



DEPARTMENT OF AGRICULTURE

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Merced Agricultural Commissioner
Pesticide Use Enforcement
Multiyear Work Plan
2016-2018

The Merced County Agricultural Commissioner's Office (CAC) is responsible for a comprehensive pesticide regulatory program at the county level, to assure the safe, efficient and legal use and storage of pesticides. The program assures the legal practices and compliance relating to the production of agricultural commodities and safe handling of pesticides by users.

Pesticide regulatory activities include: field monitoring and inspections of pesticide use, pesticide application equipment inspections, investigations of incidents related to pesticide use, pesticide record compliance audits, field worker safety inspections, issuance of pesticide permits for restricted materials, issuance of operator identification numbers (non-restricted pesticides); registration of maintenance gardeners, pest control businesses, pest control advisers, pilots, farm labor contractors; compilation of pesticides use reports; pesticide storage site inspections; employer safety record inspections for employees and continuing education presentations to growers/other license and certificate holders.

The goal of these various aspects of the pesticide regulatory program is to assure that those using pesticides understand and are in compliance with the many applicable laws and regulations.

It is the intent of the CAC to implement the following Pesticide Enforcement Work Plan during the 2016 through 2018 calendar years. Specific performance goals and program activities are listed for each of the following functional areas in the work plan:

- I. Pesticide Use Enforcement Program Resources
- II. Local Conditions
- III. Restricted Materials Permitting
- IV. Compliance Monitoring
- V. Enforcement Response

Pesticide Use Enforcement (PUE) Program Resources

Anticipated Staff Allocation for 2016-2018

- 1- County Agricultural Commissioner
- 1- Assistant Agricultural Commissioner
- 3- Deputy Agricultural Commissioners
- 14- Full Time Agricultural Biologists
- 5- Typist Clerks
- 1- Office Supervisor

Pesticide Use Enforcement Program Assets

Merced CAC has two offices. The main office in Merced has 11 agricultural biologists and four clerical staff assigned to it. The district office in Los Banos has three agricultural biologists and one clerical staff assigned to it.

Each agricultural biologist whose primary assignment is PUE has an assigned vehicle. In addition, PUE staff has been provided with digital cameras and thermal anemometers. In order to verify buffer zones, one laser range finder is available in each office.

Agricultural biologists have computers at their desks, providing full access to the CalAgPermits Program. Also, each computer has broadband internet access allowing for quick access to pesticide related information.

All agricultural biologists work in the PUE program to one degree or another. Three agricultural biologists have PUE as their primary assignment. Four biologists have pesticides as their main focus, but also assist in other programs within the department. All biologist issue permits, conduct inspections, review notices of intent and use reports, and assist with investigations. Two deputies are assigned to the PUE program. One of the deputies works full time in the PUE program, while the other spends half the amount of time.

Merced CAC has had a significant turnover of staff during the 2013-2015 previous work plan period. The range of experience ranges from 1 year to 28 years. Median years of experience are approximately 8 years. Seven of the 14 full time biologist positions were re-filled within the last two years due to retirements and promotions. Four biologists with significant experience (>15 years) retired during the 2013-2015 work plan. Two biologists were promoted within the department to Deputy Agricultural Commissioners. The Assistant Agricultural Commissioner position was vacated in March of 2015 and is expected to be filled early 2016.

Merced CAC's department has one designated bilingual agricultural deputy who is fluent in Spanish, one designated bilingual clerical who is fluent in Hmong, and one clerical staff member who is fluent in Hindi.

I. Local Conditions

Sensitive Sites

- Residences and occupied businesses near field fumigations
- Rural schools in the midst of agricultural operation
- Ag/Urban interface (mostly in the Los Banos area but an emerging issue of development associated with the new University of California, Merced Campus
- Pesticide applications to crops in proximity to waterways.
- Sites with a history of neighbor complaints
- Endangered species' habitats
- Sensitive crops (protection of organic production)
- Groundwater protection areas (357 sections in Merced County)
- Solar stations

Cropping Patterns

Merced County produces over 200 commodities. All areas of the county are heterogeneous in planting patterns. For workload reasons, the county is divided into six pesticide use enforcement districts with the major crops as follows:

- **District 1** (Merced-Atwater-Livingston-Delhi-Snelling)
 - o Tree Crops (almond, peach, pistachio, walnut, apricot); vine crops (grape, berries, kiwi); dairies and dairy support crops (silage corn, sudan-grass, grain hay, forage mix, alfalfa); poultry and egg production; rangeland (irrigated and non-irrigated); vegetable crops (sweet potato, tomato, strawberry, watermelon); nursery crop production.
 - o Generally medium to large operations with considerable urban interface occurring around the perimeter of Merced, Atwater, Livingston, and Delhi. Infrastructure and development of the area around the new University of California, Merced is also becoming an urban interface concern. Seasonal streams used during the summer for more irrigation water and the Merced River are significant environmental resources and are of special environmental concern. The west part of the district has primary leaching sections of concern for groundwater protection.
- **District 2** (Merced-Le Grand-El Nido-Planada)
 - o Tree crops (almond, pistachio, fig, dried plum, walnut, pomegranate); vine crops (grape); dairy and dairy support crops (silage corn, grain hay, forage mix, alfalfa); vegetable crops (tomato, radicchio, peppers, small scale fruit and vegetable production); nursery crop production; field crops (cotton, rice, grains); beef cattle; irrigated pasture and rangeland.
 - o Generally small to medium size farms with significant urban interface issues due to areas of infrastructure and development near the new University of California, Merced

campus. Seasonal creeks running through farmland are of special environmental concern. Much of this district has groundwater protection concerns (mainly run-off).

- **District 3** (Dos Palos- Los Banos)
 - Field crops (cotton, grain, rice, corn, dried beans); vegetable crops (tomato, cantaloupe, honeydew melon, watermelons, carrots, onions); seed crops (onions, lettuce, alfalfa); tree crops (almond, pistachio); dairy support crops(alfalfa, silage corn, sudan-grass, forage mix, forage hay); beef and sheep operations; irrigated pastures.
 - Mostly medium to very large farming operations. Significant urban interface issues. Expanding urbanization will be an issue for the foreseeable future (Los Banos). Only a small area in the north portion of the district has groundwater concerns with leaching. Environmental concerns are wildlife refuges, duck clubs, and significant endangered species habitat.

- **District 4** (Santa Nella-Gustine)
 - Tree crops (almond, cherry, walnut, apricot, dried plum); vegetable crops (tomato, cantaloupe, lima bean); field crops (cotton, grains); dairy and dairy support crops (silage corn, grain hay, sudan-grass, alfalfa); rangeland; wildlife areas (refuges, duck clubs).
 - Farm size runs from small to large. Significant urban interface issues (Los Banos). Expanding urbanization will be an issue for the foreseeable future. Wildlife refuges, state parks, and endangered species are the primary environmental concerns.

- **District 5** (Merced-Atwater-Stevinson-Livingston-Hilmar-Delhi)
 - Dairy and dairy support crops (silage corn, grain hay, alfalfa, sudan-grass); grapes (wine and raisin); tree crops(almonds, peaches, walnut); vine crops(wine grapes, raisin, blueberries, kiwi); vegetable crops (sweet potato, watermelons, carrots, tomato, small scale fruit and vegetable production); poultry and egg production; field crops (grains, dried beans, cotton).
 - Mostly small to medium size farm operations. Emerging urban interface issues (Livingston, Atwater). Field fumigation buffer zones are a major concern near expanding rural residual areas. Environmental concerns are centered on the Merced River and wildlife refuges. Shallow surface water tables result in virtually the entire district, designated for groundwater protection, from leaching.

- **District 6** (Los Banos – South Dos Palos)
 - Tree crops (almonds, pistachio, apricot); vine crops (wine grapes); field crops (cotton, grain, rice,) vegetable crops (processing tomatoes, cantaloupes, honeydew melons, watermelons, asparagus, onions, parsley); dairy support crops (alfalfa, silage corn, grain hay, sudan-grass); rangeland; irrigated pastures; wildlife areas (duck clubs)
 - Generally medium to very large farming operations. Environmental concerns with the rangeland and duck clubs involving endangered species habitat.

II. Restricted Materials Permitting

Approximately 1,550 restricted material permits (RMP) and 210 operator identification numbers (OIN) are active in Merced County. RMPs and OINs are issued on a multiyear and an annual basis. Multiyear permits are issued for permanent crops for up to three years.

Agricultural biologist on rotating office duty issue pesticide permits, operator identification numbers, and license registrations. For approximately four months (November through February), we operate on an appointment basis, with up to two agricultural biologists on duty at any one time. The CalAgPermits Program is used to issue Restricted Materials Permits.

Permit applicants are expected to come with updated sites and vicinity maps, and anticipated pesticide needs. During the permit review process, site maps are reviewed for completeness; proposed restricted materials are compared to the commodities for any off-label concerns and necessity of use; sites are cross checked with groundwater protection areas and endangered species maps for necessary permit conditioning; pesticide use reporting compliance for the previous year is also checked.

DPR suggested permit conditions have been incorporated into Merced County Agricultural Commissioner permit conditions along with several Merced County specific permit conditions. Each new permit and permit renewal is provided copies of applicable permit conditions and the permittee signs an acknowledgement that he/she has received copies.

Private applicator certification is handled at the same time as permit issuance. If the private applicator needs to take the examination, it is administered and scored in advance of permit review and issuance. The private applicator re-certification test has been used since December of 2007. If renewal is based on continuing education (CE), the private applicator records are checked to verify completion of minimum requirements. Merced CAC currently uses a database to track hours completed for continuing education for growers and their employees within our county.

Continuing education is a high priority in Merced County, both for our private applicators and licensees. During 2015, the department provided 18 hours of continuing education designed for private applicators, in which 13.5 hours covered laws and regulations. Continuing education topics usually are directed towards new or upcoming regulations. In addition to CE classes, the department provides outreach to several public agencies and events concerning pesticide regulation and safety.

Notices of Intents (NOIs) to use restricted materials are reviewed in a timely manner. Staff knowledge and experience is invaluable in this step to know where potential problems exist and how to customize conditions for particular applications. In 2015, an increased number of Pre-Application of Site Evaluations were performed to familiarize new staff with environmental conditions throughout the County of Merced. They were also performed when weekend duty staff is unfamiliar with the district or when district inspectors are not sure of surrounding areas. Our department requires all field fumigation

NOIs to have a pre-application site evaluation before approval. A list of sensitive sites requiring special consideration has been developed and identified on a county map and is available to staff.

Growers are notified annually of new and expected regulation changes through mail and again at the time of permit issuance. Growers are given a chance to discuss new regulations, or those that are unclear to them on a one on one basis with the biologist during the permit appointment. Several informational handouts are available to them at this time.

Goals to Improve the Permit Issuance Process

1. Accuracy of maps and identification of sensitive sites on the maps is an ongoing concern.
2. Continued evaluation for requesting the addition of restricted materials to permits, and accuracy of information recorded on the permits.

Deliverables

A permit issuance checklist is utilized while reviewing permits to flag and correct any discrepancies or inadequacies in the permits, which will be, or have already been issued. During permit issuance, Merced CAC will continue to spend more time on reviewing the maps for accuracy.

- Will also continue to pay close attention to pesticide applications to crops in proximity to waterways and schools for compliance with regulations.
- Continuing township cap restrictions on 1, 3-Dichloropropene, has created a need for new methods and uses of alternative fumigants (mainly in sweet potatoes) previously fumigated with 1, 3-Dichloropropene. Because of the newly introduced methods and uses, and the potential of off-site movement, applications of fumigants such as 1, 3- Dichloropropene, Metam Sodium, Metam Potassium, Chloropichrin, and Methyl Bromide will continue to be thoroughly reviewed, especially near occupied areas.

Merced CAC's Permit Conditions are reviewed and updated prior to each permit season as conditions and requirements change. Continued requirements are in place for Metam Potassium/ Metam Sodium users to complete a DPR approved stewardship certification class prior to application. Growers and/or applicators will be notified of regulations pertaining to: notice of applications, notification of completion of applications, application specific information, field entry after completed applications, and the requirements for early entry employees. Permit conditions of fumigants will be thoroughly reviewed each year, due to constantly changing labels and suggested permit conditions issued by the DPR.

The CalAgPermits Program continues to be a useful tool for determining distances to sensitive sites and assist with the development and/or implementation of permit conditions. Mapping functions allow for defined buffers based on crops or pesticides to be developed and utilized. Buffer distances can be created based upon the commodity and/or pesticide product being used and can be visualized on maps

allowing evaluation of the proposed application. Currently, defined buffers for certain restricted materials (phenoxy herbicides and fumigants) are being utilized to evaluate applications and determine compliance with Merced CAC's Permit Conditions.

School boundaries continue to be an area of focus when issuing permits. Proposed permits are thoroughly reviewed, prior to issuance, when in proximity to school boundaries. New regulations proposed by DPR in 2014 intend to require notification and restrictions within certain distances of school sites. In 2015, our department located and mapped all school boundaries within our county using the CalAgPermits system. These boundaries are currently used to evaluate permit applications and notices of intent.

In conjunction with the permit reminder that is mailed out, emphasis will be placed on the requirement for accurate and complete maps. Permits will be spot checked for accuracy of their maps and biologists will get immediate written feedback after issuing permits of any maps which are not complete, accurate, or clear. Permits will also be checked at this time for other discrepancies or deficiencies related to the permit issuance process.

III. Compliance Monitoring

Projected Inspection Totals

<u>Inspection Type</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>
<u>Pesticide Use Monitoring</u>	<u>160</u>	<u>180</u>	<u>200</u>
<u>Mix/Load Inspections</u>	<u>40</u>	<u>40</u>	<u>40</u>
<u>Field Worker Safety Inspections</u>	<u>40</u>	<u>50</u>	<u>60</u>
<u>Commodity Fumigation Use Monitoring Inspections</u>	<u>20</u>	<u>20</u>	<u>20</u>
<u>Field Fumigation Inspection</u>	<u>40</u>	<u>40</u>	<u>40</u>
<u>Structural Fumigation Inspection</u>	<u>15</u>	<u>15</u>	<u>15</u>
<u>Structural Use Monitoring Inspections</u>	<u>25</u>	<u>25</u>	<u>25</u>
<u>Pest Control Headquarters Inspection</u>	<u>30</u>	<u>30</u>	<u>30</u>
<u>Pest Control Business Headquarters Inspection</u>	<u>30</u>	<u>35</u>	<u>40</u>

In 2014-2015, the biologists participated in a field worker safety inspection pilot program in conjunction with Department of Pesticide Regulation. Our staff will continue to focus our efforts to perform routine field worker safety inspections to ensure compliance with the applicable laws and regulations.

Inspection Goals

1. Focused Pest Control Advisor Records Inspection to determine VOC non-fumigant regulations are in compliance.
2. Continue to conduct field worker safety inspection as trained through the pilot program.
3. Improve tracking and identification of non-compliances discovered during pesticide use enforcement inspections to comply with the enforcement response regulations in a timely manner.

Investigation Response and Reporting

Significant emphasis has been placed on improving report writing in recent years. Reports are now much more thorough and professional. However, a few areas have been identified which could improve our investigations.

Less experienced biologists and biologist's not routinely conducting investigations have gone through an "in house" training to improve writing quality and timeliness of completing investigations. Emphasis has been placed on important information to collect during all types of investigations. Staff will also attend any training or work closely with our DPR staff to be trained on ways to conduct investigations. All primary PUE biologists and rover biologists will be assigned investigations to effectively disperse cases to try to complete them in required time limits.

Better illness and complaint tracking has been accomplished with an illness/complaint log. Emphasis will be placed on the higher priority investigations and efforts will be made to complete them in a timely manner. A stronger emphasis will continue to be placed on completing non-priority investigations within the 120 day time frame described in DPR's Inspection Procedures Manual (Compendium Volume #5). There is also still a need to streamline the process to finalize the minor complaints. A form for minor complaints has been developed and will be utilized in 2016.

Investigation samples- A locking freezer that is dedicated to storing investigation samples prior to shipment to CDFA's Center for Analytical Chemistry is available to only authorized staff. New staff and veteran staff need training in taking various types of samples. To accomplish this, training by the enforcement branch liaison will need to be provided. A new modular building was added in 2009. A space in this building is dedicated to the storage of PUE samples and other equipment used for PUE activities.

A sample plan form has been developed and is utilized for investigations. Staff will attend investigative, NOPA report writing, advocate and hearing officer training as offered by DPR. Advocate training offered by DPR would be beneficial to staff to help identify essential elements of potential violations and to assure that necessary evidence is obtained.

Goals to Improve Investigations

1. Improved planning during early stages of investigations
2. Improve tracking and identification of non-compliances discovered during investigation
3. Submission of investigations and reports within the 120 day requirement, or request an extension
4. Utilization of complaint form to streamline minor complaints

IV. Enforcement Response

Agricultural biologist staff has received adequate training and has the experience in how to properly address noncompliance's through appropriate compliance action. Staff will strive to complete compliance actions within acceptable time frames.

A compliance history database was started several years ago, and all inspections, compliance actions, and civil penalty actions are being entered into the database. Compliance history reports are immediately available. This has streamlined the process of analyzing the enforcement options.

Merced CAC maintains a pesticide episode investigation log for those cases which will not be assigned a WH&S illness investigation number or a priority episode tracking number.

We will continue to consider other enforcement options including: denying restricted materials permits, license registrations, referral of cases to DPR, or consultation with the Merced County District Attorney for the most egregious cases.

Biologists have begun preparing and writing "decision report packages," which would contain draft decision reports, follow-up inspections, and/or compliance interviews. Decision reports written by the biologists are then to be reviewed by the Deputy and/or Assistant Commissioner.

Goals to Improve Enforcement Response

1. Improve the timeliness of evaluating non-compliances.
2. Issue appropriate action for non-compliances within required time limits.
3. Staff will be involved with writing decision reports in order to meet the proposed 60 day review requirement.

Deliverable

Continued training of agricultural biologists in the ERR (Enforcement Response Regulations) and how to process non-compliances through the regulations to arrive at appropriate recommendations for an Administrative Civil Penalty or compliance action. This can be accomplished through joint training

provided by experienced staff and our enforcement branch liaison (EBL) on a one-on-one basis throughout the year. Once this training is provided, staff would be guided in the process of making recommendations for actions.

More timely tracking of non-compliances and processing through the Pesticide ERR database has already been initiated. Regular consultation with staff to refine and strengthen this process will be implemented.

Staff will utilize a letter informing the inspected persons/businesses with non-compliances, of the Commissioners requirements and procedures under the ERR to evaluate and act on noncompliance's when directed by regulation.

County Priorities and Other Pesticide Regulatory Activities

Anticipation and implementation of the new CalPEATS program in 2017 will be a primary focus over the next work plan period. The CalPEATS program will involve significant change in processes concerning investigations, inspections, and enforcement actions. Equipment and training needs will be focused on prior, during, and after implementation of the system to insure seamless flow staff needs including training.

Non-Fumigant VOC Regulation Compliance (San Joaquin Valley-SJV): Merced CAC will work closely with DPR's Central Regional Office, DPR's Environmental Monitoring Branch and SJV Deputies to design and implement a region wide enforcement strategy. The CAC staff plan to continue to educate the majority of pesticide dealers on an annual basis. On-site trainings and record inspections will help ensure that the pest control dealers are in compliance with the VOC regulations. This will be accomplished by using several inspectors at each location performing records inspections of the dealer records, pest control business/headquarters records and pest control advisor records.

Staff training: Merced CAC staff has had considerable training to date with in-house and DPR provided training. CAC staff will continue to make a concerted effort to provide and attend both in-house and DPR sponsored training events and seminars to ensure staff is properly trained and apprised of current issues and changes. Staff members who attend trainings will consult with non-attending CAC staff to relay any relevant information. Bi-monthly pesticide training and support meetings are now being held to facilitate the sharing of information between staff. These are also used as a forum for training, using industry, DPR, and University of California Division of Agriculture and Natural Resources (UCANR) personal to provide information on pesticide related topics.

Industry education and outreach: Merced CAC staff endeavors to facilitate compliance of growers and industry by providing education and outreach opportunities regularly. When a request for education of outreach is sent to Merced CAC, staff will make every attempt to fulfill these needs.

Merced CAC staff will continue to actively participate in the Merced County Hazardous Materials Response Plan and work closely with CalFire, Merced County Environmental Health, and other agencies. CAC staff will continue to attend monthly hazardous material meetings. On occasion, CAC staff will provide agricultural and pesticide use updates and/or assists to personnel obtaining relevant information to facilitate fast and appropriate responses.