and Health Act meaning the agency can step in to enforce the WPS in contexts limited to employer–employee disputes.⁸⁷ This would exclude jurisdiction over instances of pesticide drift, where the farmworkers are harmed by a third-party applicator.



Washington's Pesticide MOU – Division of Responsibilities⁸⁸

Department of Agriculture

- Adopts and administers pesticide regulations, including registration and restrictions on use
- Tests and certifies pesticide applicators
- Administers continuing education requirements for pesticide applicators
- Issues Handler and Worker Pesticide Training documentation according to the Environmental Protection Agency (EPA) WPS guidelines
- Investigates complaints of pesticide misuse or misapplication
- Provides Technical Assistance to pesticide applicators and workers
- Participates on the Pesticide Incident Reporting and Tracking Review Panel (PIRT)

Department of Labor and Industries

- Conducts safety and health workplace inspections
- Promulgates workplace safety and health standards
- Investigates employee and workplace complaints
- Provides technical assistance and consultations to employers
- Outreach through workshops, videos, and an extensive information repository on the [Division of Occupational Safety and Health] website on occupational safety and health topics
- Participates on the Pesticide Incident Reporting and Tracking Review Panel (PIRT)
- Conducts research and provides technical reports

Department of Health

- Works in partnership with other agencies to investigate suspected human pesticide illnesses
- Secures environmental, human, or animal tissue samples to determine the nature and cause of any case of pesticide poisoning
- Reviews medical records of reported patients
- Reviews pesticide application records from the pesticide applicator pursuant to Chapter 17.21.100(4)(a)
- Analyzes illness data over time to identify trends and other significant findings
- Prepares an annual report for the legislature regarding significant findings
- Works with other agencies to correct weaknesses in regulations that may be contributing to incidents of illness
- Provides technical assistance and consultation regarding health effects and risks of pesticides to healthcare providers and other agencies
- Provides community outreach and education regarding pesticide safety
- Chairs and staffs the multiagency Pesticide Incident Reporting and Tracking (PIRT) Review Panel
- Develops medical education programs for physicians and other healthcare providers regarding pesticide poisonings

The **Washington** Department of Health, in its capacity to protect public health and welfare, is responsible for investigating and tracking pesticide-related illness.⁸⁹ Importantly, the department does not have pesticide regulation enforcement authority, meaning that if an incident of exposure is discovered, the agency cannot act and must rely on the Department of Agriculture for enforcement.⁹⁰ The MOU also provides the procedure for response to an exposure complaint. Any agency that receives notice of a potential violation of the WPS must report it to the relevant agency for an investigation, as outlined in the memo.⁹¹ Unfortunately, not all state pesticide programs have procedures in place for agency coordination and reporting of suspected incidents. **Illinois**, for example, has no mandatory reporting requirements.⁹²

3. State pesticide compliance monitoring strategies

EPA's Office of Enforcement and Compliance Assurance issued compliance monitoring strategy guidance for states to use to enforce FIFRA. Among other purposes, the guidance is intended to “promote an understanding of, and compliance with, minimum program requirements” and “promote national consistency in program implementation while acknowledging and allowing appropriate flexibility.”⁹³ Generally, all FIFRA inspections are initiated in one of two ways: “for-cause” or as part of a “neutral scheme.” For-cause inspections occur in response to a tip or complaint that a WPS violation has occurred. Neutral scheme inspections are routine in nature and based on a set of criteria established by the state regulating body.⁹⁴ Beyond that general breakdown, state inspection specifications and responses vary.



Pesticide label 2 by Melissa Scherr, Oregon Department of Agriculture is licensed under CC BY-NC-ND 2.0.

While EPA has issued inspection guidance, states are not required to follow it, even for federally funded inspections.⁹⁵ In **Illinois**, if a complaint is filed with Illinois' Department of Agriculture, the typical response consists of an investigator inspecting the field, interviewing individuals involved, testing samples, writing a report, and determining whether a violation occurred. If a violation is found, the agency will issue a notice of fine, in which case the alleged violator has the opportunity to challenge the notice in an administrative proceeding.⁹⁶



Pesticide just sprayed by David Evan Harris is licensed under CC BY-SA 2.0.

In **Florida**, field inspections are conducted by the Department of Agriculture and Consumer Services. If Florida's Department of Health receives a complaint involving pesticide exposure, it must refer the case to the Department of Agriculture to conduct the field investigation. That field inspection then becomes part of the Department of Health's case record.⁹⁷ Although the Department of Health can report findings of pesticide-related illness based on its medical evaluation of a patient, its conclusions may be influenced by the field investigation or may be inconsistent with the Department of Agriculture and Consumer Services' findings.

Much like state inspection and reporting protocol, there is no standard approach to violations of the WPS.⁹⁸ Federal data indicates that more than half of all WPS violations result in no enforcement action. Of the violations that do result in enforcement actions, half of those result in only a warning.⁹⁹ For violations that are not reported to EPA, enforcement seems to follow the same trend, where states rely heavily on warning-type responses rather than the issuance of penalties.¹⁰⁰ In fiscal year 2020–2021, **California** County Agricultural Commissioners across all counties issued 1,932 warnings and only 543 agricultural pesticide enforcement actions (agricultural civil penalties).¹⁰¹

This enforcement approach has significant implications for the overall enforcement system because warnings alone will not necessarily trigger the state's penalty scheme and, therefore, do not deter violations. In **Washington**, for example, penalty enforcement actions can only follow from the issuance of a Notice of Intent.¹⁰² After issuing the notice, penalties are calculated according to a schedule based on the severity of the violation.¹⁰³ However, Washington's Department of Agriculture rarely issues Notices of Intent,¹⁰⁴ meaning that violators do not pay fines for many of their WPS violations.

A person wearing a white long-sleeved shirt, dark pants, and a blue backpack sprayer is walking through a field of green crops, spraying a pink nozzle. The scene is illuminated by warm, golden light, suggesting late afternoon or early morning.

III. THE EFFECT OF OUR CURRENT STRUCTURE OF PESTICIDE REGULATION ENFORCEMENT

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A. Overarching Concerns with Pesticide Regulation Enforcement Systems

Because EPA has largely delegated its pesticide regulation enforcement authority to states, the functional pesticide law enforcement roles of federal and state government are disparate. It follows that the barriers to robust enforcement that EPA and the states face are distinct. Still, there are some pesticide program characteristics that plague enforcement efforts consistently at both the federal and state levels.

1. Inappropriate agencies take the lead on pesticide regulation enforcement at the federal and state level

Protection from workplace health and safety hazards is typically within the domain of the federal Occupational Safety and Health Administration (OSHA) whose inspectors have education and training in hazard identification and exposure assessment. It would seem logical, then, for OSHA to have jurisdiction over farmworkers' protection from work-related pesticide exposure. However, the main federal statute that OSHA administers, the Occupational Safety and Health Act (OSH Act),¹⁰⁵ provides that OSHA cannot regulate areas where "other Federal agencies . . . exercise statutory authority to prescribe or enforce standards or regulations affecting occupational safety or health."¹⁰⁶

In the case of pesticide regulation enforcement, FIFRA granted EPA authority to regulate pesticides, taking into account "any unreasonable risk to man."¹⁰⁷ By promulgating the WPS, EPA asserted jurisdiction over worker safety such that OSHA no longer plays a role in workplace pesticide hazards except in very limited situations. Although EPA has authority to regulate environmental harms as they relate to human health, OSHA's primary function as an agency is to address harms to human health in the workplace.

Importantly, however, OSHA faces many of the same barriers to enforcing worker protections that EPA does. To start, OSHA has a very low inspection rate, perhaps because of underfunding and understaffing. In 2016, it inspected approximately 0.46 percent of the worksites over which it has jurisdiction.¹⁰⁸ Still, there are fundamental reasons why OSHA and equivalent state agencies are well suited to play a strong role in the regulation of workplace pesticide hazards.

For example, in **California**, the inspectors employed by the Department of Pesticide Regulation and the County Agricultural Commissioners are typically agricultural biologists who lack in-depth training in hazard identification and exposure assessment. In contrast, OSHA inspectors are industrial hygienists and engineers who have this specialized background.¹⁰⁹ The distinction between OSHA and EPA expertise is also salient when it comes to assessment of enforcement penalties (see discussion in [Part III.C.](#)).

A more concerning tension is created at the state level, where lead enforcement agencies are typically departments of agriculture. State agricultural departments are not typically given jurisdiction to focus their regulatory efforts on worker safety. In fact, their delegated responsibilities can be at odds with worker safety. These agencies have the primary goal of keeping the agricultural industry productive¹¹⁰ and, in some cases, view growers as their customers.¹¹¹ State agricultural departments' misaligned focus has been an enduring concern among those involved in pesticide regulation enforcement. In a 1981 report by the US General Accounting Office, the Comptroller General noted, "while State departments of agriculture are also concerned with the environment, their top priority in pest management is to ensure that their programs offer farmers and growers adequate protection against pest damage at a reasonable cost."¹¹²

This creates two potential barriers to enforcement. First, there is the risk of "agency capture," where the lead agency may not be regulating pesticide use as diligently as it should be due to outsized influence or pushback from the industry. For example, advocates in **Washington** have pushed for policies to implement buffer zones, neighbor notification systems, higher penalties, and mandatory pesticide use reporting. Those appeals have fallen on deaf ears and advocates suspect the reason is because pesticide applicators and industry representatives have too much political power.¹¹³ In part, this suspicion is likely informed by some visible missteps. For example, Washington's legislature created a Pesticide Incident Reporting and Tracking (PIRT) Panel to improve pesticide use monitoring to better protect farmworkers. In 2008, Governor Chris Gregoire appointed a scientist to the PIRT Panel who had previously worked at Dow Chemical for 10 years and had continuing affiliations with the company, in spite of the panel's unanimous recommendation of another candidate. The appointment was so vehemently opposed by advocates that the scientist resigned shortly thereafter.¹¹⁴

The second potential barrier is that, through experience, farmworkers have come to know that departments of agriculture do not always prioritize their best interests and have grown skeptical of speaking with agency inspectors.¹¹⁵ This hinders inspectors' ability to adequately assess the working conditions of a facility when workers are reluctant to come forward with pertinent information about violations. This hesitance to speak to inspectors is compounded by workers' fear of deportation. For example, seeing government vehicles show up at the farm may cause some workers to panic because it can be difficult to distinguish agricultural inspectors from *la Migra*—ICE agents—when the officials arrive.¹¹⁶

2. Different agencies sharing some degree of regulatory jurisdiction can create confusion

In addition to the issues with the agencies designated as leads, the number of agencies involved in pesticide regulation creates challenges with enforcement. Between the federal EPA, state departments of agriculture, labor, health, and environmental protection, it can be difficult for farmworkers, advocates, and even the agencies themselves to know who is responsible for what. Another effect of sharing jurisdiction is that agencies, in acting deferentially to each other, may fail to communicate even when they share responsibility over the same matters.¹¹⁷

Washington sought to address these issues by creating interagency committees. In 1989, the legislature created the PIRT Panel with the intent “that the various state agencies responsible for pesticide regulation coordinate their activities in a timely manner to ensure adequate monitoring of pesticide use and protection of workers and the public from the effects of pesticide misuse.”¹¹⁸ However, the panel was disbanded in 2017.¹¹⁹ In 2019, the legislature created the Pesticide Application Safety Committee (PASCO), which includes membership from all of Washington’s pesticide regulating agencies.¹²⁰ Since its inception, PASCO has only met once.¹²¹ While created with the important goal of coordinating agency efforts to address pesticide safety, both committees have been largely ineffective. The creation of PASCO has raised concerns that the committee may stall reform rather than encourage it. The fear is that PASCO’s lack of clear priorities or time constraints will stand in the way of PASCO ever making meaningful policy recommendations, which will then delay the legislature as it awaits PASCO’s guidance.¹²²

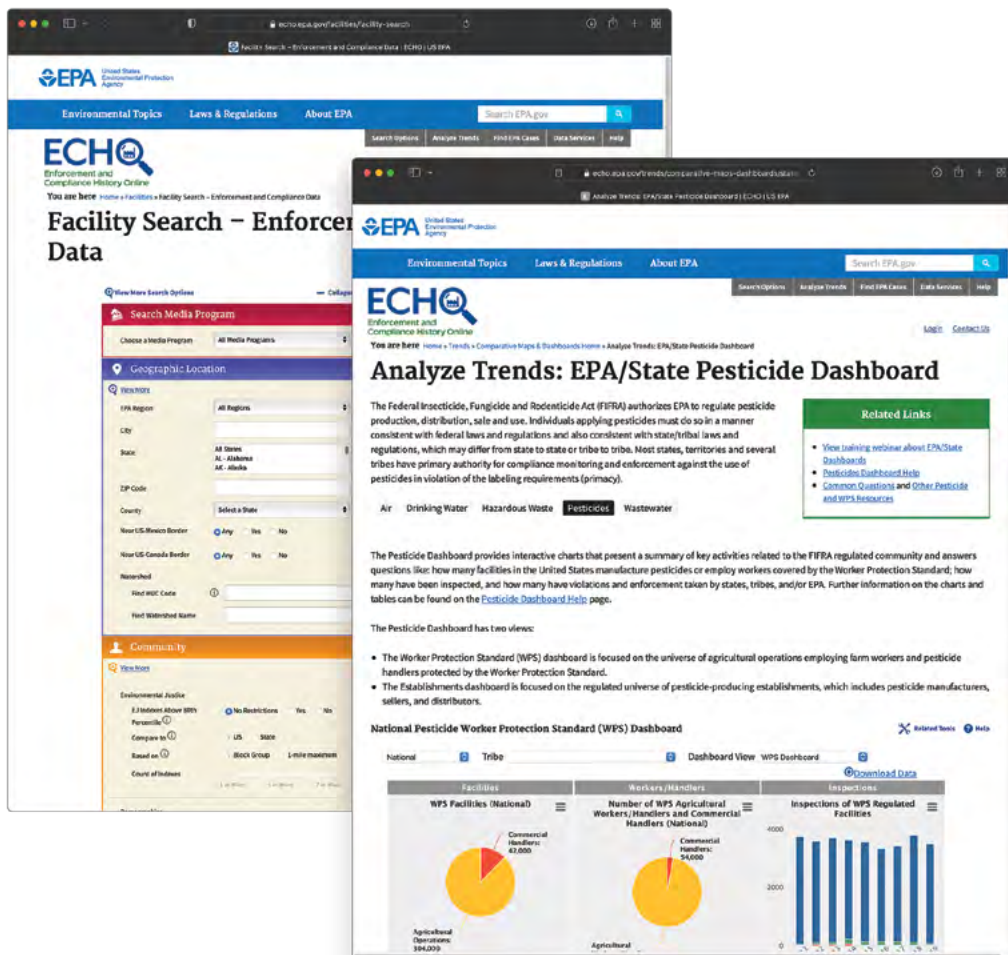
Similarly, **Florida** instituted a Pesticide Review Council in 1983 to be comprised of scientific representatives from the agencies involved in pesticide regulation, as well as scientists unaffiliated with the government. The purpose was to have a united council to advise the relevant agencies on their responsibilities regarding pesticides.¹²³ The council was also valuable to advocates because its meetings were open to the public and were a reliable source of information about the pesticide program.¹²⁴ However, the group ultimately met the same fate as Washington’s PIRT Panel. The Pesticide Review Council was defunded during Governor Scott’s tenure and the law charging the council with its purpose was repealed in 2013.¹²⁵



Workers’ skepticism of state agricultural departments is not the only barrier to effective communication between farmworkers and inspectors. **Language barriers** also pose a significant problem. Many inspectors are not bilingual,¹²⁶ which means they cannot fully uncover the reality of working conditions from farmworkers whose first or only language is not English.

3. Substantial discrepancies between data reported by EPA and the states make it difficult to understand the performance of pesticide regulation enforcement programs

The Enforcement and Compliance History Online (ECHO) database is EPA's primary collection mechanism for enforcement information on various statutes it administers, including FIFRA. Using data from ECHO, EPA created a tool specific to pesticide safety called the National Pesticide Worker Protection Standard Dashboard (WPS Dashboard). The WPS Dashboard contains nine years of WPS data on inspections, violations, and enforcement actions. It is broken down by state, Tribe, or territory. For each jurisdiction, the WPS Dashboard reports federal, Tribal, and state statistics. In other words, a given state will have three sets of data: enforcement activities conducted by (1) state agents, (2) Tribal authorities, and (3) EPA.



Many states also report inspection and enforcement data on their own agency websites, though the format and availability of data vary across agencies. California and Washington collect a substantial amount of data. Specifically, **California** has comprehensive county reports issued by its County Agricultural Commissioner’s office that include the breakdown of inspections, violations, and enforcement actions (although only readily available for 2018–2020).¹²⁷ In **Washington**, the Department of Agriculture is required by law¹²⁸ to release an annual report containing inspection, violation, and enforcement statistics. On the other hand, **Florida’s** reporting is relatively sparse. It publishes only the number of enforcement actions.¹²⁹ This makes program assessment difficult because it is impossible to determine how many inspections result in violations and how many violations result in penalties. **Illinois** has no publicly accessible registry that collects and publishes complaints or violations related to pesticide laws.¹³⁰

Of the states that do report on enforcement activities, there appear to be significant discrepancies in the data recorded by states compared to that recorded in the federal WPS Dashboard. **California’s** discrepancies are especially stark:

2018–19 California Enforcement Statistics Comparison of State and Federal Data

AGENCY REPORTING DATA	NUMBER OF WORKER SAFETY-RELATED INSPECTIONS CONDUCTED BY STATE AGENTS		DATA SOURCE
	2018	2019	
California County Agricultural Commissioners	14,313	13,799	County Agricultural Commissioners’ Enforcement Reports ¹³¹
US Environmental Protection Agency	34	33	WPS Dashboard ¹³²

Table 2. See [Appendix A](#) for notes and methodology.

These discrepancies may exist because EPA does not mandate states to report state-funded enforcement activities,¹³³ meaning the states are vastly underreporting their activities to EPA. Perhaps more puzzling are instances where EPA data records more inspections and enforcement actions than states, such as in **Washington**. It is hard to reconcile how this type of discrepancy might occur, since the WPS Dashboard statistics are based on states reporting their activities using EPA’s standard Form 5700-33H.¹³⁴ In theory, states’ records should reflect at least as many enforcement activities as the states are reporting to EPA.

2019 Washington Enforcement Statistics Comparison of State and Federal Data

AGENCY REPORTING DATA	NUMBER OF WPS INSPECTIONS CONDUCTED BY STATE AGENTS	NUMBER OF WARNINGS ISSUED	DATA SOURCE
Washington State Department of Agriculture	37	20	WSDA Pesticide Management Division Annual Report ¹³⁵
US Environmental Protection Agency	44	40	WPS Dashboard ¹³⁶

Table 3. See [Appendix A](#) for notes and methodology.

Regardless, without an accurate picture of state programs in its database, EPA cannot fully understand the success of state programs for purposes of its mandatory oversight under FIFRA. Further, these discrepancies are not unique to the federal–state relationship. Practitioners have observed that agencies within a state—such as the departments of agriculture and health—also have differences in their data.¹³⁷



The Challenges of Navigating Pesticide Regulatory Enforcement Databases

The ability to find and understand agencies' enforcement statistics is essential to those interested in or affected by the use of pesticides. However, there are problems with available data that make accessing this information challenging.

1. **EPA's ECHO database is difficult to use.** The ECHO database is meant to be a comprehensive source of federal enforcement and compliance information and to increase EPA transparency. However, navigating the database is challenging. For example, when adding filters to narrow the search to FIFRA compliance activities in California by state agencies, the database returns no results. Clearly, this cannot be the case. These types of difficulties may seem trivial, but they can pose a serious barrier to understanding the performance of our regulatory agencies. Plus, when searches yield results that seem evidently incorrect, users might be more suspicious of the reliability of other data available in ECHO.
2. **There are many sources of enforcement data and all states report statistics differently.** One useful way to draw conclusions about the pesticide regulatory system is by comparing enforcement data between different states and the federal government. Unfortunately, it is nearly impossible to do this because EPA and states each report their enforcement activities in slightly different ways. For example, EPA reports the number of inspections conducted and the total number of violations each year.¹³⁸ California reports the number of inspections conducted and the number of inspections that result in no violations.¹³⁹ Because a single inspection can result in multiple violations, the categories reported by EPA and California cannot be directly compared.

B. Barriers to Enforcement Oversight at the Federal Level

Although EPA has removed itself from a direct role in pesticide law enforcement, it still plays an important role in the overall regulatory scheme due to its responsibility to ensure adequate enforcement and compliance in states. Consequently, ineffective oversight by EPA results in significant negative impacts on the health and safety of farmworkers.

1. EPA rarely exercises its authority to conduct inspections

Despite delegating primary enforcement authority to states, regional EPA offices are said to remain “substantially involved,”¹⁴⁰ which includes the option for federal agents to inspect facilities regulated by the WPS. However, given that EPA regulates approximately 346,000 commercial handler and agricultural operations facilities,¹⁴¹ the occurrence of EPA inspections is negligible based on available data.

Total Enforcement Activities by Federal Agents in the States and Territories¹⁴²

	2015	2016	2017	2018	2019
Inspections	24	11	27	10	12
Violations	0	0	0	0	0

Table 4. See [Appendix A](#) for notes and methodology.

It appears that EPA only gets involved with inspections in exceptional cases. In 2015, the Virgin Islands had a case in which Terminix, a pest control company, misapplied pesticides containing methyl bromide in residential locations and caused “horrendous and life-altering injuries” to those exposed.¹⁴³ Because of the severity of the situation, the Virgin Islands government asked EPA to assist in handling the situation, at which point EPA stepped in.¹⁴⁴

2. EPA has failed to issue standard expectations for state enforcement programs

Although FIFRA is a federal statute, how it is enforced can vary drastically since EPA has failed to standardize its expectations and develop meaningful requirements for state pesticide programs. This has two key effects. First, it prevents EPA from getting an accurate sense of state activities, which is integral for EPA’s oversight responsibilities. Second, states have too much latitude to decide how and how often to inspect fields and facilities and respond to violations.

Regarding the assessment of state activities, EPA does not require “whole of program” reporting.¹⁴⁵ While the states’ cooperative agreements do contain some reporting requirements—namely that states must report enforcement activities carried out with federal grant funds¹⁴⁶—they are far from comprehensive. Consequently, a few types of enforcement activities may be missing from federal data in the absence of reporting requirements. The first are WPS inspections and enforcement actions undertaken with state funds. Though EPA encourages states to report inspection and enforcement activities completed with state funds as well, those disclosures are not mandatory.¹⁴⁷ As shown in [Part II.B.](#), state pesticide programs rely significantly on state funds. This means that a substantial number of inspections and violations may be absent from EPA data.

Another type of activity reporting missing from federal data involves pesticide misuse that does not violate the WPS but is unlawful according to FIFRA or other EPA regulations.¹⁴⁸ An example would be an applicator using the wrong pesticide at a site. Although these types of violations still must be reported to EPA if identified by a federally funded inspection, the reports will only appear in ECHO data if they involve the WPS. The failure to include these violations creates a gap in federal oversight since EPA is responsible for overseeing all state pesticide regulation enforcement, not simply the WPS.

Finally, the WPS Dashboard does not distinguish between neutral scheme (routine) and for-cause inspections.¹⁴⁹ Tracking those details would provide EPA with valuable insight. If a given state were conducting significantly more for-cause inspections than routine inspections, an EPA regional office might be inclined to examine why. It could be cause for concern that states are only responding to complaints of violations, rather than engaging in routine monitoring of pesticide use.

The second key effect of not standardizing federal expectations is that states have too much latitude to decide how and how often to inspect fields and facilities¹⁵⁰ and respond to violations, leaving farmworkers in some states more vulnerable than those in others. This stands in stark contrast to other federal environmental laws administered by EPA where, when a state fails to meet federal standards, EPA steps in to ensure consistency. Here, however, EPA has issued guidance on how to conduct inspections, but following it is not mandatory.¹⁵¹ The agency provides a standard inspection report form—Form 5700-33H—and requires that states use it, but only for those inspections where the state makes use of EPA funding.¹⁵² States can use it for all inspections, but do not have to. Form 5700-33H is also how states report statistics to the WPS Dashboard,¹⁵³ making its use even more critical.

In addition to these two effects of not standardizing expectations, which relate primarily to the mechanics of implementing and overseeing pesticide programs, EPA's use of a "pick-list" for program areas allows states to avoid addressing entire areas of enforcement. The fact that spray drift and emerging public health pesticide issues are optional program areas¹⁵⁴ is of particular concern.

3. EPA lacks meaningful recourse to discipline states for poor enforcement

The tools at EPA's disposal do not give the agency sufficient ability to ensure states are fulfilling their enforcement responsibilities. If EPA finds that a state is not responding as they should to an incident of pesticide misuse, it can initiate a federal action.¹⁵⁵ Beyond that, EPA has authority to rescind state primacy if it determines the state's program is inadequate¹⁵⁶ but it has never done so. If a state lost primacy, EPA would be required to step in as the primary enforcement authority and likely lacks the resources and ability to do so. To mitigate these issues, EPA could condition its federal grants on state agencies improving enforcement. However, this would likely be an ineffective strategy because state lead agencies are often susceptible to some influence of growers and applicators.¹⁵⁷ A state might sooner conduct fewer inspections with less federal funding than allow EPA to mandate certain enforcement activities.

The limited control over states provided by FIFRA is very different from EPA's role related to other federal statutes it administers. Under FIFRA, if the agency determines that a state is not adequately carrying out its responsibility, it can notify the state that it needs to correct deficiencies. If the state fails to do so within 90 days, EPA may revoke primacy, which is its only statutory recourse.¹⁵⁸

The Clean Air Act (CAA) is another federal statute that is administered by EPA and allows for states to have primacy. Under the CAA, EPA has more tools to ensure states are upholding their responsibilities to enforce the law. The CAA provides that if states fail to submit adequate attainment plans or to implement plans already approved, EPA may apply sanctions.¹⁵⁹ One option is a highway sanction, where EPA is authorized to prohibit highway projects or grants already approved by the Secretary of Transportation.¹⁶⁰ The ability to impose sanctions is a key component of EPA's ability to hold states accountable for enforcing the CAA, as they have agreed to do.

C. Barriers to State Level Pesticide Regulation Enforcement

Once states have entered into cooperative agreements with EPA, their designated state lead agencies have primary responsibility to enforce FIFRA and the WPS, in addition to their own state laws and regulations. It is critical for farmworker health and safety that these states uphold their responsibility. Unfortunately, there are a few barriers preventing states from doing so effectively.

1. There are insufficient mandatory reporting requirements

In addition to the problems created by EPA's failure to develop and mandate uniform reporting requirements, individual states also lack adequate reporting requirements. In **Illinois**, there is no requirement to report known pesticide exposures to the Department of Agriculture, the agency responsible for conducting investigations and taking enforcement actions.¹⁶¹ This results in significant barriers for farmworkers to connect to resources and impacts the agency's ability to investigate when necessary.



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STORIES FROM THE FIELD: LACK OF FORMAL REPORTING PROCEDURES

In August 2019, a field of farmworkers in central Illinois was sprayed with pesticides when the plane of a neighboring pesticide applicator flew directly overhead. Less than a month earlier, another exposure event had occurred by a different neighbor, with many of the same workers present. After the second event, several workers sought treatment for symptoms of chemical exposure at two nearby emergency departments.

Based on the exhibited symptoms and accounts of direct overhead spray, the workers' arrival at the emergency room should have immediately triggered a call to Illinois' Department of Agriculture to alert them of the potential exposure event. However, because Illinois does not mandate that medical providers report suspected cases of exposure, no such procedure is in place at hospitals in the state.

Instead, the Department of Agriculture was only informed about this case because of the initiative of a series of individuals. First, a medical provider at the hospital reached out to the Public Health Administrator (PHA) at the Champaign-Urbana Public Health District because the provider happened to know of the PHA's involvement with the farmworker community. From there, the PHA reached out to Illinois' Department of Public Health, which redirected her to the Illinois Department of Agriculture. Only after the PHA connected with the Department of Agriculture did any formal response commence.

Simultaneously, the PHA pursued resources for the workers through her personal networks. The PHA contacted the Illinois Migrant Council, an organization she had a relationship with through her work connecting farmworkers to services. The Illinois Migrant Council then made a call to one of their community partners, Legal Aid Chicago. Legal Aid Chicago has since filed legal claims against the companies involved in the applications and the farmworkers' employer.

This story exemplifies the complexity of the informal networks used by farmworkers and advocates in Illinois in the absence of mandatory reporting laws. It is crucial for states to have formal medical reporting procedures in place because these networks are not always sufficient. When medical providers are not subject to mandatory reporting, cases of exposure can fall through the cracks. This is especially true given that many farmworkers are migrant workers and may not have strong local connections or the ability to find resources without support. The ability of farmworkers to have recourse for pesticide exposure should not hinge on chance and individual good will. Rather, there should be clear mandatory reporting procedures in place.¹⁶²



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California growers and applicators must report what pesticide they use, when, where, and how (e.g., fumigation, ground spray, aerial). However, **Washington, Florida**, and many other states have no mandatory reporting of pesticide use. Although Washington growers must keep a record of use, they do not have to submit this information to the state unless specifically requested.¹⁶³ Without reports on pesticide use, it is impossible to study health trends, the proximity of application to housing and schools, and other research which could be used to improve pesticide protections. Additionally, no entity is tracking which specific pesticides are used, in what location, and in what quantity. From a public health perspective, this is important information to have since certain chemicals are much more dangerous than others.

Similarly, **Illinois** does not require pesticide use reporting. Another implication of this gap in protections is that individuals who have been exposed to pesticides by an applicator other than their own employer have no immediate access to information regarding the chemicals to which they may have been exposed.¹⁶⁴ The WPS provides employees with a right to access pesticide use information from their employers, but that right does not extend to third parties.¹⁶⁵ While a neighbor's application information can be obtained during an agency investigation, the Illinois Department of Agriculture will not release findings during the pendency of the investigation. Investigations can last for months or a year, which makes this avenue of limited use to workers who want and need information about their chemical exposure to inform their immediate medical treatment plans.¹⁶⁶ In states with mandatory use reporting laws, such as **California**, workers can more quickly access information from neighboring applicators as a matter of public record.¹⁶⁷

Further, the Center for Disease Control and Prevention's National Institute for Occupational Safety and Health (NIOSH) established a program, the Sentinel Event Notification System for Occupational Risks (SENSOR), through which states can report data on acute pesticide-related illness. The purpose of the SENSOR program is to "build and maintain occupational illness and injury surveillance capacity within state health departments."¹⁶⁸ Yet, as of 2020, only 11 states participate in the program.¹⁶⁹ Only three of the participating states received federal funds¹⁷⁰ despite the program's design to provide funding and technical support to states.

2. The rate of inspection is low and many inspections are substandard

There are 346,000 facilities subject to the WPS, 304,000 of which are agricultural operations.¹⁷¹ EPA data suggests that, between 2015 and 2019, approximately 1.01 percent¹⁷² of those facilities were inspected annually, on average. State data tells a more hopeful story. On average between 2018 and 2020, **California** agencies inspected approximately 19 percent¹⁷³ of the state's 69,900 farms.¹⁷⁴ Still, an inspection rate of 19 percent is too low given that the rate of violations tends to be high. This raises the concern that, without more inspections, many violations are going undetected. The unfortunate reality is that there are so many facilities subject to the WPS that it is simply not feasible to inspect them all.¹⁷⁵ For states to fairly be expected to conduct more inspections, they would likely need more funding and staff.

The effects of infrequent inspections are especially salient when considering small growers. Advocates in the field have noticed that inspectors tend to go to bigger farms rather than small ones. Inspections of big farms feel more efficient, whereas it is hard for inspectors to put a dent in visiting the much higher number of small farms.¹⁷⁶ However, small farms are not inherently safer than large, industrial farms. Small farms can also present significant risks.¹⁷⁷ The lack of WPS inspection of small farms is particularly problematic because the OSH Act is not enforceable against "any person who is engaged in a farming operation which employs 10 or fewer employees."¹⁷⁸

In other words, OSHA cannot conduct inspections on small farms and states cannot use federal funds to do so. According to the 2017 US Census of Agriculture, 93 percent of farms collectively employing 1.2 million workers meet these criteria.¹⁷⁹ This means that, between the OSHA exemption and insufficient WPS inspections for small operations, many farms are escaping the scrutiny of any regulatory agency.

Another important concern related to inspections is that they may not be adequately thorough. Generally, inspectors can choose to conduct surprise inspections or provide growers with notice. There is a tradeoff in making this choice. Surprise inspections create logistical problems—farm managers may not be on site or the farm’s paperwork might not be organized. These situations make it difficult for an inspector to perform a full and complete inspection. On the other hand, when growers receive notice of an inspection, they can scramble to get their facility in compliance, but revert to noncompliance when the agent leaves.¹⁸⁰ There also appears to be a practice among growers of warning each other when routine inspection “sweeps” are occurring, so that they can similarly get themselves into compliance.¹⁸¹

In other words, OSHA cannot conduct inspections on small farms. According to the 2017 US Census of Agriculture, 93 percent of farms collectively employing 1.2 million workers meet these criteria.¹⁸² This means that, between the OSHA exemption and insufficient WPS inspections for small operations, many farms are escaping the scrutiny of any regulatory agency.



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STORIES FROM THE FIELD: RETALIATION AND THE IMPACT OF WORKERS' FEAR OF REPORTING ON INSPECTIONS

Despite laws to protect farmworkers from their employers when making complaints, retaliation against those who report on poor working conditions remains a reality. About ten years ago, Ophelia worked at an ornamental plant nursery in Florida. After pesticides were sprayed near her and she was exposed to the drift, Ophelia began experiencing lingering symptoms of pesticide exposure and sought medical care. Ophelia worked with advocates at the Farmworker Association of Florida to prepare and file a complaint with Florida's Department of Agriculture and Consumer Services.

As part of the department's investigation, an inspector visited the nursery. Afterwards, supervisors began individually questioning all workers to determine who made the complaint. Somehow, nursery supervisors identified Ophelia as the complainant and immediately isolated her from the other workers. Ophelia was moved to work alone in a separate area of the nursery and noted being treated differently from other workers. Despite Ophelia's continued dedication to her work, the nursery fired her six months later. The nursery's delay was long enough to avoid the outward appearance of retaliatory behavior and escape legal consequences.¹⁸³

Given the very real threat of retaliation, workers are hesitant to come forward with complaints. A few years ago, five farmworkers in Florida came to the Farmworker Association of Florida to seek assistance in filing a complaint of pesticide violations. Jeannie Economos, a coordinator at the organization, sat down with the five of them for an hour to gather details for a complaint. Unlike some cases of exposure where the evidence is murkier, this was an instance of clear violation and the workers had strong cause to make a complaint.

After Jeannie had collected all the information necessary for the complaint, the workers changed their minds about filing. Once the workers understood that the next step would be for the Florida Department of Agriculture and Consumer Services to send a field inspector to the farm, the workers were no longer willing to move forward. Farmworkers know that once the agency initiates a for-cause inspection, the employer will figure out who the complainants are and retaliate against them—much like with Ophelia years before.¹⁸⁴



David Bacon

Workers’ fears of reporting WPS violations can have significant impacts on the thoroughness of pesticide inspections. When coupled with the barriers to routine inspections—including growers warning each other when inspections are happening and a paucity of bilingual inspectors—this fear of filing a complaint to initiate a for-cause inspection further diminishes agencies’ ability to learn of the conditions in the field.

Finally, it can be difficult to provide evidence, which creates significant barriers to quality inspections. Violations documented through paperwork can be easier to spot whereas identifying field violations during inspections is challenging. For example, in an incident where a worker was sprayed with pesticides, the grower might respond that the spray was just water. Ideally, the inspector will collect plant samples, clothing for chemical testing (unless too much time has passed), and records of application from the grower. Still, these types of situations often boil down to the supervisor’s word against the worker’s.¹⁸⁵ This is cause for concern given that state lead agencies—who are tasked with adjudicating such disputes—may be more focused on lucrative agricultural production and heavily influenced by industry, as discussed in [Part III.A](#).

3. The rate of violations resulting from inspections is high and the rate of enforcement actions taken in response to violations is low

Even considering the difficulty of identifying violations—due to poor inspection quality, lack of evidence, or growers’ ability to get into compliance just for the inspection—violation rates remain high across the country. Although EPA’s WPS Dashboard may not capture all state inspections, it provides a telling picture of what pesticide regulation enforcement looks like after an inspection does occur.

Violations Resulting from State-Performed WPS Inspections Nationally¹⁸⁶

YEAR	NUMBER OF INSPECTIONS	NUMBER OF VIOLATIONS	VIOLATION RATE
2015	3,410	1,180	35%
2016	3,189	1,142	36%
2017	3,271	2,269	69%
2018	3,651	2,047	56%
2019	3,407	1,903	56%
Average	3,386	1,708	50%

Table 5. See [Appendix A](#) for notes and methodology.

Over the most recent five years of available WPS Dashboard data, the national average rate of violations was 50 percent. It is concerning that half of inspections result in a finding of noncompliance, particularly considering how many growers can prepare for inspections and how many facilities are not being inspected at all. A closer look at individual states reveals a situation that is even more grim. With a violation rate well over 100 percent, **Washington** inspectors are routinely finding multiple violations in a single inspection.

Violations Resulting from State-Performed WPS Inspections in Washington¹⁸⁷

YEAR	NUMBER OF INSPECTIONS	NUMBER OF VIOLATIONS	VIOLATION RATE
2015	46	74	161%
2016	37	84	227%
2017	52	268	515%
2018	34	210	618%
2019	44	251	570%
Average	43	177	418%

Table 6. See [Appendix A](#) for notes and methodology.

Additionally, the rate of enforcement actions taken in response to these violations is low. Because EPA does not have a standard policy recommending enforcement actions for violations issued by states, the states have discretion in choosing when and how to initiate enforcement actions.¹⁸⁸

Enforcement Actions Resulting from State-Identified Violations¹⁸⁹

YEAR	NUMBER OF VIOLATIONS	NUMBER OF ENFORCEMENT ACTIONS	RATE OF ENFORCEMENT ACTION	RATE OF NON-WARNING ENFORCEMENT ACTION
2015	1,180	635	54%	23%
2016	1,142	626	55%	30%
2017	2,269	568	25%	13%
2018	2,047	649	32%	18%
2019	1,903	731	38%	16%
Average	1,708	641	41%	20%

Table 7. See [Appendix A](#) for notes and methodology.

Over five years, the national average rate of enforcement actions was below 50 percent—and half of those actions were warnings only.¹⁹⁰ The issuance of a warning has an impact on an agency’s ability to employ penalties. In **Washington**, the penalty matrix only applies if a grower receives a notice of intent.¹⁹¹ The grower’s obligations after receiving a warning are practically meaningless. For example, with a PPE warning, the grower may only be required to send the agency a picture of PPE to demonstrate that they have since made it available to their farmworkers.¹⁹² The national average rate of enforcement actions that are not warnings is just 20 percent. These cases involve proceedings before an administrative law judge. Attorneys in the field have noted that this process heavily favors growers and applicators in terms of due process, evidence, and the industry’s ability to appeal unfavorable rulings to delay or diminish modest fines or license actions given the significant resources at its disposal.¹⁹³

4. Penalties are disproportionately low

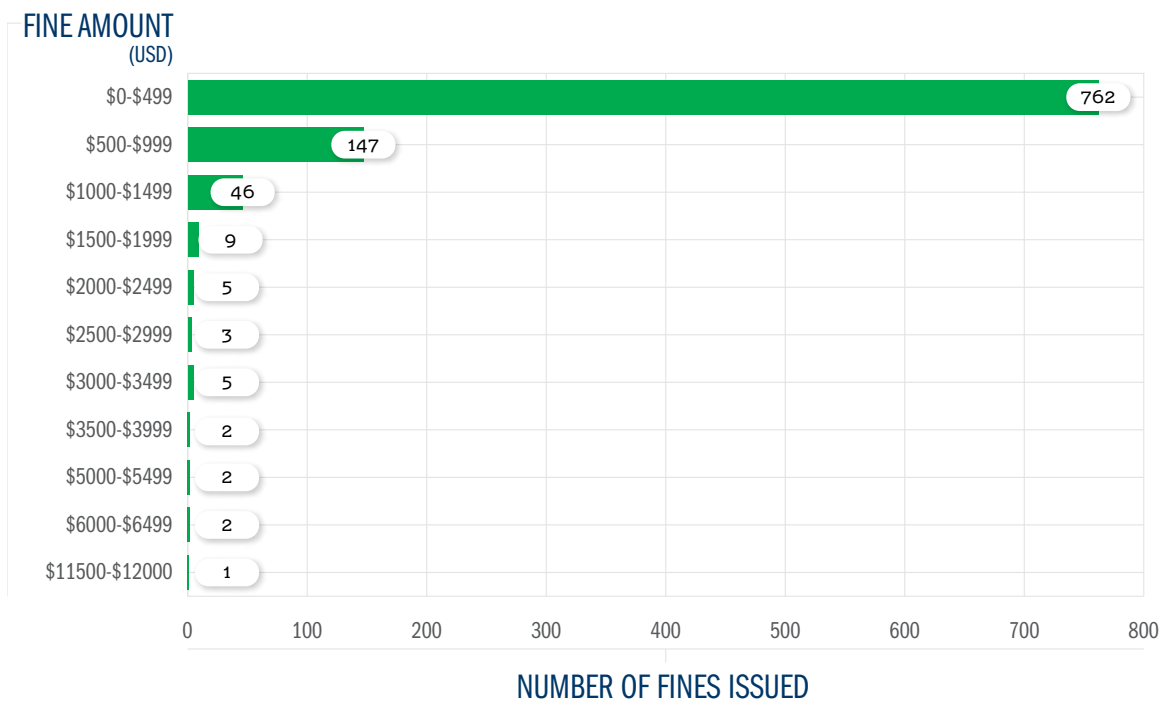
A common concern with the pesticide regulatory system is that even when penalties are assessed for violations of the WPS or equivalent state standards, they are too low.¹⁹⁴ In **California**, 1,404 administrative civil penalties were levied for all pesticide-related violations—agricultural and structural—between December 2019 and December 2021. Of the 984 penalties levied specifically for agricultural violations, the three most common fine amounts were \$500, \$250, and \$50. Although agricultural fines ranged from \$50 to \$12,000, 86 percent were at or below \$500.¹⁹⁵

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The three most common **California** code violations which resulted in a \$250 agricultural fine¹⁹⁶ cover (1) employers’ responsibility to facilitate emergency medical care for employees,¹⁹⁷ (2) employers’ duty to provide personal protective equipment,¹⁹⁸ and (3) prohibition of pesticide use in a manner that conflicts with registered labels.¹⁹⁹ Failure to comply with these three protections could put farmworkers’ health and safety at risk of pesticide exposure, despite the very modest consequence to growers.

Administrative Civil Penalties Levied by California County Agricultural Commissioners for Agricultural Pesticide-Related Violations

December 2019–December 2021



Source: California County Agricultural Administrative Civil Penalties²⁰⁰

There are two reasons why penalties may be low. First, penalties focus on the action violating the WPS, rather than the implications of that action. The magnitude of fines is commensurate with, for example, the fact that a grower did not post the correct field reentry signage after applying pesticides. It does not account for the fact that the signage failure can have serious implications for workers' health.²⁰¹ Since the worker protection standard is seeking to protect people, fines should be commensurate with threats or actual harm to human health and safety. Consider a comparison between the penalty provisions under the federal OSH Act, implemented by OSHA, and FIFRA. Under FIFRA, civil penalties for commercial pesticide applicators are limited to \$5,000 for any violation of the act. Civil penalties for private applicators (which many WPS-covered applicators are²⁰²) are limited to \$1,000 per violation, or \$500 for a first-time offense.²⁰³ Under the OSH Act, violations of posting requirements alone can carry a civil penalty of \$7,000.²⁰⁴

Second, point systems for penalties fail to account for the scope of the incident. Under **Illinois'** point system,²⁰⁵ points are assigned based on an occurrence of exposure, rather than the number of people exposed during that occurrence.²⁰⁶ Fines are then issued on the point value of the incident. If penalties are not sufficiently high, growers will not be deterred from noncompliance—rather, they will view fines as the cost of doing business, particularly when they are under \$1,000.²⁰⁷



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STORIES FROM THE FIELD: HUMAN HEALTH IS THE GROWER'S COST OF DOING BUSINESS

The threat of penalty is not sufficient to deter even clear, egregious cases of pesticide exposure. In 2004, a child, Carlos, was born with a condition called Tetra-Amelia—he was born without arms or legs, with spinal anomalies and a lung deformity.²⁰⁸ Carlos' mother, Francisca Herrera, worked for Ag-Mart Produce in tomato fields during her pregnancy.²⁰⁹ While working, Francisca was sprayed with pesticides multiple times a week. Sometimes, “the spray would wet her clothes, her body, her face, and her hair. When she picked tomatoes, the spray would stick to her hands. She did not wear gloves because she did not make enough money to buy them.”²¹⁰ During her pregnancy, Francisca showed symptoms of pesticide exposure, yet was “threatened by one of Ag-Mart's employees that if she did not work, even if she felt sick, then she could not live in the house that Ag-Mart provided her.”²¹¹

Carlos was not the only child of an Ag-Mart employee born with birth defects. At least two other mothers working on Ag-Mart's Florida and North Carolina farms had children with congenital anomalies within eight weeks of Carlos' birth.²¹²

Ag-Mart had, at various times before 2004, been notified by state authorities and company employees that it was “misusing pesticides known to cause birth defects.”²¹³ Ag-Mart was specifically cited in Florida and North Carolina for WPS violations during Francisca's pregnancy.²¹⁴ Regarding Francisca's case in particular, Kenneth Rudo, an environmental toxicologist from North Carolina's Department of Health and Human Services, was charged with investigating the possible exposure. He found that “overexposure to individual and multiple teratogens and mutagens occurred for many hours during Francisca's pregnancy and possibly before pregnancy at levels EPA considers unsafe. Overexposure to at least five teratogenic pesticides at levels individually considered by EPA to be unsafe occurred. There was also definitive exposure to potent developmental toxins.”²¹⁵ Rudo concluded that “Carlos' case was the strongest case he had seen in his experience from an exposure, duration and lack of protection standpoint and that resulted in an adverse event.”²¹⁶

In response to the mothers' experiences, Florida's Department of Agriculture and Consumer Services issued two complaints against Ag-Mart in 2005, which together alleged 88 separate violations of pesticide use laws.²¹⁷ However, by the end of the administrative proceedings, 75 of those violations were dismissed. Ultimately, Ag-Mart's grave misuse of pesticides, despite strong evidence linking it to multiple cases of birth defects, was punished with fines totaling a mere \$11,400.²¹⁸



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5. Farmworkers who are victims of WPS violations have limited individual recourse for enforcement and have no opportunities to receive support under FIFRA

It is important to recognize where the many barriers to robust state enforcement of the WPS and other pesticide regulations leaves farmworkers. FIFRA and state pesticide acts do not provide a private right of action.²¹⁹ Consequently, the government has sole authority to enforce violations. Private citizens cannot sue to enforce the laws themselves. If citizens did have a private right of action, it might alleviate some effects of the structural failings of enforcement. Individuals who have been harmed would not have to wait for the government to choose to enforce the law.

There are, however, some avenues that farmworkers can pursue outside of FIFRA. One is a lawsuit under the Migrant and Seasonal Agricultural Workers Protection Act (AWPA).²²⁰ AWPA creates a private right of action²²¹ and makes it unlawful for an agricultural employer to “violate the terms of any working arrangement made by that contractor, employer, or association with any migrant agricultural worker.”²²² If the farmworker’s working arrangement included an expectation that the employer would adhere to federal and state worker protection standards, including the WPS, that farmworker can sue for a violation of the terms of the arrangement.²²³ This private right of action is available to migrant and seasonal agricultural workers regardless of immigration status.²²⁴ Importantly, however, this option has limits, particularly because of AWPA’s small business and other exemptions.²²⁵

Another potential option for aggrieved farmworkers is to sue the applicator. For example, farmworkers have brought claims including negligence (in breach of a duty to take reasonable steps to avoid endangering nearby persons during pesticide application), strict liability for abnormally dangerous activity, and even assault.²²⁶ Difficulty arises, though, when the applicator is the farmworker’s employer. With the enactment of state workers’ compensation laws, and employees’ eligibility for government benefits for workplace injuries, employees lost their right to sue their employer.

Although the details of workers’ compensation vary by state, the limitation on suing employers may be overcome in some states if the harm was an intentional tort on the employer’s part. Still, the intent requirement creates a higher burden of proof in states where farmworkers are covered by workers’ compensation. As a result, farmworkers may be more successful with lawsuits in cases of pesticide drift, where exposure was caused by the negligence of a third party rather than the worker’s employer.²²⁷

Further, the needs of workers who have been harmed by pesticide exposure are not contemplated by the regulatory system. When a grower is issued a fine for a violation, that grower will pay the penalty to the government and the matter will be resolved. The victims receive nothing under FIFRA. Instead, they must depend on the possibility that they will prevail in a private action to receive any type of support. This gap has practical implications for enforcement of FIFRA, even beyond considerations of workers’ health and general principles of fairness. Farmworkers’ testimony is a crucial component in administrative proceedings. Administrative law judges are compelled by the human perspective. Since the injuries from pesticide exposure tend to develop over time, connecting the harm to the incident of exposure can be difficult on paper. It is far more convincing to have a firsthand account of the experience and resulting symptoms.²²⁸ Understandably, workers are reluctant to testify when they know that no support for them will come out of the administrative hearing process.²²⁹ As this discourages individuals from testifying, there may be fewer growers held accountable for pesticide law violations. This situation might be improved if pesticide laws provided for medical care or damages for victims.



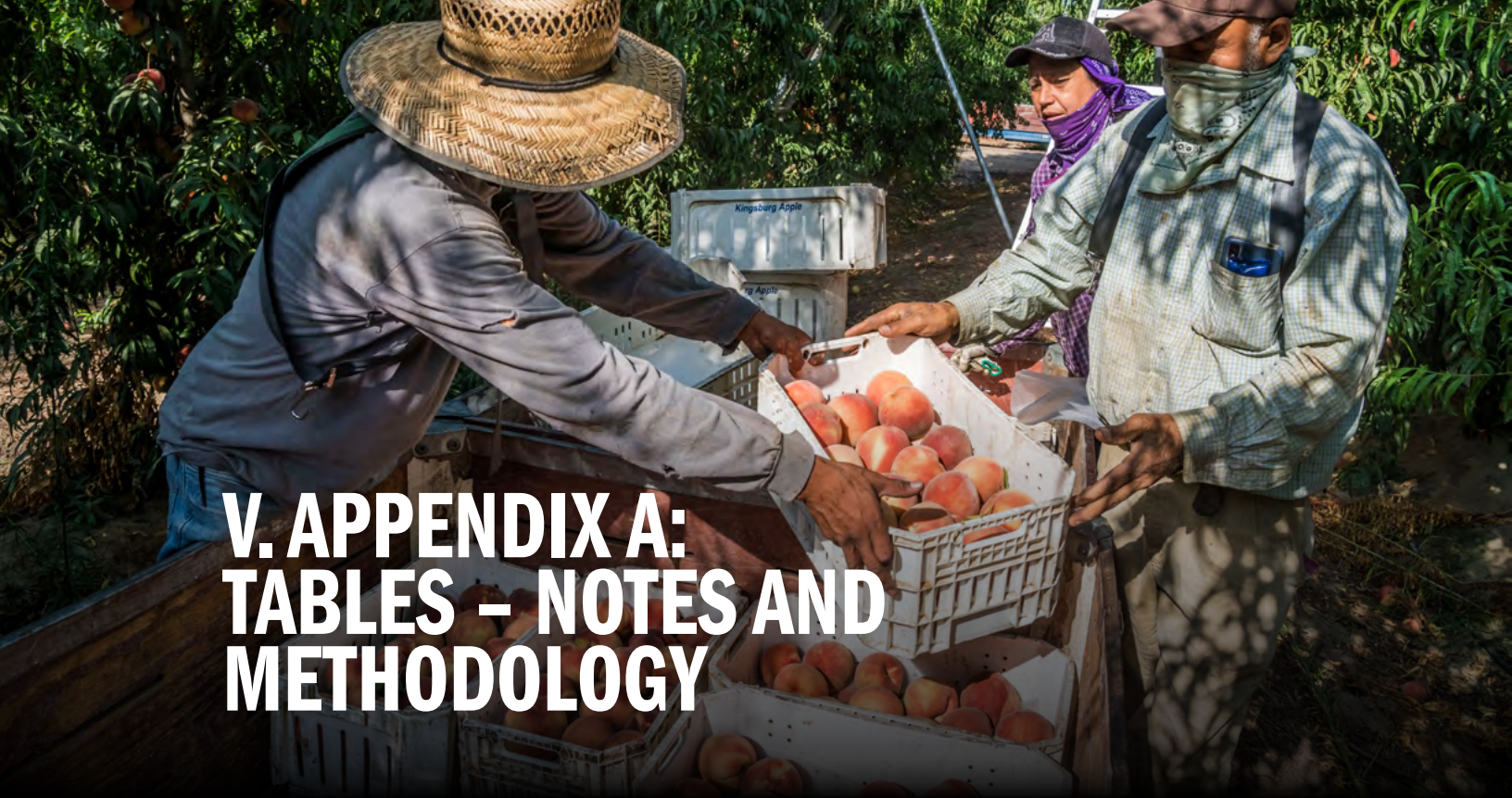
IV. RECOMMENDATIONS

David Bacon

WITHOUT QUESTION, FARMWORKERS ARE ESSENTIAL TO OUR FOOD SYSTEM. To ensure that they receive sufficient health and safety protection, significant social, cultural, and political conditions must be addressed. At a minimum, the regulatory system that has the potential to protect them should not be working against them. To start, law and policymakers must address the structural flaws in pesticide law enforcement. The following recommendations reflect steps that can be taken to further this objective.

1. **Congress should restore partial jurisdiction over the regulation of pesticide-related occupational hazards to OSHA to ensure better coordination between OSHA and EPA.** Simultaneously, Congress should eliminate the small farms exemption from the OSH Act. Congress should also increase OSHA and EPA appropriations to improve the agencies' capacity to inspect more of the worksites they regulate, particularly given the Biden Administration's clear focus on racial equity and justice.
2. **Congress should consider amending FIFRA to model other environmental statutes administered by EPA.** This could include consideration of a private right of action, a greater ability for EPA to address states' nonattainment of minimum standards, and other measures to strengthen states' incentives to remain in compliance.
3. **Congress should grant EPA greater authority to respond to states failing to meet enforcement goals, including the authority to impose sanctions related to the agriculture industry.** Congress can look to other environmental statutes, such as the CAA, where it has given EPA the authority to impose sanctions for noncompliance in the interest of public health.
4. **Congress should appropriate more funds to NIOSH's SENSOR program to support states in consistently reporting data on acute pesticide-related illness and to expand the number of states in the program.**
5. **EPA should incorporate more "pick-list" program areas into its required program area list, especially those areas that affect human health and safety, such as spray drift and emerging public health pesticide issues.**

6. **EPA should undergo a rulemaking to establish a clear metric by which it measures state compliance with FIFRA and EPA regulations.** EPA should engage stakeholders to understand what factors are most important in assessing compliance (e.g., number of exposures, quality of response to exposures, etc.) and what amount of data collection is required to make this assessment. This will enable EPA to set clearer expectations for how states will allocate funds for their programs and to respond to states' nonattainment.
7. **EPA should issue mandatory and universal standards for inspections and responses to violations, at least for federally funded enforcement activities.**
8. **EPA should mandate "whole of program" annual reporting as a condition of receiving federal grants.** This should include statistics on all state-funded activities, whether related to the WPS or other pesticide provisions.
9. **EPA should require that state lead agencies for pesticide regulation enforcement be departments of labor, departments dedicated to pesticide regulation, or another department whose main priority is human health and safety.** This could alleviate the inherent tension in having departments of agriculture be responsible for both promoting the industry and protecting health.
10. **Regional EPA offices should conduct more inspections as part of their routine oversight duties. EPA should consider a public-private partnership to fulfill this obligation.** Delegating oversight inspections to a nongovernmental organization that typically works with farmworkers could be an effective way for regional EPA offices to collect thorough and reliable information from workers. Any public-private partnership should be developed through meaningful consultative processes with farmworkers to ensure their efficacy.
11. **States should streamline their administration of pesticide regulations.** At a minimum, state agencies involved in pesticide regulation should enter into a memorandum of understanding that sets out clear duties for each agency and protocols for collaboration between agencies.
12. **States should commit to reducing the influence of industry over pesticide regulation.** At a minimum, states should enact a "conflict of interest" provision in their pesticide statutes to prohibit enforcement officials from being involved in sale, manufacture, or distribution of pesticides, as California has done.²³⁰
13. **States should implement a neighbor notification system to reduce the incidence of exposure caused by pesticide drift and receive federal assistance to do so.**
14. **States should implement mandatory reporting requirements, both for pesticide use and for incidents of pesticide exposure.**
15. **State legislatures should grant state departments of health more authority to conduct inspections and investigations of suspected pesticide exposure incidents, independent of the state's designated lead agency.**
16. **States should conduct more routine inspections without providing advance notice to growers.** To accomplish this goal, state legislatures must appropriate adequate funds for pesticide regulation enforcement activities.
17. **Penalties for violations of the WPS (or state-equivalent regulations) should be increased to reflect the grave harm caused to human health and safety.** Higher penalties are crucial to create a deterrent effect.



V. APPENDIX A: TABLES – NOTES AND METHODOLOGY

David Bacon

Table 1. Current Federal Grant Awards for State Pesticide Programs

- a. Grant awards are subject to increase by way of a continuation, which is recorded in the Transaction History section of the USAspending.gov award profile. A continuation grant is “an extension or renewal of existing program funding for one or more additional budget period(s)” and is awarded “based on availability of funds, project performance, and compliance with progress and financial reporting requirements.”²³¹
- b. Amounts contained in Table 1 reflect the amount recorded on USAspending.gov on July 15, 2022.

The information contained in Tables 2–7 is sourced from EPA’s WPS Dashboard or state program reports. Notes regarding the calculations for each table are below.

Table 2. 2018–19 California Enforcement Statistics – Comparison of State and Federal Data

- a. The California County Agricultural Commissioners’ Enforcement Reports record inspection statistics for eight categories of inspections. None is exactly equivalent to the “WPS Inspections” found in the WPS Dashboard. A California Department of Pesticide Regulation employee explained that the Field Worker Safety Inspections are roughly equivalent to a tier 1 WPS inspection of field workers working in treated fields, but other categories also inspect some elements of the WPS. The statistics in Table 3 reflect the number of inspections in five categories, all of which address the WPS to some degree: (1) field worker safety inspections, (2) pesticide use monitoring inspections, (3) soil field fumigation use monitoring inspections, (4) pest control headquarters inspections, and (5) pest control business headquarters inspections. This comparison was drawn to illustrate a general trend of discrepancies in data, despite the state and EPA categories not being exactly comparable.
- b. The WPS Dashboard statistics are the inspections listed for the State of California and conducted by state agents.

Table 3. 2019 Washington Enforcement Statistics – Comparison of State and Federal Data

- a. The Washington statistics are pulled from the state Department of Agriculture’s annual report to the state legislature. This table includes the number of inspections and warnings that are specifically tagged as relating to the WPS in the report.
- b. The WPS Dashboard statistics are the inspections and warnings listed for the State of Washington and conducted by state agents.

Table 4. Total Enforcement Activities by Federal Agents in the States and Territories

- a. The WPS Dashboard statistics are the sum of inspections and violations, respectively, conducted by EPA agents in the states and territories.

Table 5. Violations Resulting from State-Performed WPS Inspections

- a. The inspections and violations were calculated by adding state-conducted inspections and violations for the states and territories recorded in the WPS Dashboard.
- b. The violation rate was calculated by dividing the number of violations by the number of inspections in each year.

Table 6. Violations Resulting from State-Performed WPS Inspections in Washington

- a. The inspections and violations were calculated by adding state-conducted inspections and violations for Washington State recorded in the WPS Dashboard.
- b. The violation rate was calculated by dividing the number of violations by the number of inspections in each year.

Table 7. Enforcement Actions Resulting from State-Identified Violations

- a. The violations and enforcement actions were calculated by adding state-conducted violations and enforcement actions for the states and territories recorded in the WPS Dashboard.
- b. The enforcement action rate was calculated by dividing the number of enforcement actions by the number of violations in each year.
- c. The non-warning enforcement action rate was calculated by adding the number of enforcement actions that were not warnings in the states and territories. That figure was then divided by the number of violations in each year. The enforcement actions other than warnings include: “admin, hearings/civil,” “sent to EPA,” “additional actions,” “stop sale, seizures, quarant.,” and “cases with fines.”

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- 2 Nathan Donley et al., *Pesticides and Environmental Injustice in the USA*, 22 BMC PUBLIC HEALTH (2022), <https://bmcpublihealth.biomedcentral.com/articles/10.1186/s12889-022-13057-4>; U.S. EPA, PESTICIDES INDUSTRY SALES AND USAGE at 13 (2017), https://www.epa.gov/sites/default/files/2017-01/documents/pesticides-industry-sales-usage-2016_0.pdf.
- 3 Am. Pub. Health Ass'n, *Improving Working Conditions for U.S. Farmworkers and Food Production Workers* (Nov. 7, 2017), <https://www.apha.org/policies-and-advocacy/public-health-policy-statements/policy-database/2018/01/18/improving-working-conditions>.
- 4 CTR. FOR AGRIC. & FOOD SYS. AT VT. L. SCH., ESSENTIALLY UNPROTECTED (2021).
- 5 See, e.g., Telephone Interview with Jeannie Economos, Coordinator, Farmworker Ass'n of Fla. (June 9, 2022); see also, e.g., Telephone Interview with William Jordan, Consultant, William Jordan Consulting (June 10, 2022).
- 6 *National Agricultural Workers Survey 2019-2020*, FARMWORKER JUSTICE (2022), <https://www.farmworkerjustice.org/wp-content/uploads/2022/06/NAWS-data-fact-sheet-FINAL.docx-3.pdf> (reporting that approximately 44% of farmworkers are undocumented immigrants); see, e.g., Carlos Cabrera-Lomeli, *Blacklisted for Speaking Up: How California Farmworkers Fighting Abuses Are Vulnerable to Retaliation*, KQED (June 30, 2022), <https://www.kqed.org/news/11918317/blacklisted-for-speaking-up-how-california-farmworkers-fighting-abuses-are-vulnerable-to-retaliation> (describing that “recruiters often make sure the worker is blacklisted across the industry [for speaking up about illegal labor practices]—making it harder for these laborers to find another job in the U.S.”).
- 7 Geoffrey M. Calvert et al., *Acute Pesticide Poisoning Among Agricultural Workers in the United States, 1998-2005*, 51 AM. J. INDUSTRIAL MED. 883 (2008).
- 8 Telephone Interview with Lauren Dana, Supervisory Att’y, Legal Aid Chi. (June 10, 2022).
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- 11 *H-2A Performance Data*, U.S. DEP’T OF LAB. (Aug. 15, 2022, 6:36 PM), <https://www.dol.gov/agencies/eta/foreign-labor/performance>.
- 12 See *No Way to Treat a Guest: Why the H-2A Agricultural Visa Program Fails U.S. and Foreign Workers*, FARMWORKER JUSTICE (2011), <https://www.farmworkerjustice.org/resource/no-way-to-treat-a-guest-why-the-h2a-agricultural-visa-program-fails-u-s-and-foreign-workers/>; CENTRO DE LOS DERECHOS DEL MIGRANTE, INC., *supra* note 10.
- 13 *Id.*
- 14 Lomeli, *supra* note 6.
- 15 Leigh Thredgold et al., *Exposure of Agriculture Workers to Pesticides* 16(23) INT’L J. ENV’T RSCH. PUB. HEALTH 4798, 4798 (2019), <https://www.mdpi.com/1660-4601/16/23/4798/htm>.
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- 19 *Id.* § 136a.
- 20 *Id.* § 136.
- 21 40 C.F.R. § 170 (1992); 7 U.S.C. § 136w (1996).
- 22 Exec. Order No. 13,985, 86 Fed. Reg. 7,009 (Jan. 20, 2021).
- 23 7 U.S.C. § 136j(a)(2)(G).
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- 25 Jordan, *supra* note 5.
- 26 7 U.S.C. § 136v(b) (1988).
- 27 *Id.* § 136v(a).
- 28 *Id.* § 136(b).
- 29 *Id.* § 136w-1.
- 30 *Id.* § 136u(a).
- 31 See, e.g., U.S. EPA, JOINT OPP/OECA FY2022-2025 FIFRA COOPERATIVE AGREEMENT GUIDANCE AND FUTURE PRIORITY DISCUSSIONS (2021), <https://www.epa.gov/sites/default/files/2021-02/documents/22-25guidance.pdf> [hereinafter COOPERATIVE AGREEMENT GUIDANCE].
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- 33 *Id.* at 10.
- 34 *Id.* at 6.

- 35 *Id.* at 6–14.
- 36 *Id.* at 4.
- 37 *National Pesticide Worker Protection Standard (WPS) Dashboard*, U.S. EPA (June 24, 2022, 4:07 PM), <https://echo.epa.gov/trends/comparative-maps-dashboards/state-pest-dashboard>.
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- 39 Economos, *supra* note 5; Telephone Interview with Andrea Schmitt & Joe Morrison, Att’y’s, Columbia Legal Servs. (June 14, 2022).
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- 41 *Assistance Listings, Performance Partnership Grants*, SAM.GOV (July 14, 2022, 8:00 AM), <https://sam.gov/fal/1e72834b-28584fb6b457ae834117b1b0/view>; COOPERATIVE AGREEMENT GUIDANCE, *supra* note 31, at 3 (explaining “grantees may negotiate a Performance Partnership Grant (PPG, CFDA 66.605) in lieu of Consolidated Pesticide Enforcement Cooperative Agreements (CFDA 66.700)”; Consolidated Appropriations Act of 2021, 134 Stat. at 1511 (noting that STAG appropriations include performance partnership grants).
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- 43 *Assistance Listings, Multipurpose Grants to States and Tribes*, SAM.GOV (July 14, 2022, 8:00 AM), <https://sam.gov/fal/4c-29c0771698404fa150e15c275ffe37/view>; U.S. EPA, FY21 MULTIPURPOSE GRANT GUIDANCE FOR STATES at 2–3 (2021), https://www.epa.gov/sites/default/files/2021-05/documents/final_fy21_mpg_guidance_for_states.pdf (listing pesticide cooperative enforcement under FIFRA as an eligible activity); Consolidated Appropriations Act of 2021, 134 Stat. at 1511 (noting that, under STAG, “\$10,000,000 shall be for multipurpose grants”).
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