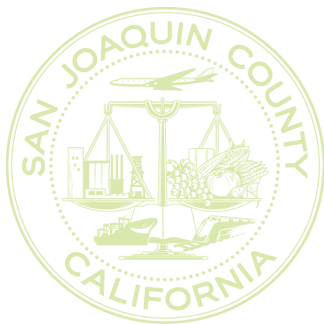


2024 PESTICIDE SAFETY HANDBOOK

A Reference for Growers and Applicators



SAN JOAQUIN
— COUNTY —

Greatness grows here.

**San Joaquin County
Pesticide Safety Handbook
Reference for Growers and Applicators**

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Pesticide Handler Safety

Pesticides are important tools for the production of food, fiber and ornamental crops. Federal and State pesticide laws are in place to protect employees, growers (Property Operators) and the public when pesticides are handled and applied. The California Department of Pesticide Regulation (DPR) and the County Agricultural Commissioners enforce California pesticide laws and regulations.

It is your responsibility to make sure that you and your employees handle and use pesticides as required by laws, regulations, permit conditions and pesticide product labeling. When you follow worker safety requirements, you're doing your part to protect your employee's health, the environment and yourself. Employers must provide their employees with protection from exposure to pesticides. Being properly trained, and wearing the required Personal Protective Equipment (PPE), provides handlers protection from pesticide hazards. Your employee is a "handler" if they perform any of these activities:

- Mixing, loading, transferring, applying (including chemigation) or assisting with the application (including flagging) of pesticides;
- Maintaining, servicing, repairing, cleaning, or handling equipment used in these activities that may contain residues;
- Working with opened (including emptied but not rinsed) containers of pesticides, adjusting, repairing, or removing treatment site coverings, incorporating (mechanical or watered-in) pesticides into the soil;
- Entering a treated area during any application or before the inhalation exposure level listed on pesticide product labeling has been reached or greenhouse ventilation criteria have been met;
- Performing the duties of a crop advisor, including field checking or scouting, making observations of the well-being of the plants, or taking samples during an application or any restricted entry interval listed on pesticide product labeling.
- Other handling activities specified by the label.
- Handle does not include local, State or federal officials performing inspections, samplings, or other similar official duties.

Age Limitations

If under the age of 18, you cannot mix or load any pesticide when air supplied respiratory protection, a closed system, or full body, chemical-resistant protective clothing is required.

Personal Protective Equipment (PPE)

Probably the most important and challenging task for an employer is to make sure that employees use Personal Protective Equipment (PPE). Growers who tell their employees, "Use it or find work elsewhere!", have fewer pesticide-related problems. Employers simply do not want the liability. If employees have a valid Pesticide Applicator Certification (PAC) card, or have gone through an annual handler training, should be knowledgeable of PPE requirements.

The employer must give employees all the required PPE. All conditionally exempted PPE must be available at the use site and stored in a chemical-resistant container, such as a plastic bag. When not in use, PPE must be clean and stored separately from pesticides. Employees must never take home any used or contaminated PPE.

Coveralls

Employees must wear employer-supplied coveralls when handling DANGER or WARNING pesticides. Coveralls are a one or two piece garment of closely woven fabric or equivalent that covers the entire body, except head, hands and feet. Employers must make sure that:

- Employees are provided clean coveralls at the start of each workday.
- Employees start each work day wearing coveralls when they handle DANGER or WARNING signal word pesticides.
- Employees change out of their coveralls and then wash at the end of the work day.
- Potentially contaminated coveralls removed at the worksite or headquarters are not taken home.
- Employees ending their workday at home remove and store potentially contaminated coveralls in a sealable container outside of their own living quarters for later return to the employer.
- The coverall requirement does not apply to fumigants unless the pesticide label expressly requires the use of coveralls.

Eye Protection

One of the most common injuries from pesticide exposure is to the eye. An employer must provide their employees with the proper protective eye-wear. Employees must wear eye protection when:

- Applying pesticides, unless specifically stated otherwise on the label;

The **employer is responsible** for providing employees with all required PPE.

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- Required by label;
- Mixing and loading pesticides;
- Adjusting or maintaining equipment;
- Using closed systems;
- Using handheld equipment;
- Using towed or vehicle-mounted equipment;
- Flagging

Exceptions:

- a) A vehicle with an enclosed cab, or
- b) Spray nozzles on machinery is located below the driver and pointing downward, or
- c) Applying vertebrate pest control baits that are placed without being propelled from application equipment. ,
- d) Applications involving injection or incorporation into soil, or
- e) There is no liquid contact with fumigants, or
- f) Applications of solid fumigants, or
- g) Applying non-insecticidal lures or baiting insect monitoring traps.

Protective eyewear includes: goggles, safety glasses, a face shield or full-face respirator. Goggles, safety glasses and face shields must be marked with "ANSI Z87.1-2010". Safety glasses must provide front, brow and temple protection. Sunglasses and eye-glasses do not provide adequate protection to meet this requirement.

Emergency Eyewash

If the label requires protective eyewear, the handler must also carry one pint of water for emergency eye washing. The eyewash may be carried on a belt or shoulder strap or mounted on the vehicle, but it must be within reach. The water must be clean and of a temperature that will not damage the eyes.

Chemical-Resistant Gloves

The most common way for pesticides to enter the body is through the skin, especially the hands. Chemical-resistant gloves must be provided and worn when handling pesticides.

- Employees must wear chemical-resistant gloves when:
 - Applying pesticides, unless the label specifically states otherwise;
 - Required by label;
 - Mixing and loading pesticides;
 - Using handheld equipment; or
 - Adjusting or maintaining equipment.
- If a barrier material is specified by category on the product labeling the required glove material

must be worn by the employee.

- If a barrier material or category is not specified, the barrier material may be:
 - Barrier laminate, butyl rubber, nitrile rubber, neoprene, natural rubber,

Label code	Materials Required by Law	Material Code
A	1,2,3,4,5,6,7,8	1 Laminate
B	1,2	2 Butyl
C	1,2,3,4,7,8	3 Nitrile
D	1,2	4 Neoprene
E	1,3,4,8	5 Natural
F	1,2,3,8	6 Polyethylene
G	1,8	7 PVC
H	1,8	8 Viton

polyethylene, polyvinyl chloride (PVC), or Viton

- All barrier materials must be 14 mils thick or thicker, except barrier laminate and polyethylene materials.
- When making fine adjustments or other activities that require high dexterity, the gloves can be less than 14 mil from category A or B if used only for a maximum of 15 minutes. These gloves may be used only once and not reused after the task is accomplished.
- Leather gloves may be worn over chemical-resistant gloves when required by working conditions. Once used for this purpose, they must not be worn without being worn over chemical-resistant gloves.
- Care must be taken not to touch unprotected body parts with the contaminated over-glove.
- Separable glove liners made of cotton or other absorbent materials may be worn under chemical-resistant gloves, unless prohibited by the label. Glove-liners cannot be exposed at the end of the chemical-resistant glove. Glove liners must be discarded at the end of the work day, or immediately if it comes into contact with the pesticide.

Gloves must NEVER have a non-separable absorbent lining.

Full-Body, Chemical-Resistant Protective Clothing

Full-body, chemical-resistant protective clothing (not to be confused with chemical-resistant coverall

The most common way for pesticides to enter the body is **through the skin**, especially the hands.

If the label requires protective eyewear, the handler must also carry **one pint of water**.

- Chemical-resistant headgear (hood or hat with wide brim);
- Chemical-resistant footwear;
- Waterproof or impervious coveralls or rain suit (covering torso, arms, legs).

A full-body, chemical resistant protective suit is not to be worn when daytime temperature exceeds 80 degrees F, or nighttime temperature exceeds 85 degrees F.

Respiratory Protection Program

If employees handle materials requiring respirators, the employer must provide respiratory equipment approved for the particular exposure by the National Institute for Occupational Safety and Health (NIOSH) and employees must use the equipment provided. The employer must also have a written Respiratory Protection Program at the work place when materials require respirators and/or the employer requires employees to wear respirators. This program includes the following:

1. Medical Evaluation

An employee must have a medical evaluation by a physician or Licensed Health Care Professional (PLHCP), based on the Department of Pesticide Regulation's medical questionnaire, to determine the employee's ability to use a respirator before they are fit tested or required to use a respirator in the workplace. The PLHCP must be provided information on: the respirator type and weight; duration and frequency of respirator use; the expected physical work to be performed; additional protective clothing to be worn; expected temperature and humidity under working conditions; a copy of the written Respiratory Protection Program; and a copy of Title 3 California Code of Regulation (3CCR) Section 6739(d). A follow-up medical examination must be performed if a need is determined by the PLHCP, an employee's facial features alter in a way that could affect the fitted respirator's seal, or if an employee reports medical signs or symptoms related to the ability to use a respirator.

2. Medical Examinations and Questionnaires

Medical examinations and questionnaires must be confidentially provided during the employee's normal working hours or at a time and place convenient to the employee. Employers must provide a confidential reader, if needed, and provide the employee with a pre-addressed, stamped envelope for the questionnaire to be mailed to the PLHCP. The employer must get a written recommendation from the PLHCP about the employee's ability to use the respirator.

3. Written Respiratory Protection Program

The employer must have a Written Respiratory Protection

Program that outlines procedures for selecting, fitting, cleaning and maintaining respirators. Select respirators from a sufficient number of models and sizes so the respirator correctly fits the user. The Respiratory Protection Program must be updated, as necessary, to reflect any changes in workplace conditions that could affect respirator use. Employers must retain the Respiratory Protection Program documents for employees who are required to use respiratory protection and for three years after the end of their employment. For more information and a model Written Respiratory Protection Program and other required documentation go to www.cdpr.ca.gov, (type "Respiratory Compliance" in the search field).

4. Documentation of Employee Evaluations & Training

Employees must be evaluated and trained prior to using respirators and annually thereafter, as described in 3CCR 6739. Maintain a list, with dates, of employees evaluated, training, medical recommendations and annual fit testing. This information must be available for inspection while the employee is required to use respiratory protection and for three years after the end of employment. Growers may contract with private companies for Respiratory Protection Program training and fit testing, however it is still the responsibility of the grower to keep all documentation.

5. Maintenance of Emergency Use Respirators

Emergency use, or second respirators, must be checked prior to each use of a pesticide requiring their presence to ensure that the air cylinders are maintained at 100 percent of the manufacturer's capacity. Respirators for emergency use must be inspected and logged at least monthly, according to routine-use inspection criteria, while employees require respiratory protection. Documentation of the most recent inspection must be kept with the respirator and include the name, or signature, of the person who made the inspection, the findings, required remedial action, and a serial number or other means of identifying the respirator inspected.

Use of Respirators

Employers must make sure that their employees use a respirator as required by the label, regulation, or restricted material permit condition. Proper respiratory protection is important during fumigations.

Proper respiratory protection is important during fumigations. If you are unsure which type of respirator is appropriate for your situation, please contact the Agricultural Commissioner's Office.

The employer must make sure that employees who use a tight fitting, face-piece respirator annually pass a qualitative or quantitative fit test. This includes filtering face-pieces (N95 respirators). Employees should perform a user seal check each time they put on a respirator. The employer may provide their employees with respirators for voluntary use if the use will not create a hazard (a 3CCR 6739 subsection “r” posting will then be required).

Employees must not use respirators that rely on a face-to-face-piece seal if they have facial hair, wear corrective glasses, or goggles that come between or interferes with the seal. Other types of non-face-sealing respirators, if adequate for protecting against the hazard, may be worn.

If you are unsure which type of respirator is appropriate for your situation, please contact the Agricultural Commissioner's Office.

Employer PPE Responsibility

First:

Explain to your handler-employees and early-entry field-worker employees, in a language they understand, about:

- Pesticide used.
- Pesticide safety hazards.
- PPE.
- Other equipment used.
- Work procedures.
- Pesticide worker safety regulations.
- Emergency procedures and contacts.

Second:

- Inspect all PPE before each day of use for leaks, holes, tears, or worn parts.
- Repair or discard and replace any damaged equipment.
- Provide the PPE required by pesticide labeling and the worker safety regulations for the particular handling or early-entry activity.
- Know when certain label-required PPE may be substituted when using certain engineering controls (closed-systems, enclosed cabs, soluble bags).
- Assure that employees wear the required PPE until the handling or early-entry activity is complete.
- Assure that employees correctly use the required PPE.
- Take precautions to prevent heat-related illness while the PPE is worn.
- Ensure that each employee understands the following: why a respirator is necessary; limitations of a respirator; how to use the respirator in emergency situations

including if the respirator fails; storage and maintenance procedures; and how to recognize medical symptoms that limit effective use of a respirator.

Third:

- For any employee who regularly handles pesticides with the signal word “DANGER” or “WARNING” (including non-production and non-ag use situations): Provide a clean designated area where employees can change into their PPE and remove their PPE at the end of their exposure period.
- Provide a clean, pesticide-free place for employees to store personal clothing not in use while they are at work handling pesticides.
- Provide single-use towels, soap, clean extra coveralls, and at least three gallons of water per employee to allow for decontamination.
- Ensure that PPE remains under your control and that employees do not take home potentially contaminated PPE.

Fourth:

- Ensure that any PPE to be reused is clean before each day of reuse according to instructions from the PPE manufacturer.
- Store and/or wash separately from other clothing or laundry any potentially contaminated PPE.
- Dry thoroughly in a well ventilated area any clean PPE before storing.
- Ensure that any person or firm assigned or hired to clean or repair potentially contaminated PPE is protected and informed of the hazards of the pesticides they may encounter.
- Be safe and discard any absorbent materials, including PPE, which have been contaminated with a pesticide.

Emergency Medical Care

Employer Responsibilities

- In advance, plan for Emergency Medical Care for employees who handle pesticides or who enter treated fields.
- Find a facility where emergency care is available for both handler-employees and fieldworker-employees.

Employers provide the PPE required by pesticide labeling and the worker safety regulations for the particular handling or early-entry activity and ensure that PPE remains under their control and that employees do not take home potentially contaminated PPE.

- Let handler-employees and fieldworker-employees know the name, address, and phone number of a physician or medical care facility where emergency medical care is available.
- Posting: Employers must specify a facility that will provide emergency care to employees who handle pesticides. The employer must post, at each worksite, the following:
 - Name of the medical facility;
 - Location of the facility;
 - Telephone number of the facility.

The posting may be in the window of a vehicle, or on application equipment, or on decontamination facilities, as long as they are at the worksite.

- Inform employees of the procedures to be followed to get emergency medical care, if the identified facility is not reasonably accessible from the work location.

Ensure that an employee is taken to a physician immediately when:

- There is reasonable grounds to suspect an employee has a pesticide-related illness, or
- An exposure to a pesticide has occurred that might reasonably be expected to lead to an employee's illness.

An employer must provide the following information to medical personnel treating their employee:

- The Safety Data Sheet;
- Product name;
- EPA Registration Number;
- Active ingredient;
- How the pesticide was being used; and
- The circumstances that could have resulted in exposure.

Employee Transport

If you have become aware that your employee might be ill or injured from pesticides, you must ensure that the employee is taken to the doctor immediately. The employee may not drive themselves.

Working Alone

An employee mixing, loading, or applying a pesticide in toxicity category one ("DANGER" signal word) for production of an agricultural commodity may not work alone during daylight or nighttime hours unless personal radio or telephone contact is made to a responsible adult at intervals not exceeding two hours during daytime and not to exceed one hour during

nighttime.

A pilot, mixer-loader and/or flagger team shall be considered as working together. In the case of two ground applicators working in the same field, no additional person is necessary if they can see each other or each other's application vehicles.

Decontamination Facility

Employers must provide decontamination facilities that include:

- 3 gallons of potable water per handler at the beginning of each handler's work day
- Soap
- Clean, single use towels
- An extra pair of clean coveralls

The water must be of a quality and temperature that will not cause illness or injury when it contacts the skin or eyes. It must be stored separate from water used for mixing with pesticides unless the tank holding the water is equipped with the appropriate valves to prevent backflow of pesticides into the water source.

All mix/load sites must have a decontamination facility. Decontamination facilities must be located within a 1/4 mile of applicators at all times (pilots excluded). If the field is large, facilities may be located at the nearest point of vehicular access.

At the mix/load site, employees must have immediate access to at least one system capable of delivering gently running water at a rate of 0.4 gallons per minute for at least 15 minutes, or at least 6 gallons of water in containers suitable for eye flushing for 15 minutes if the product requires protective eyewear or if a closed mixing system is used.

The most serious health effects occur with lengthy exposure to pesticides in the concentrated form (before dilution in water). In an emergency, the goal is to quickly dilute the contaminating material. Generally, having three gallons of water to immediately flush exposed skin is more helpful than a state-of-the-art washing facility that is ten minutes away.

If you have become aware that your employee might be ill or injured from pesticides, you must ensure the employee is taken to a doctor immediately. Be aware, ill or injured employees may not drive themselves.

All mix/load sites must have a decontamination facility.

Change Area

Employers must provide a change area for employees handling pesticides for production agriculture with the signal words “WARNING” or “DANGER”. This area is to be provided where employees end their exposure period and remove their potentially contaminated PPE. It is an area where employees may change clothes and wash themselves. Employers must provide:

- Clean towels
- Soap
- Sufficient water to allow for through washing
- A pesticide-free place for storage of employee’s personal clothing that is not in use while they are handling pesticides.

Closed Mixing Systems and Other Engineering Controls

Closed mixing systems remove pesticides from their original container, rinse the container, and transfer the pesticide to the mix tank through sealed hoses that do not allow exposure to the concentrated pesticides. When used correctly, closed mixing systems provide important protection to handlers.

Handler-employee protection, when using closed mixing systems, follows a tiered approach based on the specific dermal toxicity in the Human Hazard and Precautionary Statements. There are currently two tiers:

“Tier 1”: pesticides and adjuvants that bear the statement “Fatal if absorbed through skin” or other comparable language;

“Tier 2”: pesticides, not including adjuvants, which bear the statement “May be fatal if absorbed through skin” or “Corrosive, causes skin damage” or other comparable language.

Tier 1 closed mixing systems must be capable of enclosing the pesticide, including adjuvants, while removing the contents from its original container, and each emptied container must be rinsed and drained while still attached to the closed mixing system. This will prevent the pesticide from contacting handlers.

Tier 2 closed mixing systems prevent a pesticide from contacting handlers; however, it does not require the container to be rinsed while it is still attached to the system.

Employers must provide a “Tier 1” type closed mixing systems for employees who mix “Tier 1” liquid pesticides, including adjuvants, or a “Tier 2” type closed system for employees who mix “Tier 2” liquid pesticides, not including adjuvants.

Exemptions:

- Mixing pesticides with a method or device that would be in conflict with the registered label.
- Opening a container by removal of the manufacturer’s original seal without removing any of the contents, before reclosing with a liquid-tight sealing device.
- Regulatory personnel collecting samples of pesticides.
- Refillable containers that are required to be returned to the dealer, manufacturer, or registrant do not have to be rinsed.
- An employee required to use a Tier 2 system is exempt if they handle a daily maximum of one gallon or less.

Employee Training Program

Worker safety regulations are in place to help workers understand about pesticides used in your operation, to help employees work safely and to make sure that accidents are handled properly.

Employees must be trained in the safe use of pesticides (Pesticide Handler Training Program); must have access to information on the hazards of working with pesticides (Hazard Communication) and have notification of applications that have been made within 1/4 mile of their worksite by their employer (Application-Specific Information).

Pesticide Handler Training Program

Employees must be trained in safe handling procedures prior to working with any pesticide. A qualified trainer must conduct the training. (See the next section for qualified trainer requirements).

Pesticide handler training must cover required topics listed on the Employer’s Written Handler Training Program form and Handler Safety Training Record form (available through the County Agricultural Commissioner or DPR’s website). Employees must receive pesticide handler training annually.

Employees must be trained in safe handling procedures prior to working with any pesticide.

Inform employees that they must be able to demonstrate understanding of their handler training during pesticide use inspections.

The training shall be held at a location reasonably free from distraction and the trainer(s) must be present throughout the entire presentation. In addition, employers should review pesticide specific label and regulation requirements with employees, prior to use. Emphasize the potential health hazards of the material and the PPE to be worn.

Training sessions must be documented. Complete a form for each employee trained and have them sign where indicated. The form must include the employee's printed name and signature; the date of the training; the title(s) and source of the training materials used; the employer's name; and the trainer's name and qualifications.

Inform employees that they must be able to demonstrate their understanding of the training during pesticide use inspections. Inspectors will determine a pesticide handler's level of training based on their use of PPE and knowledge of pesticide training topics.

Employer Responsibilities

If all your employees are certified applicators, they are considered trained.

- Make sure that each employee who will be handling pesticides is properly trained in general pesticide safety and about correct pesticide-handling procedures before they are allowed to handle pesticides.
- Complete an Employer's Written Handler Training Program form and Handler Safety Training Record form (available through the County Agricultural Commissioner or DPR's website) for your handler-employees that lists the materials (study guides, pamphlets, pesticide product labeling, Pesticide Safety Information Series (PSIS) leaflets applicable, Safety Data Sheets (SDS), slides, books, visual media, etc.) and information that will be used, and identify the person or firm that will provide the training. (Note: PSIS leaflets are DPR summaries of pesticide hazards and SDS are pesticide-specific safety summaries produced by the pesticide manufacturer and are available where pesticides are sold).
 - Continually update handler-employee training to cover any new pesticides that will be handled, and if you use a new pesticide, then you must train on the new pesticide label before that pesticide is used.
- Repeat training annually.
- Cover the following subjects for each specific pesticide (for example: Roundup Pro) or by active ingredient (for example: glyphosate) to be used by your handler-employees.

Written Training Program

Employers must document the videos, pamphlets, and other materials used to train employees. Completion of the Employer's Written Handler Training Program (available through the County Agricultural Commissioner's office or DPR's website) form fulfills this requirement.

Be sure to cover the following:

1. How to read and understand a pesticide product's label.
2. Applicator's responsibility to protect persons, animals, and property while applying pesticides and not to apply pesticides in a manner that resulted in contact with persons not involved in the application process.
3. Need for, limitations, appropriate use, removal, and sanitation of any required PPE.
4. Safety requirements and procedures, including engineering controls (closed mixing systems, enclosed cabs) for handling, transporting, storing and disposing of pesticides.
5. Environmental concerns (drift, runoff and wildlife hazards).
6. Purposes and requirements of medical supervision, (if organophosphate or carbamate pesticides with the signal word "DANGER" or "WARNING" are mixed, loaded or applied).
7. Ways that pesticides can enter the body.
8. Signs and symptoms of exposure.
9. How to get emergency medical care.
10. Routine and emergency decontamination procedures, including spill cleanup and the need to thoroughly shower with soap and warm water after the exposure period.
11. Prevention, recognition and first aid for heat-related illnesses, in accordance with Title 8 of the California Code of Regulation Section 3395.
12. Warnings about taking home pesticides or pesticide containers.
13. Pesticide safety requirements (PSIS, SDS).
14. Location of written "Hazard Communication Information For Employees Handling Pesticides" (DPR leaflet PSIS A-8), other PSIS and SDS information.

Continually update handler-employee training to cover any new pesticides that will be handled and repeat training annually.

15. Employee's rights:
 - Right to personally receive information about pesticides to which they may be exposed.
 - Right for their physician or employee representative to receive information about pesticides to which they may be exposed.
 - Right to be protected against retaliatory action due to the exercise of any of these rights.
- Use a qualified trainer to conduct training for employees who will be handling pesticides for the commercial or research production of an agricultural commodity. The person conducting the training must be qualified as one of the following:
 1. A California certified commercial applicator.
 2. A California certified private applicator. (County issued Private Applicator Certificate (PAC). Most growers qualify with PAC).
 3. A person holding a valid County Biologist License in Pesticide Regulation or Investigation and Environmental Monitoring issued by the Department of Food and Agriculture.
 4. A farm advisor employed by the University of California Extension Office.
 5. A person who has completed an "instructor trainer" program given by one of the following:
 - University of California, Integrated Pest Management Program (After January 1, 1993)
 - Other instructor training program approved by the Director.
 6. A California licensed Agricultural Pest Control Advisor.
 7. A California Registered Professional Forester.
 8. Other trainer qualification approved by the Director of DPR.

Required Records

Most growers organize their Pesticide Handler Training Program in a binder, including the following:

- A completed Employer's Written Handler Training Program form;
- The training materials used;
- A completed Pesticide Safety Training Record form for each trained employee.

The binder is a more useful reference when sectioned by year, making it easy to determine when employees received annual training and which specific pesticides have been covered.

Use a qualified trainer to conduct the training for employees who will be handling pesticides for the commercial or research production of an agricultural commodity.

Employers must retain the documented Pesticide Handler Training Record and Employer's Written Handler Training Program forms for two years in a location accessible to employees.

Record the date and extent of initial and annual required training given and the job to be assigned. Verify each record with the employee's signature and maintain this record for two years at a central location at the work place accessible to employees.

Workplace Disciplinary Action Policy

The County Agricultural Commissioner may bring an action against an employee who failed to use required PPE or other safety equipment as required by law if the below are met:

- The employee is a licensed or certified applicator;
- The employer provided the equipment to the employee and the equipment was available at the worksite in a condition that would have provided the safety or protection intended by the equipment;
- The employer, through its written workplace disciplinary action policy, required the employee to use the equipment;
- The employer has complied with training requirements prior to the time the employee failed to use the equipment ;
- At the time of the failure to use the equipment the employee had knowledge of the discipline that could be imposed under the employer's written workplace disciplinary action policy for failure to utilize the equipment.

Employer Responsibilities

- Knowing about applicable safe use requirements specified in regulations and on the pesticide product label;
- Informing the employee, in a language the employee understands, of the specific pesticide being used, pesticide safety hazards, the PPE and other equipment to be used, work procedures to be followed and pesticide safety regulations applicable to all activities they may perform;
- Supervising employees to ensure that safe work practices, including all applicable regulations and pesticide product labeling requirements, are complied with;
- Providing a safe work place for employees and requiring employees to follow safe work practices; and
- Taking all reasonable measures to ensure that employees handle and use pesticides in accordance with the requirements of laws, regulations and pesticide product labeling requirements.

Medical Supervision Program

The Medical Supervision Program includes an initial blood test to determine the employee's usual or "baseline" level of cholinesterase and then periodic blood tests to determine if the level of cholinesterase

has dropped as the result of an exposure. Cholinesterase is a substance in the body that regulates nerve impulses and muscle activity. Cholinesterase inhibitors block the production of cholinesterase. When the level of cholinesterase is lowered, the nervous system does not function well.

Organophosphates and carbamates are cholinesterase inhibitors and exposure to these pesticides can affect nerve function. Some common pesticides containing cholinesterase inhibitors include, but are not limited to:

Lannate, Sevin, Diazinon and Thimet

The initial blood test must occur prior to use of organophosphate or carbamate pesticides. The employee is then tested at the end of each of the first three, 30-day periods of regular handling. Further testing occurs at a frequency recommended by the physician, with test intervals not to exceed two years. Employers must keep cholinesterase test results and physician recommendations for three years.

An initial blood test must occur prior to use of organophosphate or carbamate pesticides.

Some common pesticides containing **cholinesterase inhibitors** include, but are not limited to:

Lannate, Sevin, Thimet and Diazinon

Employee Use Records

Whenever an employee regularly handles a pesticide containing cholinesterase inhibitors with the signal word DANGER and/or WARNING, the employer must maintain employee use records. The pesticide use records must include the employee's name, pesticide used, and date of use. Some growers use a calendar to record this information. The employer must keep the record for three years.

Medical Supervision Posting

Medical supervision information for employees who regularly handle organophosphate or carbamate pesticides with the signal word DANGER and/or WARNING must be posted at the workplace in a central location. The posting must be prominent and include the name, address and telephone number of the physician providing medical supervision. This is separate from the requirements of 3CCR section 6726.

Physician's Agreement

When employees regularly handle an organophosphate or carbamate pesticide with the signal word DANGER and/or WARNING, the employers must have a written agreement signed by a physician stating that the physician has agreed to provide medical supervision for the employees. An employee that handles pesticides, whether it is for 5 minutes or 8 hours, on more than 6 days in a 30-day period, is regularly handling those materials. The employer must keep the agreement for three years and be available for inspection by the Agricultural Commissioner's Office.

Required Records

Most growers organize their Medical Supervision Program in a binder and include the following:

- Employee use records;
- The Physicians Agreement;
- Cholinesterase testing dates and physician recommendations;

Employers must retain these materials for three years and they must be accessible for review.

Minimal Exposure Pesticides

Minimal Exposure Pesticides require specific precautions for handling and application. Minimal Exposure Pesticides include the following products:

- Bromoxynil (Maestro, Cleansweep, Brox, Moxy)
- Folpet

- Oxydemeton-methyl
- Propargite (Omite, Comite, Decimite, Endomite, Mitomax)

Exemptions

The following exemptions apply to the specific minimal exposure pesticides:

- Folpet, when contained in or added to paints, coatings, or caulking compounds, is exempt from the requirements described.

Conditions of Use

The following conditions apply to the specific minimal exposure pesticides:

- Applications of oxydemeton-methyl to ornamental landscape trees and shrubs shall be made by trunk injection or soil injection methods only;
- Oxydemeton-methyl shall not be applied within a greenhouse; and
- Propargite shall not be applied within a greenhouse.

When employees regularly handle an organophosphate or carbamate pesticide, with the signal word DANGER or WARNING, the employer must have a written agreement signed by a physician stating that the physician has agreed to provide medical supervision for the employees.

Minimal Exposure Pesticide Safety Use Requirements

- The employer shall provide a clothing change area for employees who handle minimal exposure pesticides for any period of time, regardless of the toxicity category of the product used.
- The employer shall provide washing facilities where minimal exposure pesticides are mixed or loaded, regardless of the toxicity category of the product used.
- The employer shall provide and maintain coveralls and require it to be worn, regardless of the toxicity category.
- The employer shall provide and require employees to wear full-body, chemical-resistant protective clothing and respiratory protection. Contact the Agricultural Commissioner's Office for exceptions (these PPE must be present at the worksite even if there is an exception from wearing the PPE for a specific work situation).

Pesticide Safety Information Series

The Pesticide Safety Information Series (PSIS) is provided for the training of pesticide handlers and fieldworkers. The leaflets are available at the County Agricultural Commissioner's Office and online at <http://www.cdpr.ca.gov>. The following leaflets (as well as the N series for non agricultural settings) are available in English, Spanish, Hmong, and Punjabi.

- PSIS A-1:** Working Safely with Pesticides in Agricultural Settings
- PSIS A-2:** Storing, Moving and Disposing of Pesticides in Agricultural Settings
- PSIS A-3:** Closed Mixing Systems, Water-Soluble Packaging, and Enclosed Cabs in Agricultural Settings
- PSIS A-4:** First Aid and Emergency Decontamination
- PSIS A-5:** Protecting Yourself from Breathing Pesticides in Agricultural Settings
- PSIS A-6:** Safety Rules for Minimal Exposure Pesticides (MEPs) in Agricultural Settings
- PSIS A-7:** Washing Pesticide Work Clothing
- PSIS A-8:** Safety Rules for Pesticide Handlers in Agricultural Settings
- PSIS A-9:** Pesticide Safety Rules For Farmworkers
- PSIS A-10:** Extra Medical Care for Handlers Who Use Organophosphates and Carbamates

The employer shall provide a closed system and require its use by all employees who mix, load or transfer liquid formulations or load diluted liquid mixes derived from dry formulations of minimal exposure pesticides, regardless of the toxicity of the product used.

California's worker safety regulations specify safe work practices for employees performing cultural activities in fields treated with pesticides, including nurseries and greenhouses. By following these safe work practices, fieldworkers are aware of pesticide safety issues and these practices limit or prevent employee exposure to pesticide residues. Cultural activities performed by fieldworkers include irrigating, weeding, harvesting, pruning, etc. These requirements apply whether work is done by hand, with tools or with tractors. Some of the requirements apply when work is done while a field is considered a "treated field". A field is considered a "treated field" for 30 days after application plus the restricted entry interval.

Important: If a grower (or their employee) provides immediate supervision or direction to fieldworkers, the grower is considered the employer and is responsible for training and safety requirements.

If the Farm Labor Contractor (or his employee) is immediately supervising the crew, the grower is relieved of certain worker safety responsibilities.

Training Program

Agricultural fieldworkers, including nursery workers, must receive training before beginning work in a treated field. Any employee that is a Certified Applicator is considered trained. The training must include the required topics listed on the Fieldworker Safety Training Record form (available from the County Agricultural Commissioner or DPR's website), and the training must be **conducted annually**. A qualified trainer must conduct the training.

Complete a form for each employee trained and have them sign where indicated. The form must include the employee's printed name; the title(s) and source of the training materials used; the employer's name; and the trainer's name and qualifications. This record must be retained for 2 years at a central location in the workplace that is accessible to employees. The record must be provided to the employee upon request.

Emergency Medical Care

Employers must locate a facility or doctor that will provide emergency care to employees who work in treated fields. The fieldworkers, or their field supervisor, must know the name and location of the facil-

ity or doctor.

The employer shall provide the following information to the medical personnel who are treating the employee: the Safety Data Sheet; product name; EPA Registration Number; active ingredient; what the employee was doing and what could have caused the exposure.

Employee Transport to Medical Facility

When there are reasonable grounds to suspect that an employee has a pesticide illness or when an exposure to a pesticide has occurred that might reasonably be expected to lead to an employee's illness, the employer shall ensure that the employee is taken to a physician immediately. The employee must not drive their self. The employer, or the employer's representative, shall drive the employee to the medical facility.

Decontamination Facility

Employers must provide decontamination facilities for fieldworker employees in treated fields, who are engaged in activities involving contact with treated surfaces. The decontamination facility must have at least 1 gallon of water per fieldworker employee available at the beginning of the work day, or 3 gallons of water per employee for early entry activities available at the beginning of the work day, soap, an extra set of clean coveralls, and clean, single use towels for washing of the hands and face and for emergency eye flushing. Decontamination facilities must be located within a 1/4 mile of fieldworkers at all times. Employees must be notified of the location of the decontamination site prior to working in a treated field. If the field is large, facilities may be located at the nearest point of vehicular access.

Restricted Entry Interval (REI)

The Restricted Entry Interval is a period of time, either in hours or days, after a pesticide application when people are prohibited from entering the pesticide treated field or other pesticide treated area. The REI (see list at end of chapter) is indicated on the product label or found in regulation and can vary from crop to crop for the same product. Some REI's do not allow entry under any conditions while others allow early entry for specific tasks if Personal Protective Equipment (PPE) is worn.

Important: If a grower (or their employee) provides immediate supervision or direction to fieldworkers, **the grower is considered the employer** and is responsible for training and safety requirements.

Workers may **only enter a posted field** if they are following precautions listed under Early Entry Requirements on the product label.

Field Posting: Field, Chemigation, Enclosed Space and Fumigation

Field Posting

Fields are posted to prevent unprotected people from being exposed to the pesticide that was applied. The grower must post the field when required by the label or when the Restricted Entry Interval (REI) is longer than 48 hours, unless access to the treated field is controlled that assures no employee will enter, work in, remain in, or walk within a ¼ mile during the application and/or the REI. Additionally, all enclosed spaces, fumigation and chemigation applications require posting of warning signs. Signs must be posted before the application begins, but not more than 24 hours in advance.

Posting is required for applications in an entirely enclosed space unless access is controlled in a manner that assures no employee will enter, work in, remain in, or pass through the enclosed space during the application and the REI. An enclosed space is defined as a space enclosed, entirely or in part, with a nonporous covering of sufficient size to permit entry, and is used in the commercial or research production of an agricultural commodity. Some examples include greenhouses, mushroom houses, hoop houses, etc.

Posting is also required in all other applications made in an enclosed space that are not specified above that result in a REI of more than 4 hours unless access to the enclosed space is controlled in a manner that assures no employee will enter, work in, remain in, or pass through the enclosed space during the application and the REI.

Workers may only enter a posted field if they are following precautions listed under the Early Entry Requirements on the product label. The posted warning signs must be taken down within 3 days after the end of the REI and before unprotected workers are allowed to enter.

Posting must be readable from a distance of 25 feet and must remain clearly written in both English and Spanish throughout the application and the REI.

Signs must be visible at all usual points of entry to the treated area and along any borders with worker housing areas located within 100 feet of the treated field. If there are no identified usual points of entry, signs must be posted at each corner. If the treated field is adjacent to an unfenced public right-of-way (example: a road), signs must be posted at each end and at intervals no more than 600 feet apart.

Sign #1:



General Use

Sign #2:



Restricted Entry Interval of more than 48 hours

Sign #3:



Fumigation

Sign #4:



Chemigation

The employer shall make sure that early-entry fieldworkers are informed of pesticide product labeling requirements related to human hazards or precautions, first aid, symptoms of poisoning, use and care of PPE required for early-entry into treated fields, prevention, recognition, and first aid for heat-related illness and the importance of washing thoroughly at the end of an exposure period.

Early Entry into Treated Fields

The employer shall make sure that early-entry fieldworkers are informed at minimum orally of the location of the early-entry area where work is to be performed, what pesticides have been applied, the date and time that the Restricted Entry Interval (REI) period begins and ends, pesticide product labeling requirements related to human hazards or precautions, first aid, symptoms of poisoning, use and care of Personal Protective Equipment (PPE) required for early entry into treated fields, prevention, recognition and first aid for heat-related illness (in accordance with Title 8 of the California Code of Regulation Section 3395), the location of the Pesticide Safety Information Series (PSIS) A-9 and the importance of washing thoroughly at the end of an exposure period.

The employer shall provide all required PPE described in the Pesticide Handler Safety section of this handbook, and make sure that the PPE is used correctly for its intended purpose. The PPE shall remain the property of the employer.

The employer shall make sure that at least one pint (16 fluid ounces) of eye flush solution is immediately accessible (carried by the fieldworker or on the vehicle the fieldworker is using) to each fieldworker who is performing early-entry activities in a treated field for which the pesticide product labeling requires protective eyewear during any REI specified time period on pesticide product labeling.

The employer shall make sure that early-entry fieldworkers engaged in cultural practices are provided (at the place where they remove PPE) at least 3 gallons of water per employee, soap, and clean single use towels so that they may wash thoroughly at the end of the exposure period. The water must be of a quality and temperature that will not cause illness or injury when it contacts the employees' skin or eyes or if it is swallowed. The water shall be stored separate from that used for mixing with pesticides unless the tank holding the water for mixing with pesticides is equipped with appropriate valves to prevent back flow of pesticides into the water. The employer shall provide one clean change of coveralls for employees engaged in early-entry activities and have it available at the decontamination site.

The employer shall make sure that early-entry fieldworkers are provided a clean, pesticide-free place for storing personal clothing and putting on PPE at the start of work and taking off PPE at the end of the exposure period.

The employer shall take appropriate measures to prevent heat-related illness, when necessary.

Employees may enter a treated field during a REI under certain conditions:

- To conduct pesticide handling activities, such as soil incorporation, provided employees wear PPE listed on the label for pesticide handlers.
- To conduct "no contact" activities (activities which do not allow contact with treated plants, soil, water, or equipment), including operation of equipment from an enclosed cab.
- To conduct necessary and unforeseen "limited contact" activities (activities where exposure is minimal and contact is limited to hands and forearms, feet and legs below the knees) including irrigation, provided that:
 - fieldworkers wear PPE listed on the label for early-entry requirements;
 - entry occurs at least 4 hours after completion of the application and the employee does not remain in the field more than 8 hours, in a 24 hour period;
 - the pesticide product label does not require both oral and posted notification; and
 - inhalation exposure does not exceed any pesticide product labeling standard or the greenhouse ventilation criteria.

The employer shall take appropriate measures to prevent heat-related illness.



An employee may enter a treated field after the expiration of the Restricted Entry Interval (REI) specified on pesticide product labeling and when a California regulation extended REI is in effect to:

- Conduct activities, other than hand labor, provided that the employees are wearing work clothing with long sleeves and long pants, shoes with socks, and gloves.

Fieldworkers must receive training on the pesticide label, including use of required PPE, prior to early field entry.

Enclosed Space Ventilation Criteria

When a pesticide requiring respiratory protection is applied by any method, or when any pesticide is applied as a fumigant, smoke, mist, fog or aerosol inside an enclosed space, ventilation shall continue until:

- The concentration is measured and found not to exceed any pesticide product labeling standard; or
- One of the following has occurred if there is no labeling standard:
 - ten air exchanges are completed;
 - two hours of mechanical ventilation, such as with fans, are completed;
 - four hours of passive ventilation, such as opening vents, windows, or doors, are completed;
 - twenty-four hours with no ventilation occurs; or
 - any combination of percentage portions of the above options are completed which equals 100%.

Fieldworkers must receive training on the pesticide label, including use of required PPE, prior to early field entry.

Extended Restricted Entry Intervals

Where problems have been associated with a specific pesticide, the Restricted Entry Interval (REI) has been extended by regulation. Tradenames are included in brackets as most products are sold under these names. Other tradenames not listed that contain the active ingredients listed below are subject to the same permit requirements.

Note changes in Restricted Entry Intervals.

Pesticide	APPLES	CITRUS	CORN	GRAPES	PEACHES/NECTARINES	OTHER CROPS
Diazinon		5		5	5	
Endosulfan	2	2	2	2	2	2
Malathion		1		1	1	
Methomyl (Lannate)				7(C)		
Phorate (Thimet)			7			
Phosmet (Imidan)				5	5	
Propargite (Omite/Comite)	21	42	7	30	21	21(F)(G)
Sulfur				3(H)		

Footnotes:

All numbers in the above table represent days. This table from 3CCR 6772(b) has been edited to remove active ingredients no longer registered for use in California.

Per Title 3 of the California Code of Regulation (3CCR) Section 6772(b):

(C) Applications of methomyl made after August 15, have a 21-day restricted entry interval. This interval may be terminated after 10 days if leaf samples tested pursuant to 6774(c)(4) show 0.1 micrograms per square centimeter or less of dislodgeable foliar residue of methomyl.

(F) The restricted entry interval for strawberries and field grown roses treated with propargite is 3 days.

(G) The restricted entry interval for cotton fields treated with propargite is seven days. However, from the end of the restricted entry interval until the beginning of harvest, the employer shall assure that employees entering propargite treated cotton fields wear work clothing with long sleeves and legs and gloves.

(H) This restricted entry interval for sulfur applies from May 15 through harvest in the counties of: Fresno, Kern, Kings, Madera, Merced, **San Joaquin**, Stanislaus, and Tulare; and during March and April in Riverside County.

Before employees handle pesticides or enter fields that were treated with pesticides, the grower or employer must provide information to the employees about the pesticide hazards involved and how to work safely around these materials. Hazard communication is described in Pesticide Safety Information Series (PSIS) A-8 for pesticide handlers and PSIS A-9 for field workers. These PSIS leaflets are available at county agricultural commissioner's office or are available online at <http://www.cdpr.ca.gov>.

Notice of Applications

Notifications must be given orally or in writing and completed prior to the use of any pesticide and in ample time for all subsequent notifications to be made and for all persons notified to take appropriate action. Each person performing pest control shall assure that the grower operating the area to be treated receives notice of the scheduled application. The notice must be in a manner the person can understand and include:

- The date(s), start time(s), and estimated end time(s) of the scheduled application;
- Location and description of the field to be treated;
- The pesticide product name(s), U.S. EPA Registration Number(s), and active ingredients;
- Spray adjuvant product name(s) and U.S. EPA Registration Number(s), if applicable;
- The applicable Restricted Entry Interval (REI);
- If the pesticide product labeling requires the posting of treated fields, oral notification, or both; and
- Any other precautions printed on the pesticide product labeling, permit conditions, or included in applicable laws and regulations, related to the protection of employees or other persons during or after application.
- Contact you Local Agricultural Commissioners office about possible exemptions.

If there is a change in the notice of the scheduled application, each person performing pest control shall assure that the grower operating the area to be treated receives notice of this change prior to the application.

Notice must also be given to employees, fieldworkers, and the fieldworkers' employer if they are working on the grower's property, or are scheduled to work on the grower's property, and to any persons whom the grower has prior knowledge that he or she will likely enter the field to be treated on the date of the application or while the REI is in effect. The notice must be in a manner the person can understand and include:

- The date of the scheduled application; and
- The location and description of the field to be treated; and
- Instructions not to enter the field to be treated and its application exclusion zone until authorized by the grower.

Notice of applications also apply to non-production agricultural settings.

Any person applying pesticides shall assure that **the operator of the property receives notice** within 24 hours of the completion of the application.

Notice must also be given to other persons that the operator of the property has prior knowledge will likely enter the field during the REI.

Pesticide Application Completion Notice

Any person applying pesticides shall assure that the grower operating the area treated receives notice within 24 hours of completion of the application. A notice must include:

- Date(s) and time(s) the application was started and ended;
- Site identification number, location, and treated acres;
- Pesticide product name(s), U.S. EPA Registration Number(s), and active ingredient(s);
- Spray adjuvant product name(s) and U.S. EPA Registration Number(s), if applicable; and
- Restricted Entry Interval (REI) and Pre-Harvest Interval for each pesticide product used.

Growers are required to maintain a record of each notice received by site. This record may be a written log prepared by the grower or copies of work orders, pesticide use reports, or recommendations containing all the required information. These records must include the date(s) and time(s) the application started and ended. The grower must retain the Completion Notice record for two years.

The grower must provide notice of completion to:

- Handler and fieldworker employees;
- Employers of handler and fieldworker employees; and
- Other persons he/she has prior knowledge will likely enter the field during the REI.

The grower must provide the following information:

- Location and description of the field;
- Time during which entry is restricted; and
- Instructions not to enter the field until the REI has expired.

Displaying Application-Specific Information

Growers shall display at a central location the following application-specific information while employees handle pesticides and/or fieldworkers are employed to work in treated fields:

- Crop or site treated and identification of the treated area;
- Date(s) and time(s) the application started and ended;
- Restricted Entry Interval;
- Copy of the Safety Data Sheet for the applied

pesticide(s);

- Product name(s), active ingredient(s), and U.S. EPA Registration Number(s); and
- Spray adjuvant product name(s) and U.S. EPA Registration Number(s), if applicable.

Examples of information display methods include a bulletin board with a map of fields and notations of the application information for the appropriate field. Another approach is maintaining this information in a binder using pesticide use reports or work orders. Either method is acceptable as long as employees know where the information is kept and can access it without having to ask.

This information must be displayed when the grower receives notice of the completion of an application and before any fieldworkers are allowed to enter the treated field. The information must remain displayed until 30 days after the expiration of the REI. This information must be kept for 2 years.

The grower shall display at the worksite or at a central location where fieldworkers gather a description of the location where the Application-Specific Information display can be found. The description of the location must be specific enough for fieldworkers to find and have access to the application-specific display. This description can be on or an attachment of the PSIS A-9.

Display at the worksite or at a central location where fieldworkers gather a description of the location where the Application-Specific Information display can be found.

Hazard Communication for Handlers and Fieldworkers

For Pesticide Handlers

1. Display a copy of a completed PSIS A-8 leaflet at a central location in the workplace. Fill out the sections on emergency medical care, pesticide use and records.
2. Maintain a packet containing each of the PSIS leaflets at a central location at the workplace accessible to pesticide handler employees in a language they understand.
 - Other PSIS leaflets applicable to your pesticide handling operation as needed.
 - Pesticide Use Records for pesticides handled by employees. These records must be maintained for two years.
 - Safety Data Sheets (SDS) for pesticides handled by employees.
3. The PSIS A-8 must also be posted at all permanent decontamination facilities and any decontamination facilities servicing 11 or more handlers.
4. Any changes to the PSIS A-8 relating to the name, address, or telephone number of the facility providing emergency medical care must be updated within 24 hours of the change.

For Fieldworkers

1. Display a copy of a completed PSIS A-9 leaflet at the actual worksite (field) or if fieldworkers gather at a central location prior to transportation to the worksite at that central location and at all permanent facilities and any decontamination facilities servicing 11 or more fieldworkers. Describe where the application-specific information display is located on the PSIS A-9 or as an attachment to the A-9. Fill out the sections on emergency medical care and record keeping. Don't forget to provide your Farm Labor Contractor(s) with the address and description of your central record keeping location so they can post a completed PSIS A-9 for their employees while they work in your field(s).
2. Maintain the following additional information at your identified central record keeping location for your own fieldworkers or for Farm Labor Contractor fieldworkers:
 - a. Pesticide Use Records for each field for

all pesticides applied within the last two years.

- b. SDS for each pesticide listed in the pesticide use records.

3. Any changes to the name, address, or telephone number of the facility providing emergency medical care must be updated on the PSIS A-9 within 24 hours of the change.

A packet containing each of the PSIS leaflets, in English, Spanish, Hmong, and Punjabi, is available at the agricultural commissioner's office or may be accessed online at: <http://www.cdpr.ca.gov>

Required Records

Most growers maintain Hazard Communication information in a binder or file cabinet. Keep the information in the shop or breakroom - somewhere employees can access the information without having to ask.

How long information must be available or maintained varies for Notice of Applications, Pesticide Application Completion Notice, Application Specific Information, and Hazard Communication and can be found in the chart on the next page.

Display a copy of a completed PSIS A-8 leaflet for handlers and A-9 for fieldworkers leaflet at a central location in the workplace. Fill out the sections on emergency medical care, pesticide use and records.

**CALIFORNIA REGULATIONS GOVERNING:
Notification, Pesticide Application Completion Notice, Application-Specific
Information and Hazard Communications**

REQUIREMENTS FOR EACH SECTION

	Notice of Applications (3CCR 6618)	Pesticide Application Completion Notice (3 CCR 6619)	Application Specific Information (3 CCR 6723 pesticide handlers & 6761 fieldworkers)	Hazard Communication (3 CCR 6723 pesticide handlers and 6761 fieldworkers) PSIS A-8: A-9
<i>How must the info be communicated?</i>	Oral & written	Oral & written both req'd by label	Written	Written
<i>Who is responsible?</i>	Person performing pest control	Pesticide applicator	Operator or the Property owner	Employer
<i>To whom must the information be conveyed?</i>	Operator of property, PCB or licensed FLC Handlers/fieldworkers other persons entering treated field	Operator of property, operator's fieldworkers & handlers, fieldworkers and their employers; and other persons likely to enter treated field	Pesticide handlers & fieldworkers	Pesticide handlers & fieldworkers
<i>When must the info be conveyed?</i>	Prior to application and/or prior to employees entering treated field	Within 24 hours of completing pesticide application	When operator of the property receives notice that the pesticide application is complete	Before employees are allowed to handle pesticides; when employees are working in treated fields
<i>What info is required to be provided?</i>	~Date, start time, and estimated end time of application ~Location of pesticide application ~Pesticide use records for identity of pesticide ~EPA registration number, California registration number ~Active ingredients ~REI ~Posting requirements ~Any precautions related to the protection of employees or other persons	~Date, start time, and estimated end time of application ~Location of pesticide application ~Product name, U.S. EPA registration number, CA registration number ~REI ~PHI (Pre-Harvest Interval) ~PHI Site ID & acreage treated	~Date, start time, and estimated end time of application ~Crop or site treated & the identification of the treated area ~EPA registration number, California registration number ~SDS of the applied pesticide ~Active ingredient ~REI ~Description of the location of the application specific display	~A completed PSIS A-8 for handlers ~Pesticide use records for pesticides handled the employee ~Copies of applicable PSIS ~SDS for pesticides handled by the employee ~A completed PSIS A-9 for fieldworkers
<i>How long must the information be available or maintained?</i>	Ample time for all subsequent notifications to be made	2 years	2 years	For handlers: As long as they are handling pesticides For fieldworkers: As long as they are working in a treated field
<i>Where is the information required to be?</i>	Needs to be given orally or in writing no set location	Needs to be given orally or in writing no set location	At a central location (description of location is required to be on the A-9 or attached to the A-9)	Handlers: Central location & permanent facilities servicing 11 or more Fieldworkers: Worksite or at a central location where they begin the workday, and permanent facilities servicing 11 +

Groundwater Protection

Groundwater is a valuable source of drinking water and irrigation water. Studies in the Central Valley have shown that pesticides can reach groundwater through various routes including the wellhead or leaching down through the soil profile. In 2004, the Department of Pesticide Regulation adopted comprehensive groundwater protection regulations. The rules prescribe actions to prevent Pesticides from reaching groundwater in “groundwater protection areas” or GWPA. This is a geographically defined area that is vulnerable to pesticide contamination either by leaching or runoff. A portion of farmland in San Joaquin County falls into a GWPA. Generally, to protect groundwater aquifers, take the following precautions:

- Choose pesticides with reduced runoff or leaching potential.
- Use the lowest effective rate.
- Keep pesticides on the target site.
- Load or clean sprayers at least 100 feet away from wells or areas with the potential for leaching.
- Prevent backflow into wells at mixing site: install a backflow prevention and/or keep an air gap between the water discharge point and sprayer tank.

Any time a pesticide proven to cause groundwater contamination is proposed for use in a GWPA, a Restricted Materials Permit must be obtained from the agricultural commissioner’s office. The pesticides requiring permits for use include:

- Atrazine
- Bentazon (Basagran®)
- Bromacil
- Diuron
- Norflurazon
- Prometon
- Simazine
- Note that no permit is required for certified applicators using a pesticide listed **outside** of a GWPA.

The above pesticides cannot be used inside recharge basins, canals or ditches under conditions that favor movement to groundwater.

Permits to apply a GWPA pesticide include “use requirements” or management practices that vary

based on whether the area is vulnerable to leaching or runoff. These requirements are spelled out in the permit. If listed practices are not feasible for a particular site, a grower may request that DPR approve other, effective management practices that may be more suitable to their farming techniques (those practices must ultimately be adopted).

To determine if a parcel is included in a GWPA, go to www.cdpr.ca.gov (Click on “Programs” then “Monitoring” then “ Identifying and protecting ground water protection areas”). Also check with the county agricultural commissioner.

Wellhead Protection

Wellhead protection is mandatory for all pesticides. The following activities are prohibited within 100 feet of a well (including domestic, municipal, agricultural, dry or drainage, monitoring or abandoned wells):

- 1) Mixing loading, and storage of pesticides;
- 2) Rinsing of spray equipment or pesticide containers;
- 3) Maintenance of spray equipment; and
- 4) Application of pre-emergent herbicides.

Exemptions from the 100-foot requirement are allowed when:

- 1) The well is sited so that runoff from irrigation or rainfall does not move towards the wellhead and collect around any part of the wellhead (including the concrete pad or foundation), or
- 2) The wellhead is protected by a berm. Applications of pre-emergent herbicides are prohibited between the berm and the wellhead.

Surface Water Protection

Managing pesticide runoff from farm lands can be addressed at two levels on a farm site: source control through pesticide selection and application and farm site management.

Before using a groundwater restricted material, contact the county agricultural commissioner.

Dormant Orchard Spray Regulations

In 2006, California adopted new dormant orchard spray regulations that resulted from detections in surface water of pesticides used in orchards during the winter months. The regulations apply to insecticides such as organophosphates (example: diazinon) and pyrethroids (example: Asana, Ambush, Warrior).

Products exempt from the regulations include certain pesticides applied alone or in combination: dormant oil or biocontrol agents such as Bt insecticides and spinosad. Also exempt are orchards located in hydrologically isolated areas where no field runoff can enter an irrigation or drainage ditch, canal or other body of water or if runoff water can held 72 hours before releasing into a sensitive aquatic site.

To use a regulated insecticide in a dormant spray, a grower must:

- Obtain a written recommendation from a licensed pest control advisor (PCA);
- Provide a 100-foot buffer zone between the treated area and any sensitive aquatic site; and
- Apply when the wind speed is between 3 and 10 mph.

Pesticide Selection and Application

- Select pesticides based on field scouting to determine pest spectrum, populations and control needs. When spraying is needed, follow good application practices such as proper mixing/loading and drift control.
- Set-up your sprayers with the best nozzles and control systems and regularly calibrate sprayers to minimize total applied pesticides per acre.
- Shut off orchard sprayers on row turns and use extreme caution when the wind is moving toward adjacent roadways. Never spray when the wind is blowing toward waterways and other sensitive sites.
- When an orchard closely borders a sensitive area, consider spraying inward on rows 1 and 2. Reduce speed in row 1 and 2 to compensate for spraying only one side.

Farm Site Management

- Evaluate each field site and base Best Management Practice (BMP) on each site's tendency to produce surface water runoff in storm events.
- Have a clear understanding of the field being sprayed, the expected weather conditions and the environment surrounding the field.
- Consider using cover crops, vegetated filter strips, vegetated drainage ditches, or other practices to minimize offsite movement of storm water or irrigation tail water (which can contain pesticide residues).

Irrigation Management

- Evaluate uniformity of the irrigation system distribution.
- Increase irrigation efficiency by using low volume emitters or microsprinklers which reduce loss of water through over-applications.
- Maximize crop yield and water conservation by using irrigation management systems such as CIMIS (California Irrigation Management Information System, University of California) to plan irrigations.

Spray Drift Management

Offsite movement of pesticides due to spray drift can be minimized or eliminated by use of good management practices.

Ground Applications

(vehicle-mounted or towed ground equipment)

- Apply only when wind speed is 10 miles per hour or less at the application site, as measured by an anemometer positioned four feet above the ground. This requirement does not apply to greenhouse or indoor applications. Always review the pesticide label, regulation, or permit condition for wind restrictions.
- Start discharge after entering the target site; shut off discharge before exiting the target site.
- Never make row turns while spraying.

Make sure the applicator understands all possible sensitive areas and potential hazards in and around each application site.

Apply only when wind speed is 10 mph or less at the application site, as measured by an anemometer positioned four feet above the ground. This requirement does not apply to greenhouse or indoor applications.

Aerial Applications

- Direct nozzle orifices backward.
- Control flow of liquid from each nozzle by a positive shutoff system.
- Functional boom length, measured from outboard nozzle to outboard nozzle, should not exceed 75% of the overall wing span or rotor length.
- Do not exceed manufacturer's recommended pressure for the nozzles being used on the spray boom.
- Apply only when wind speed is 3 to 10 miles per hour at the application site, as measured by an anemometer positioned four feet above the ground.
- Initiate discharge after entering the target site; discharge height should not exceed 10 feet above the crop or target; shut off discharge whenever necessary to raise the equipment over obstacles; shut off discharge before exiting the target site.

Sulfur Drift Management

Any time sulfur is sprayed or dusted on crops near sensitive areas, the equipment operator should be aware of the potential for offsite movement. While sulfur is a natural element used safely for thousands of years to control disease and insects, exposure to sulfur can cause eye irritation, rashes, and breathing difficulties. To prevent sulfur exposure to the public, equipment operators must take extra care when working near sensitive areas such as schools, bus stops, busy roadways, residences or any area where people not involved in the application are present. Ultimately, the equipment operator is responsible for managing sulfur drift.

Equipment Operation

- Stop dusting or spraying activities if sulfur drift will potentially move to sensitive areas.
- With sulfur dusters, slow engine RPM at row ends to minimize drift potential.
- Start dusting or spraying only when applicator is adjacent to the first plant, vine or tree.
- When possible, apply sulfur at night or on weekends if near urban areas, roadways or where activity is common.
- Make sure the handler clearly understands the field being sprayed or dusted and the environment surrounding the field.

Application Conditions

- Sulfur should not be applied when the wind speed exceeds 10 miles per hour.
- Applicators should be aware that in some areas, "dead calm" conditions are often associated with an inversion situation. Applying sulfur when there is a minimum air movement of 3 mph will help ensure that an air inversion does not exist.
- Leave an adequate buffer zone to protect sensitive areas.
- Closely track changing weather conditions.

Chemigation

Chemigation is a method of pesticide application where pesticides are injected into irrigation water. Any pesticide applied using this method must have chemigation instructions listed on the product label. When making the application, a user must also conform to backflow prevention requirements described on the label. For more information on chemigation, go to www.cdpr.ca.gov/docs/emon/grndwtr/chem.htm or check with the County Agricultural Commissioner.

Beekeeper Notification

Each person intending to apply any pesticide, (including Pest Control Advisors, Pest Control Businesses and Growers) that is toxic to bees at a site where blossoming plants are present needs to inquire with the County Agricultural Commissioner's Office or the online notification service, BeeWhere, to find out whether any beekeeper with apiaries within one mile of the application site has requested notice. The person performing pest control shall notify the beekeeper at least 48 hours in advance and include the following information:

- Time and place
- Crop and acreage to be treated
- Method of application
- Identity and dosage rate of the application
- How the person performing pest control may be contacted by the beekeeper

For more information, visit:

beewhere.calagpermits.org

(login with a CalAgPermits web username and password)

Or visit:

beewherecalifornia.com

Pesticides toxic to bees are those that include the words "toxic to bees" on the labeling of a pesticide.

Endangered Species Protection

Measures used to protect endangered species vary from region to region throughout California and can be found on the Department of Pesticide Regulation website under Endangered Species Project's PRESCRIBE bulletin. The PRESCRIBE Online Database Application was created to assist pesticide applicators with determining if there are endangered species in the vicinity of the application site and if there are restrictions on the pesticide intended to be applied.

To access PRESCRIBE visit:

www.cdpr.ca.gov/docs/endspec/precint.htm

Follow the prompts on the website.

Call the Agricultural Commissioner's Office for more information.

Triple Rinsing and Disposal

Containers which hold liquid pesticides must be rinsed at the time of end use so that the rinse solution can be applied to the field being treated.

When empty, rinse the container carefully three times and drain the rinse water back into the sprayer or the container used to mix the pesticide. Use the rinse water as a pesticide, following label directions. Replace the cap securely.

After rinsing, clean and dry containers can be taken to San Joaquin County operated landfills with a Pesticide Container Disposal Certificate. These certificates are issued by the Agricultural Commissioner's Office: call to arrange for an inspection of your containers (empty containers delivered on a Container Recycling Event Day described below are self-certified by growers using a form available from the County Agricultural Commissioner's Office).

Properly emptied pesticide bags may be disposed of in two ways:

- Landfill disposal— larger accumulations of bags must be taken to San Joaquin County operated landfills.
- Burning bags (see below)

Bag Burning

Pesticide bags may be burned at the use site*, with a burn permit issued by the Valley Air District (PHONE: 559-230-6000). For more information, visit their website at www.valleyair.org. The permit allows growers to burn bags accumulated during one day of use; such burning is exempt from burn day restrictions.

- Burn the pesticide bag in the field that will minimize the amount of smoke blowing over areas where people or domestic animals may be located. To select a site, consider distances to homes, parks, schools, businesses; wind speed and direction; inversions; and length of time to burn bags.
- Place a rock, brick, or similar noncombustible weight on top of the stack of bags to be burned.
- Light the bottom bag.
- Stand upwind of the burn site to avoid breathing the smoke.
- Control the site until burning is completed and the fire is extinguished.

***Commercial applicators can burn properly emptied pesticide bags at the grower's site under the grower's**

burn permit. Questions about whether a pest control operator can burn on a grower's site should be referred to the local air pollution control district.

Safe Disposal

- The best way to dispose of a small amount of excess pesticide is to use it. Apply according to directions on the product label.
- An empty pesticide container can be as hazardous as a full one because of residue inside. Never reuse such containers.
- Call your County Agricultural Commissioner's Office to find out how to get rid of unwanted pesticides.
- Never pour any leftover pesticide product down a sink, toilet, a sewer or street drain or on the ground. Pesticides may interfere with the operation of wastewater treatment systems or pollute waterways. Many municipal systems are not equipped to remove all pesticide residues. If pesticides reach waterways, they can harm fish, plants, and other living organisms.
- Do not throw unused pesticides in the trash.

Pesticide Container Recycling Program

The Agricultural Pesticide Container Recycling Program is an alternative way to dispose of empty plastic and metal pesticide containers that are safely recycled into new products.

The pesticide containers are collected at San Joaquin County disposal sites, shredded by a contractor, and recycled into non-food type plastic products (e.g., traffic signs, plastic lumber). Metal containers are crushed and taken to a metal recycler.

Pesticide containers are accepted year-round at San Joaquin County disposal sites if they meet acceptable container requirements. On scheduled recycling days, gate fees are waived and an agricultural inspector is on site to certify the containers. Be aware that a gate fee is charged if containers are taken to disposal sites on other days.

Growers and applicators are encouraged to dispose of their containers on scheduled recycling days. This will save both time and money for the agricultural community.

Containers which hold liquid pesticides must be rinsed at the time of end use so that the rinse solution can be applied to the field being treated. Pesticide containers are accepted year-round in San Joaquin County disposal sites if they meet acceptable container requirements.

Recycling Program Purpose

1. To dispose of pesticide containers in a cost effective environmentally sound way, which benefits the county and the general public.
2. To encourage resource conservation by recycling plastic and metal containers.
3. To assist San Joaquin County waste management to fulfill their legislated mandate to reduce the amount of solid waste that is land-filled.

Disposal Procedures For Plastic and Metal Pesticide Containers

On a scheduled recycling day...

- Rinse and puncture containers thoroughly at the time of end use.
- Self-certify that the containers are clean. Self-certification forms are available from the Agricultural Commissioner's Office. Transport containers to the landfill.
- No gate fee is charged.*
- An inspector from the Agricultural Commissioner's Office at the disposal site checks containers.

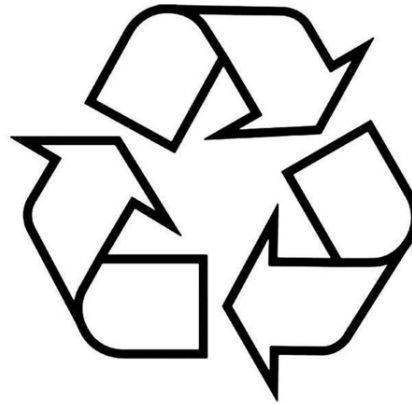
***NOTE: If pesticide containers are taken to the landfill with other garbage or are not properly clean a fee is charged.**

On an Unscheduled day...

- Rinse and puncture containers thoroughly at the time of end use.
- Arrange to have containers inspected and certified by an inspector from the Agricultural Commissioner's Office before they are taken to the landfill.
- Take your containers to the landfill.
- The normal gate fee is charged.

Recycling Guidelines:

- Containers are accepted from 1 pint up to 35 gallons.
- Containers must be triple-rinsed, empty, clean and dry with caps removed.
- Remove all label booklets and plastic sleeves and paper from container. Glued-on labels are okay for recycling. Also, remove the majority of the foil seal around the spout.
- 5-gallon buckets/pails must have lid removed and metal handle removed and buckets and pails stacked inside each other. Lids are accepted with metal and rubber gasket removed.
- 35-gallon barrels are accepted with the plastic bungs removed.



**PLEASE
RECYCLE**

Containers must be triple rinsed, empty, clean and dry with caps removed. Remove all label booklets and plastic sleeves and paper from container. Glued-on labels are okay for recycling. Also, remove the majority of the foil seal around the spout.

Pesticide Storage

Pesticides should always be stored in the original container. The registered label must remain on the container, even when empty. Pesticide containers, whether full or empty, must be stored in a locked enclosure.

Enclosures holding containers with the signal words **DANGER** or **WARNING** must be posted as pesticide storage areas. The signs must state:

DANGER

Poison Storage Area

**All Unauthorized Persons Keep Out
Keep Door Locked When Not in Use**

The signs must be readable from a distance of 25 feet and must be visible from any likely direction of approach.

Improper pesticide storage and disposal can be hazardous to human health and the environment. Follow these safety recommendations:

- Don't stockpile. Buy only enough pesticide to carry you through the use season.
- Always store pesticides in their original containers. The label on the container has important information, including ingredients, directions for use and first aid in case of accidental poisoning. Never transfer pesticides to soft drink bottles or other containers commonly used for food, drink or household products. Children or

others can mistake them for something to eat or drink.

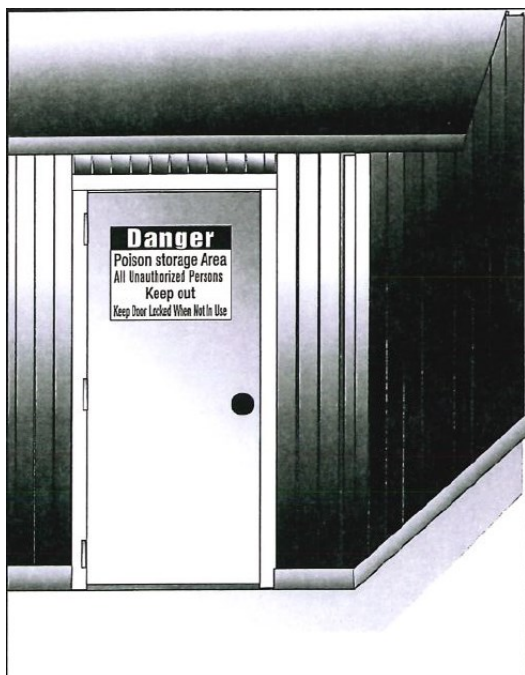
- Store pesticides out of reach of children and pests. The best place to store pesticides is in a locked storage shed or cabinet in a well-ventilated area. Never store pesticides in cabinets near food, animal feed or medical supplies. Store pesticides immediately after each use.
- "Child resistant" packaging does not mean childproof. You still must store pesticides properly, out of children's reach. Be sure to close containers tightly.
- Store flammable liquids away from living areas and away from ignition sources such as a furnace, vehicle, outdoor grill or gas-powered tools. Do not store containers where flooding is possible or in places where they might spill or leak into wells, drains, ground water or surface water.
- Transparent tape applied over labels helps keep them legible. If you can't tell how old a container is, or identify its contents, follow the advice on safe disposal.

Transportation

There are simple procedures which can be followed to ensure that pesticides are transported in a safe manner.

- Pesticides must not be transported in the same compartment with a person, food, or feed.
- All pesticides should be transported in a secure upright position, the opening should be closed to prevent spillage, and all containers must have either the original manufacturer's label or service container labeling attached.
- Service container labeling requires the name and address of the person responsible for the container, the common name of the pesticide and the signal word ("DANGER", "WARNING", "CAUTION") from the original label.

Pesticide containers, whether full or empty, must be stored in a locked enclosure. Store pesticides out of reach of children and pets. The best place is in a locked storage shed or cabinet in a well-ventilated area.



Pesticide Use Reporting and Recordkeeping

California law requires 100% pesticide use reporting from commercial agricultural operations and pest control services. All materials applied for agricultural production must be reported to the County Agricultural Commissioner with the exception of fertilizers and soil amendments. This includes all pesticides, sulfur, rodenticides, herbicides, defoliants, growth regulators and adjuvants. If a material has an EPA or California Registration Number on the label, a report is required.

If you have questions about completing a pesticide use report, please contact the County Agricultural Commissioner's Office.

Grower-applied materials must be reported to the Agricultural Commissioner's Office by the 10th day of the following month (i.e. June applications must be submitted by July 10). Pesticide use reports may be submitted by mail, electronically (via CalAgPermits or a third party vendor), or in-person; they may not be submitted by email or fax.

The grower is responsible for the submission of Pesticide Use Reports; while pesticide dealers or Pest Control Advisors often submit reports as a courtesy, the grower remains ultimately responsible for the timelines and accuracy of the report.

Commercial applicators must report for-hire applications to the County Agricultural Commissioner's Office within 7 days of completion. The commercial applicator must also send a copy to the grower.

The grower must retain both private and commercial pesticide use reports for two years.

Electronic Pesticides Use Reports and Notice of Intent Filing

San Joaquin County growers and applicators can submit Pesticide Use Reports and Notice of Intent via CalAgPermits or a third party vendor site. To access the free, web-based, CalAgPermits system, growers must first obtain a username and password, which can be done through the County Agricultural Commissioner's Office by walk-in, phone, or email. The site address is www.calagpermits.org.

Recordkeeping

Growers –as the property operator you must maintain and keep the following records:

- Restricted Materials Permit/Operator Identification Number: retain 2 years.
- Pesticide Use Reports: retain 2 years.
- Application Completion Notices: retain 2 years.
- Emergency Medical Care information must be posted at a central work location any time employees are handling pesticides or entering treated fields.
- Pesticide Handler Training Program, including Employer's Written Handler Training Program, Pesticide Safety Training Records: retain 2 years.
- Completed copy of Pesticide Safety Information Series (PSIS) A-8 must be accessible to employees that handle pesticides, without having to ask. This must remain accessible while employees handle pesticides.
- Completed copy of Pesticide Safety Information Series (PSIS) A-9 must be accessible to fieldworkers, without having to ask. This must remain accessible while workers are employed to perform field work such as pruning, harvesting, irrigating or other activities where workers enter treated fields.
- Hazard Communication Information and Application Specific Information must be accessible. These must remain accessible while employees handle pesticides or work in treated fields.
- Respiratory Protection Program includes Written Operating Procedures, documentation of employee training and Employee Statement of Medical Condition/Medical Evaluation. These must be available while employees handle materials requiring respirators and for three subsequent years.

Growers with employees who regularly handle organophosphate or carbamate insecticides:

- Medical Supervision information must be posted at the workplace any time employees are regularly handling organophosphates or carbamates.
- Medical Supervision Program Includes employee use records, physician's agreement, test results and recommendations: retain 3 years.

California law requires 100% pesticide use reporting from commercial agricultural operations and pest control services. **The grower is responsible for the submission of pesticide use reports.**

The following information applies to all applications, whether by growers (property operators), agricultural pest control businesses, or their employees.

Restricted Materials

Some pesticides are more hazardous than others, even when used according to the label. California restricts the use of these materials. A list of California Restricted Materials is included at the end of this chapter.

A Restricted Materials Permit, issued by the Agricultural Commissioner's Office, allows the application of California Restricted Materials to the fields listed on the permit. The permit lists each California Restricted Material the grower intends to use.

Prior to the use of California Restricted Materials, growers and agricultural pest control businesses must submit a Notice of Intent (NOI). County Inspector Biologists verify that the application rate and method are appropriate for the commodity and evaluate the site. This review is intended to provide an additional margin of safety for workers, the public, the environment, and surrounding crops. The NOI may be submitted through the CalAgPermit web portal, by phone, or in-person. You will be contacted by the County Agricultural Commissioner's Office if your Notice of Intent requires mitigation or is denied.

Once approved, the pesticide application must commence at the proposed date and time. A four day window from the date indicated on the Notice of Intent is acceptable ONLY if there's an unforeseen event that prohibits an application at the original date and time (this is only a 12 hour window for fumigations). If the application is not started within this time period, the NOI must be extended or cancelled by contacting our office.

Growers/property operators must be certified applicators to apply California Restricted Materials and federally restricted materials. Private Applicator Certificates are issued by the Agricultural Commissioner's Office.

As with all pesticides, applications of restricted materials require a pesticide use report be completed and submitted.

Certification

Growers must have a Private Applicator Certificate (PAC) card to use California Restricted Materials and federally restricted materials and/or to train their employees in

the safe use of pesticides.

The PAC card qualifies the grower to use restricted materials on property owned, leased or rented by the grower. The grower is also qualified to train and supervise employees in the use of pesticides. The PAC card may never be used to perform work for hire.

An employee holding a PAC card is qualified to use restricted materials on property controlled by the employer. He may also train and supervise other employees. An employee holding a PAC card is exempt from pesticide training requirements (however, employer documented pesticide specific training is recommended).

Growers may obtain a PAC card by passing a multiple-choice test given by the Agricultural Commissioner's Office. When issued, the PAC card expires according to alphabetical groupings as follows:

**Last name beginning A-H:
in December 2024, 2027 etc.**

**Last name beginning I-Q:
in December 2025, 2028 etc.**

**Last name beginning R-Z:
in December 2026, 2029 etc.**

A PAC card can be renewed in two ways:

- 1) By retaking the PAC exam every three years,
- 2) By obtaining at least (6) hours of Continuing Education training, (2) of which are in laws and regulations.

Cards valid for three years require a total of six Continuing Education (CE) hours earned over the three year issuance period. Two of the six CE hours must cover the subject "Laws and Regulations." CE renewal hours are prorated for cards issued for less than a full three-year period. The Agricultural Commissioner's Office offers CE classes for card renewal annually. If using hours to renew your card, the card must be renewed before April 1 of the year following expiration. Cardholders that miss the April 1 deadline will have to retake the exam to renew.

Prior to the use of California Restricted Materials, growers must submit a Notice of Intent (NOI).

Growers must have a Private Applicator Certificate (PAC) to use restricted materials and/or to train their employees in the safe use of pesticides.

Letters of Authorization

Permits for the use of a restricted material are issued in the name of the operator of the property(s) to be treated. The permittee (grower) or, when allowed by the Commissioner, the permittee's authorized representative, must sign the permit. The authorized representative must provide the Commissioner with written documentation allowing the representative to act on the grower's behalf (3CCR 6420 a,b,c). A letter of authorization may also be used in place of a lease agreement if the requester is not the owner of the property. This form is available from the County Agricultural Commissioner.

Permit Requirements

Restricted Material Permits must include the following information:

- Name and business address of the permittee and signature of either the permittee, or when allowed by the commissioner, the permittee's authorized representative;
- Location of each property to be treated;
- Identification of all known areas that could be adversely impacted by the use of the restricted material(s) including hospitals, schools, playgrounds, residential areas (including labor camps), parks, lakes, waterways, estuaries and reservoirs, state wildlife management areas, critical habitats of rare endangered or threatened species, livestock and crops. A map or aerial photograph may be used for designating such areas;
- Identification of each commodity or crop, or if there is no commodity or crop, the site to be treated;
- Anticipated pest problem(s) for each crop (pest(s) to be controlled);
- Restricted material(s) requiring a permit necessary to control each pest on each commodity, crop, or site;
- Approximate date(s) or crop stage(s) of intended restricted material application(s);
- Expected method of application including the dilution, volume per acre or other units, and dosage;
- Name, business address, and license or certificate number, with expiration date, of the certified private or certified commercial applicator responsible for supervising the possession or use of the restricted material(s). Pest Control Business, Pest Control Advisor, and/or Dealer may also be added as a contact when the grower allows them to have access via CalAgPermits for viewing or submitting PURs.

Non-Restricted Materials

The use of non-restricted materials for production and non-production agricultural applications doesn't require a Restricted Materials Permit, but it does require obtaining an Operator Identification Number.

Growers do not need to be certified applicators to apply non-restricted materials.

For all applications of non-restricted materials, including sulfur, a pesticide use report must be completed and submitted.

Operator Identification Number

An Operator Identification Number, issued by the Agricultural Commissioner's Office, allows the application of non-restricted materials to the fields listed on the permit. If you have a Restricted Materials Permit, it also serves as your Operator Identification Number.

Prior to the purchase and use of pesticide(s) for the production and non-production of an agricultural commodity, the operator of the property (or the operator's authorized representative) must obtain an Operator Identification Number from the commissioner for each county where pest control work will be performed. The operator (grower) must provide each pest control business applying pesticides to their property with his or her operator identification number.

Growers must retain a copy of the Restricted Materials Permit/ Operator Identification Number for two years and make the permit promptly available to the director or commissioner upon request.

California Restricted Materials List

Pesticides with active ingredients listed below are Restricted Materials in California. Check active ingredients on pesticide labeling to see if additional California restrictions apply. Tradenames are included in brackets as most products are sold under these names. Other tradenames not listed that contain the active ingredients listed below are subject to the same permit requirements. This list is subject to change.

Acrolein , when labeled as an aquatic herbicide	Endodulfan (Thiodon)*
Aldicarb (Temik) – unregistered	Ethoprop (Mocap) when labeled for turf use
All dusts (except sulfure, lime and certain copper)	Lindane - unregistered
All Section 18 Materials (emergency exemption)	2-Methyl-4-Chlorophenoxyacetic Acid MCPA*
Any pesticide containing active ingredients Listed under section 6800 (a), when labeled for agricultural, outdoor institutional or outdoor industrial use. (1)	Magnesium Phosphide
Aluminum Phosphide (Phostoxin)	Metam Sodium
4-Amino Pyridine (Avitrol)	Methamidophos (Monitor) - unregistered
Azinphos-Methyl (Guthion) - unregistered	Methidathion (Supracide)
Brodifacoum	Methomyl (Lannate)
Bromadiolone	Methyl Bromide
Calcium Cyanide - unregistered	Methyl Isothiocyanate (MITC)
Carbaryl (Sevin)	Mevinphos (Phosdrin) - unregistered
Carbofuran (Furadon) - unregistered	Molinate (Ordram) - unregistered
Chloropicrin	Oxydemeton-Methyl (Metosystox-R)
Chlorpyrifos (application restrictions apply)	Paraquat (Gramoxone, Firestorm)
Dazomet (Basamid)	Parathion-Methyl (Penncap-M) - unregistered
Difenacoum	Phorate (Thimet)
Difethialone	Phosphine Gas
Diglycolamine salt of 3,6-Dichloro-O-Anisic acid Propanil (Dicamba)	Potassium N-Methyldithiocarbamate
Disulfoton (Di-Syston) - unregistered	Sodium cyanide
3-Chloro-P-Toluidine Hydrochloride (Starlicide)	Sodium fluoracetate (compound 1080) - unregistered

For the latest California Restricted Materials List, contact the San Joaquin County Agricultural Commissioner's Office or visit DPR's website.

Sodium tetrathiocarbonate (Enzone) - Unregistered

Strychnine*

Fenamiphos (Nemacur) - unregistered

Sulfotepp— unregistered

Sulfuryl Fluoride (ProFume)

1,3-Dichloropropene (Telone II)

Thiobencarb (Bolero)

Tribufos (Def, Folex)

Tributyltin when labeled for fouling organisms in an aquatic environment

2,4-Dichlorophenoxyacetic acid (2,4-D)*

2,4-Dichlorophenoxybutyric acid (2,4-DB)*

2,4-Dichlorophenoxypropionic acid (2,4-DP)*

Zinc Phosphide*

(1) Exemptions from Permit Requirements

No permit is required for certified applicators using the Following 6800 (a) products outside of a groundwater Protection area: atrazine, bentazon, bromacil, diuron, norflurazon, prometon and simazine.

Permit Conditions

A Restricted Materials Permit often have additional conditions attached for specified active ingredients, including but not limited to: Aluminum Phosphide, 2,4-D, or 1,3-Dichloropropene.

For example, condition QL for Dicamba and Phenoxy Herbicides (active ingredient 2,4-D) cannot be applied North of 8 Mile Road from March 16 through October 15 in San Joaquin County. It also cannot be applied anywhere in the County if the wind is greater than 10 mph. Review your Restricted Materials Permit to see if any addition conditions may apply to your application.

A Restricted Materials Permit may have **additional conditions** attached for specified active ingredients. Review your Restricted Materials Permit to see if any additional conditions may apply to your applications.

Application Checklist

The framework of regulations guiding pesticide use is complex but the goal is straightforward: avoid accidental exposure.

Read the label for each material and locate:

- Signal word: indicating the level of immediate toxicity to humans;
- DANGER>WARNING>CAUTION, in decreasing order of toxicity;
- Hazards to humans, including symptoms of exposure;
- Personal Protective Equipment (PPE) to be worn;
- Hazards to the environment, including bee toxicity, drift concerns, and groundwater protection;
- Crop, rate, and dilution allowed by label;
- Field Posting requirement;
- Length of Restricted Entry Interval (REI) and Pre-Harvest Interval.

Plan the application:

- Train the applicators for this application.
- If material is a carbamate or organophosphate, document employee use.
- Is medical supervision, including blood testing, necessary?
- Obtain necessary PPE, eyewash, and decontamination supplies.
- Evaluate nearby sensitive sites (schools, residential areas, waterways).
- Assign your more experienced applicators to fields near sensitive sites.
- Time your applications to avoid problems.
- Notify all of your employees and Farm Labor Contractor employees likely to be within 1/4 mile of the application site.
- Contact Farm Labor Contractors each morning before work.
- Tell workers and post the information in a central location.
- Post field as required.
- Calibrate application equipment and check for leaky nozzles. Check closed system, if required.
- Certified applicators need to be available for applications by non-certified applicators.
- A second person needs to be reachable for danger labeled materials.
- Be aware of wind conditions. No movement, which can indicate an inversion, and too windy can both lead to a potential pesticide drift.

If using a California Restricted Material:

- Is it listed on your current Restricted Material Permit for San Joaquin County?
- Did you file a Notice of Intent 24 hours (or 48 hours depending on the material) prior to the proposed application?
- Did an inspector approve the Notice of Intent?

The framework of regulations guiding pesticide use is complex but the goal is straightforward: **avoid accidental exposure.** Obtain necessary Personal Protective Equipment, eyewash, and decontamination supplies.

If using a material toxic to bees:

- Did you call our office to check for beekeepers with hives near your site?
- Are blooming plants present at the application site?
- Did you contact each of the beekeepers at least 48 hours in advance to the application?
- Did you use the BeeWhere website to check for bee's around an application site?

Mixing and Loading

- Use Personal Protective Equipment (PPE) and a closed system as required by the label, regulations, or trigger language in the Precautionary Statements. Working with concentrated pesticides can be dangerous.
- Use an accurate measuring device and follow the label. Too high a rate may result in illegal residues and too low a rate can be ineffective.
- Triple rinse containers as they are emptied and puncture them so they cannot be reused. Apply the rinse solution to the application area.

Making the Application

- Double-check the area for work crews, beehives, and other unforeseen hazards.
- Ensure that pesticide handlers are correctly wearing Personal Protective Equipment.
- Watch the weather. Adjust or stop the application as needed.
- Monitor your surroundings continuously. Cars and people have a way of appearing unexpectedly.

After the Application

- Clean the application equipment.
- Return cleaned containers to the pesticide storage area.
- Display Application-Specific Information within 24 hours for employees who will be working within 1/4 mile of the treated field.
- Remove any field postings within 3 days after expiration of Restricted Entry Interval (REI).
- Submit pesticide use reports to the Agricultural Commissioner's Office before the 10th day of the following month.
- Clean or dispose of used PPE as required.

Ensure that pesticide handlers are wearing Personal Protective Equipment.

Display Application-Specific Information within 24 hours for employees who will be working within 1/4 mile of the treated field.

Enforcement Response Policy Regulations

The Enforcement Response Policy Regulations limit the discretion of County Agricultural Commissioners when violations occur. The goal of the regulations is to increase compliance while protecting public health, property, pesticide worker safety and California's environment.

The San Joaquin County Agricultural Commissioner's Office's pesticide use enforcement program focuses on three elements: education, inspections, and enforcement.

Education

Providing outreach ensures that pesticide users are knowledgeable about regulations through:

- Agricultural biologists (one-on-one training);
- Compliance Assistance Inspections;
- Annual Continuing Education meetings;
- Pesticide training workshops;
- This pesticide safety handbook;
- U.C. Cooperative Extension;
- DPR website (www.cdpr.ca.gov).

Inspections

These assure that pesticide users apply their knowledge correctly.

- All non-compliances or violations are recorded;
- Applicator/grower receives a copy of the inspection report;
- A non-compliance or violation will often result in enforcement actions.

Enforcement

This provides a set of consequences for not complying with regulations.

- All non-compliances or violations are processed through the enforcement guidelines;
- If a penalty is required, applicator/grower is notified by Notice of Proposed Action;
- The penalty is then paid or a hearing can be requested;
- Depending on the outcome of the hearing, there are appeal rights.

Two Step Process for Handling Violations

A violation is a failure to comply with any law or regula-

tion. A two-step process has been developed to deal with each violation.

Step one: Classify the violation type as a hazard, an effect, or unclassified. A violation's severity is classified depending on the circumstances surrounding the non-compliance. A violation's creation of, or potential to create, a health, or environmental hazard, or effect, and even previous violations, are all taken into account.

Step two: Depending on the severity of the violation, and past compliance history, the appropriate enforcement action is triggered.

1) Violation Classifications

a) Class A

Class A violations are those which cause a health, property, or environmental hazard. It also includes violations of law or regulation that mitigates the risk of adverse health, property, or environmental effects.

Class A examples:

- Pesticide drift;
- Failure to follow safe work practices resulting in injury;
- Fines for a Class A violation can range from \$700 to \$15,000 unless other enforcement action options are taken.

b) Class B

Class B violations include a violation of a law or regulation that mitigates the risk of adverse health, property, or environmental effects that is not designated as Class A.

Class B examples:

- Failure to obtain a Restricted Materials Permit prior to purchase and use or failure to submit a NOI in a timely matter.
- Failure to follow safe work practices (for example, not wearing personal protective equipment);
- Failure to post treated fields;
- Fines can range from \$250 to \$3,000.

Enforcement regulations require use of penalties for violations and limits discretion of County Agricultural Commissioners.

C) Class C Violations

Class C are violations of law or regulation that do not mitigate the risk of an adverse health, property, or environmental effect.

Class C examples:

- Failure to submit pesticide use reports to the Agricultural Commissioner.
- The fine range is \$50 to \$400.

2) Determine Action

Once a violation is categorized, there are two types of actions an Agricultural Commissioner may take: an enforcement action or a compliance action, depending on the severity of the violation and past compliance history. Factors affecting the type of enforcement response include:

- Seriousness of the violation.
- Repeat violations.

What programs and practices an employer has in place to prevent or mitigate violations is also taken into consideration.

Enforcement Action

An enforcement action will most often come in the form of an Administrative Civil Penalty or fine action against the responsible party. Other options might be to revoke a grower’s permit or private applicator certificate. In more severe scenarios the District Attorney could be involved.

Compliance Action

Compliance actions are not punitive in nature and may consist of a warning letter, an inspection form with non-compliances noted or a notice of violation. A documented compliance interview is held where violations are discussed between the Agricultural Commissioner and the responsible party. An agreement is reached on mitigation measures adopted to prevent future incidents. A Decision Report with official explanation of the outcome is written and submitted to the Department of Pesticide Regulation.

Decision Report

The Agricultural Commissioner is required to write a decision report when a compliance action is taken instead of an enforcement action. It is an official explanation and record of the Agricultural Commissioner's decision. This report is submitted to the Director of the Cali-

fornia Department of Pesticide Regulation within 60 days of the initial violation. If the Director does not concur with the decision, the Agricultural Commissioner shall be notified within 30 days with reasons for the denial and an enforcement action subsequently will be taken.

Incident

An occurrence when one or more violations (non-compliances) are discovered. An incident may be limited to a single routine inspection or audit. It may include several inspections. It may be an investigation or the sum of follow-up activities related to a pesticide episode.

Subsequent Incident

A subsequent incident is an incident that takes place within two years of a previous, separate incident. “subsequent incident” should not be confused with “repeat violation,” a concept considered when determining the correct fine level.

Repeat Violation

A violation shall be considered a “repeat violation” for the respondent against whom a fine action is proposed if the respondent had a prior violation in the same fine class (A, B, or C) as the current violation and an administrative civil penalty (fine) was levied for that violation within two years of the current proposed fine action.

Action on a violation can be either enforcement or compliance, depending on the severity of that violation and past compliance history.

Serious violations can prompt fines as high as \$5,000 per violation.