



2021

Integrated Pest Management Annual Report



IPM Advisory Committee Members

- Jim Donnelly, Chair**.....*Public Member #3 Seat*
- Susan Captain, Vice Chair**.....*Public Member #1 Seat*
- Carlos Agurto, Secretary**.....*County Pest Management Contractor Seat*
- Stephen Prée**.....*Public Member #2 Seat*
- Amy Budahn**.....*Public Member Alternate Seat*
- Andrew Sutherland**.....*Environmental Organization Representative*
- Susan Heckly**.....*Fish & Wildlife Commission Representative*
- Kimberly Hazard**.....*Sustainability Commission Representative*
- Michele Mancuso**.....*County Stormwater Program Representative*
- Michael Kent**.....*Health Services Department Representative*
- Dave Lavelle**.....*Public Works Facilities Designee*
- Chris Lau**.....*Public Works Deputy Director Designee*
- Beth Slate**.....*Agriculture Commissioner Designee*



1/11/2022

Executive Summary

Pesticide Usage

The amount of pesticides applied by County Departments increased this year for the first time since 2012. The increase is attributed to two divisions within the Public Works Department—Airports and Maintenance. Usage at the two Airport properties will be evaluated by the ongoing work of the IPM Decision-Making Subcommittee who commenced the revision of decision documentation for vegetation management at the airports in August. The Maintenance Division resumed pesticide applications on roadsides and flood control properties in February after pausing the program in November 2018. Usage data for the last three fiscal years are significantly impacted by the pause of the PWD-Maintenance herbicide program as described on pages 2 and 3 of this report.



IPM Advisory Committee

The Committee developed a pesticide risk visualization tool and decision documentation for vegetation management at Juvenile Hall. They received presentations about topics ranging from IPM outreach to organic herbicides & alternatives to glyphosate. The Committee initiated efforts to revise departmental IPM plans and draft an outreach strategy that supports the IPM Policy goal to create public awareness of IPM through education.

In addition to the departmental IPM plan revisions and development of an outreach strategy, the 2022 Work Plan of the Committee will also focus on enhancing departmental IPM training and recordkeeping. The Committee accomplished many of the ambitious activities outlined in the 2021 Work Plan and seeks to further many of them in the coming year.

Personnel

This year also marked a few impactful personnel developments in the Agriculture and Public Works Departments. Deputy Agriculture Commissioner Larry Yost retired after 32 years of public service in the department, and Assistant Agriculture Commissioner Jose Arriaga was appointed as Agriculture Commissioner of Orange County. Two new Deputy Commissioners have been hired along with several key positions within Public Works. The Grounds Division filled five Gardener vacancies and the Maintenance Division brought three new Vegetation Management Technicians on board.

2021 Integrated Pest Management Annual Report

Introduction

All advisory bodies to the Board of Supervisors (BOS) are required to submit an annual report at the end of each calendar year. The Countywide Integrated Pest Management (IPM) Policy requires the IPM Advisory Committee to include updates on the development and implementation of IPM programs within the Agriculture and Public Works Departments. The pesticide usage component of these reports is compiled by fiscal year (July through June) and the remaining content covers the period from when the previous year's report was approved by the Committee (typically mid-November).

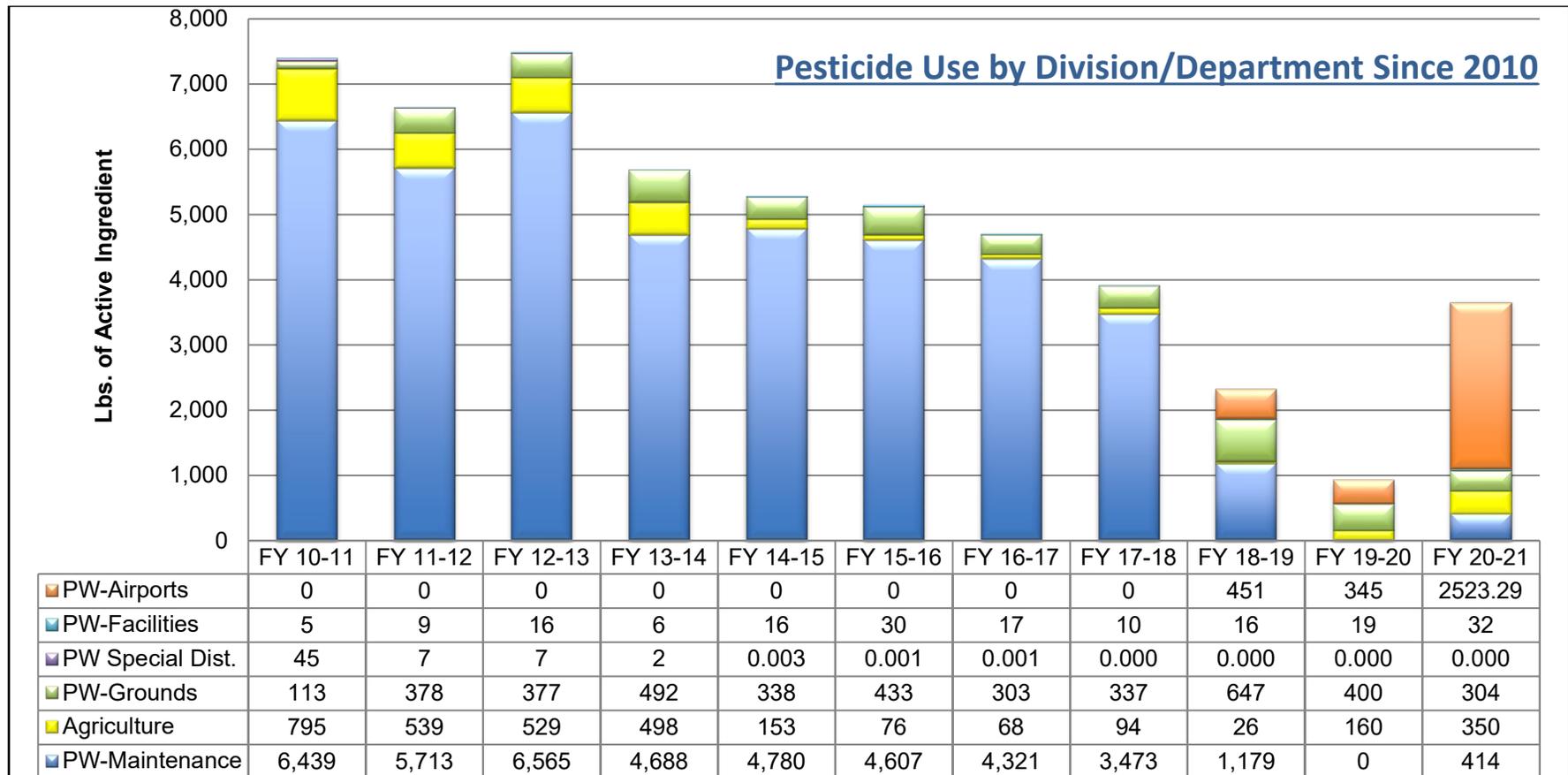
Pesticide Usage

Since 2000, County departments have decreased pesticide usage by 81% (see updated [Pesticide Use Summary Comparison](#)). During the same time frame, the use of pesticides deemed bad actors by the Pesticide Action Network have decreased by 75%. There have only been two instances over the last 20 years when usage increased from one year to the next. The first occurred with a 12% increase between fiscal years 2011-12 and 2012-13. The second happened during this reporting period. This year's usage increased by 392% compared with FY 2019-20, when there was a pause in the PWD-Maintenance herbicide program. The total amount used this year was less than FY 2017-18 when the PWD-Maintenance herbicide program was in place. While additional exploration into the full justification for the increase is warranted; the following findings may provide context:

- PWD-Maintenance performed all herbicide applications at airport properties prior to 2018 under the direction of the Vegetation Management Supervisor. The percentage of herbicide applied to airport properties by PWD-Maintenance personnel before 2018 is unknown.
- The Public Works Maintenance Division (PWD-Maintenance) reconvened their herbicide program in February of this year. Prior to that, they had not applied herbicides on roadsides or Flood Control properties since November of 2018.
- The last person to occupy the Vegetation Management Supervisor position accepted employment with another public agency in 2016.
- Due to several unsuccessful attempts to fill that position—whose salary was comparatively lower and required a higher level of minimum qualifications in comparison with equivalent positions in the region—the Department opted to cancel the position in order to help fund a Training and Staff Development Specialist position in December of 2019. (Additional context available on the Board Order found [at this link](#))
- The 2-year pause of the PWD-Maintenance herbicide program not only created vegetation management backlogs along roadways and on Flood Control properties, but it also placed an unrealistic burden on Public Works Department Airports Division (PWD-Airports) to absorb a complex herbicide application function without the previously high-level of technical expertise available.
- Staff in the Airport Safety Officer series have performed all herbicide applications since 2018.
- The class specification for Airport Safety Officers lists the application of chemicals and other weed control products as typical tasks alongside fire suppression, airport security, regulatory compliance, and equipment maintenance.
- Despite fewer pesticide-specific regulations applying to airports in general and not having a regulatory responsibility to do so, PWD-Airports leadership continues to consult with licensed Pest Control Advisors (PCA's) on the products used to ensure safety conditions mandated by the Federal Aviation Administration (FAA).
- Herbicide applications at Byron and Buchanan Field Airports accounted for 70% of the total pesticide usage of all County departments in FY 2020-21.

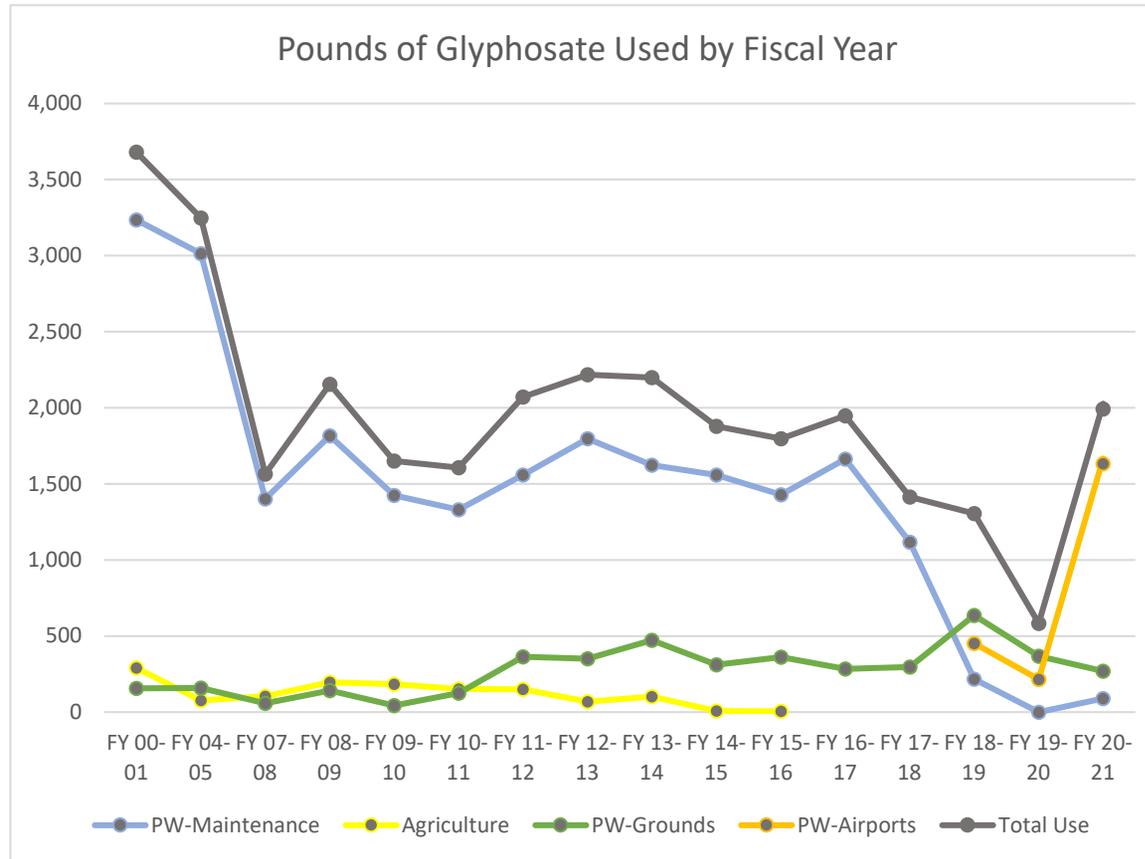
- The IPM Decision-Making Subcommittee initiated the process for revising the decision document for vegetation management at the airports in August and will continue to deliberate on that topic in 2022.

The chart below depicts the total pesticide used between the different Public Works divisions and the Agriculture Department over the last 11 years. The Public Works Facilities Division (PWD-Facilities) and Agriculture saw an overall increase in usage from the previous year. The PWD Grounds Division (PWD-Grounds) nearly matched their 10-year low for herbicide use this year. Usage data for the last three fiscal years are significantly impacted by the pause of the PWD-Maintenance herbicide program as described above. Divisional data from this year and FY 2018-2019 are abnormally low since applications were only conducted during a few months of each year. PWD-Maintenance did not apply herbicides in FY 2019-20.



Glyphosate Update

Herbicides containing glyphosate continue to be a controversial topic. In 2017, the California Office of Environmental Health Hazard Assessment (OEHHA) listed glyphosate as a Proposition 65 chemical known to cause cancer. However, there have been no regulatory changes associated with the use of formulations containing glyphosate by the United States Environmental Protection Agency (EPA) and the California Department of Pesticide Regulation (DPR).



At the request of the IPM Advisory Committee in 2019, the IPM Coordinator conducted an assessment of glyphosate use by County departments. That review revealed the highest use sites to be the detention facilities at West County and Marsh Creek, Juvenile Hall, and the Byron and Buchanan Field Airports. In 2020, the Committee approved vegetation management decision documentation for both detention facilities. The Committee approved similar documentation for Juvenile Hall this year. As noted earlier, vegetation management at the airports is currently being reviewed by the Decision-Making Subcommittee.

The Committee remains interested in assisting County departments navigate this complex subject. The development of the Pesticide Risk Assessment Tool is intended to help departments and applicators in the County to weigh multiple risks associated with certain active ingredients. That tool is described in greater detail later in this report.

In the July meeting of the Committee, Karey Windbiel-Rojas from the University of California Cooperative Extension and Statewide IPM Program presented on organic herbicides and Alternatives to glyphosate. She continues to perform field trials for a variety of post emergent products and closely monitor efficacy of each one. The trials are ongoing and the data she presented were preliminary. Some of the products show promise, but cost implications and heightened acute health risks to applicators are significant limitations. Additionally, the California Department of Food and Agriculture has issued two stop-use-notices in the last year for products claiming to be organic alternatives. In each case, the products claimed to be organic, natural, or glyphosate free but were found to contain glyphosate as well as other synthetic pesticides not included on their respective label.

IPM Advisory Committee

The Committee met five times during the year. The Decision-Making Subcommittee also held five meetings while the Grants & Pilots Subcommittee convened twice. All agendas and approved minutes can be found online at the County's Public Meeting Agenda Center. The Committee made progress on many of the objectives included in the 2021 Work Plan and intends to continue working on them during 2022. The work of the Committee was driven by the four stated goals of the Countywide IPM Policy:

1. Minimize risks to the general public, staff and the environment as a result of pest control activities conducted by County staff and contractors.
2. Create, implement and periodically review written IPM plans in the Agriculture, Health, and Public Works Departments specific to their operational needs and consistent with the UC definition and this policy.
3. Promote availability, public awareness and public input into written county pest management plans and records.
4. Create public awareness of IPM through education.

Some of the activities and accomplishments of the Committee that pertain to each goal are as follows:

Goal #1

- In January, the Committee received a presentation about a new visualization tool initiated by Dr. Paul Jepson and his colleagues at the Oregon IPM Center. They offered input and referred further discussion and development of the tool to the Decision-Making Subcommittee. The Subcommittee worked to modify elements of the tool to better identify the types of risk associated with County operations. They approved the concept of the [Pesticide Risk Footprint Tool](#) in August and the full Committee approved it in November.
- Completed [Decision Documentation for Vegetation Management at Juvenile Hall](#) and reviewed vegetation management activities at the Orin Allen Youth Rehabilitation Facility, the Byron Airport, and Buchanan Field Airport.
- Conducted research into alternative vegetation management tactics, pesticide risk assessment, and potentially applicable grants.
- The July meeting of the Grants & Pilots Subcommittee included a presentation on competitive planting from Dr. Chris McDonald from the University of California Cooperative Extension.

Goal #2

- The Committee reviewed each departmental IPM Plan during the March meeting. Members offered a variety of feedback on the existing plans and gave suggestions for revision. The Committee Chair recommended that a plan template be developed to ensure all departments and divisions within the County are implementing IPM in a uniform manner. The template is under active development and will be discussed in 2022.
- The Committee received a presentation in March regarding an overview of the Healthy Schools Act. The presentation included a summary of which facilities are subject to the legislation as well as the compliance status of each site.

Goal #3

- The Committee supported the formation of a geographic information systems (GIS) technical advisory committee (TAC) to explore the possibilities of improving site-specific pest management data compilation and increasing the transparency of pest management decisions. The TAC will convene in 2022.

Goal #4

- During the March meeting, the Committee received three outreach-related presentations. Michael Kent presented on the efforts of the Outreach Subcommittee that was previously convened in 2017 and 2018. Michele Mancuso gave an overview of the Clean Water Program’s coordination with Our Water Our World, and Greg Spurlock detailed the Alternatives Considered format used by Restricted Materials Permittees. Committee members provided input on potential outreach methods. The IPM Coordinator agreed to draft an outreach strategy to be considered by the Committee in 2022.

Attendance, Training, and Member Engagement

| IPM Advisory Committee Attendance | | | | | | | |
|---------------------------------------|------|------|------|------|-----------------------|-------|----------------|
| 2021 | 1/21 | 3/18 | 5/20 | 7/15 | 9/16 | 11/18 | Total Absences |
| Public Member #1 | P | P | P | P | 9/16 Meeting Canceled | P | 0 |
| Public Member #2 | P | P | P | P | | P | 0 |
| Public Member #3 | P | P | P | P | | P | 0 |
| Public Member Alternate | | P | P | | | P | 2 |
| Environmental Org. Representative | | P | | P | | P | 2 |
| Sustainability Comm. Representative | | | P | P | | P | 2 |
| Fish & Wildlife Comm. Representative | P | P | P | P | | P | 0 |
| Stormwater Program Representative | P | | P | P | | P | 1 |
| Health Services Representative | P | P | P | P | | P | 0 |
| Ag Commissioner Designee | P | P | P | P | | | 1 |
| PWD-Facilities Designee | P | P | P | P | | P | 0 |
| PWD Deputy Director Designee | P | P | P | P | | P | 0 |
| County Pest Mgmt. Contractor | P | P | P | P | | P | 0 |
| Total Present | 10 | 11 | 12 | 10 | | | 10 |
| Voting Members Present | 6 | 7 | 8 | 8 | | 8 | |
| Total Members of the Public attending | 2 | 2 | 1 | 2 | | 0 | |

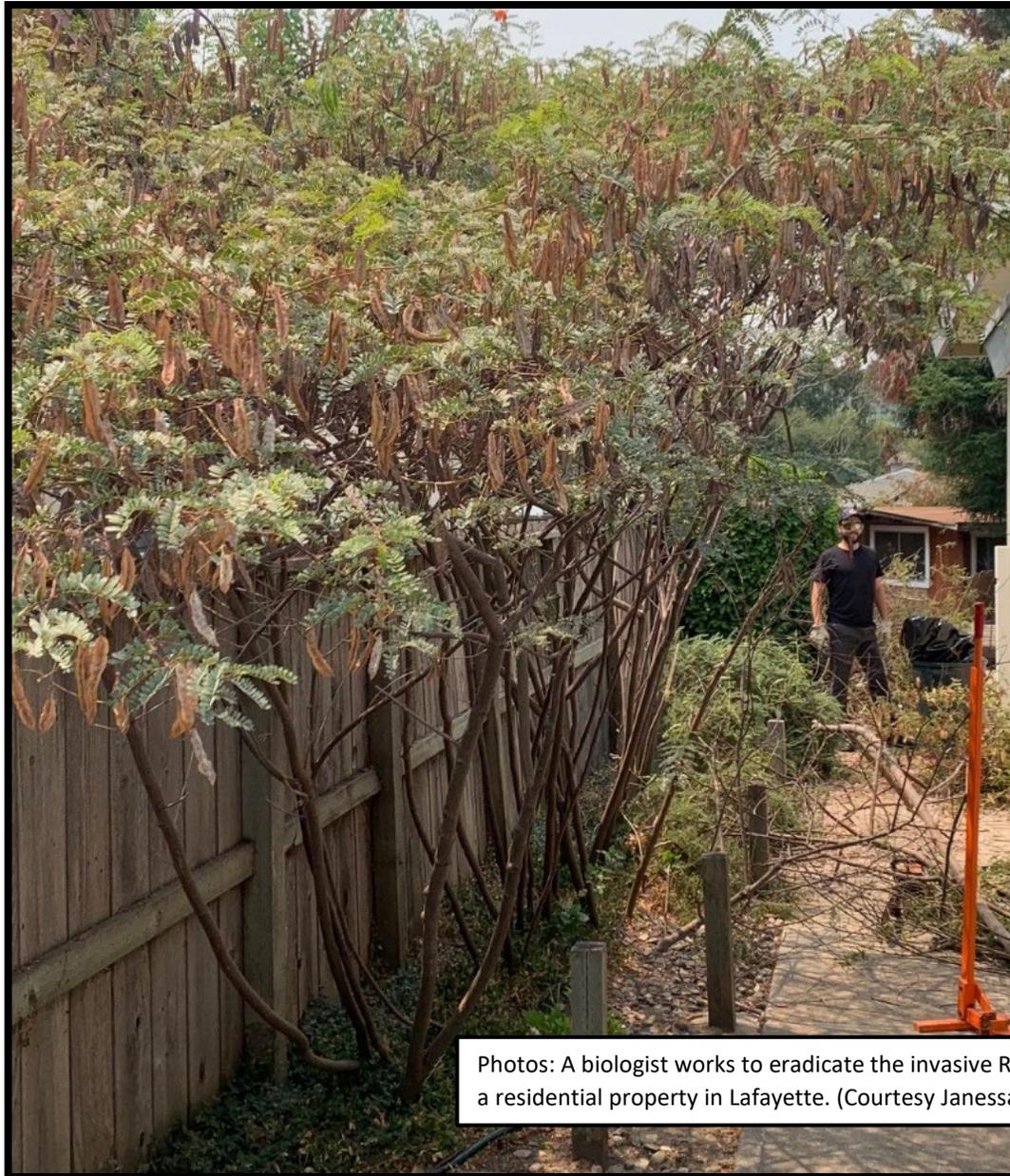
P=Present

- All public members of the Committee are current on Brown Act and Better Government Ordinance Training.
- There have been no unexpected vacancies occur within the reporting period.
- In addition to the meetings of the full Committee, many members also attended subcommittee meetings throughout the year.
- Only one scheduled meeting was canceled this year due to advance notice of several anticipated absences.
- Despite personnel changes in County departments, staff-designated seats were 92% filled at each meeting of the full Committee.
- Of the public member and contractor seats, three reside in BOS District 1, three in District 2, and one in each of Districts 3, 4, and 5.

Public Works and Agriculture Departments

Agriculture

- In August, Larry Yost retired from the County after 32 years in the Department. He was on the Committee for several years and was a valuable member of the Decision-Making Subcommittee.
- Jose Arriaga was appointed Orange County Agriculture Commissioner in September. In March, he gave a presentation to the Contra Costa County Sustainability Exchange on the topic of urban agriculture. The Sustainability Exchange is a quarterly gathering for local government staff in Contra Costa County who collaborate on sustainability issues.
- Erin Herbst and Ivan Godwyn were hired as Deputy Agriculture Commissioners this year. Deputy Commissioner Beth Slate now represents the Department on the Committee and oversees the vertebrate and invasive plant programs.



Photos: A biologist works to eradicate the invasive Red Sesbania from a residential property in Lafayette. (Courtesy Janessa Weingand)



PWD-Airports

- In August, Airport personnel presented an operational overview of vegetation management at both airports to the Decision-Making Subcommittee. They highlighted a few practices now used at both the Byron and Concord properties. Some include the following:
 - Each site has dedicated mowing and discing implements that primarily stay at each location to reduce vegetal pest pressures from getting established at both airports.
 - The bare-earth areas alongside runways and taxiways have been reduced from an average width of 50 to 75 feet wide to an average width of 15 to 25 feet.
 - Mowing and spraying were eliminated in a portion of the Byron Airport where it would not impact safety and security.



PWD-Grounds

- County gardeners were the first division to adhere to revised posting requirements. 72 applications since February were appropriately noticed on the County IPM website as well as physically at each location with temporary signage. The IPM Committee recommended updates to the posting policy and signage in 2020. The recommended changes—which included 2019 TWIC guidance—have not yet been formally implemented by the Public Works Department. However, the Facilities and Grounds Division are commended for their efforts to transparently communicate information about each pesticide application in areas where the public has permitted access.
- The Division welcomed 5 new gardeners this year: George Earlywine, Omar Walker, Roberto Sedano, Rochelle Garcia, and Tim Thoene.
- The Grounds team updated the landscape surrounding the Brookside Shelter in North Richmond. The installation included palm trees, pathways, and graveled areas that will limit harborage for rodents and other pests.
- New on-call landscaping and weed abatement contracts were awarded to H&N Enterprises and The Landscape Company for three year terms with the option of two one-year extensions. These vendors are used when the demand for landscaping and weed abatement services exceeds staffing levels.

PWD-Special Districts

- The vertebrate pest program completed its fourth year of not using rodenticide on properties managed through the Countywide Landscaping District. The contractor trapped 12 gophers and 1 mole in 2021.

PWD-Maintenance

- Resumed herbicide applications on roadways and Flood Control properties in February, 2021.
- Hired three Vegetation Management Technicians to increase the total number to four. Emmett Brady, Hannah Clifton, and former Committee member Jim Cartan filled these vacancies.
- In September, the Department renewed its on-call grazing contract with Goats R Us for a one-year term with the option of two one-year extensions.



PWD-Facilities (Pestec)

- The County acquired the former Motel 6 in Pittsburg through a Project Homekey grant in 2020. In June of this year, Pestec began inspecting and treating the 174-room facility that will be used to support residents transition into supportive housing. The County began operating the site early in the pandemic as a shelter where residents could isolate. Pestec continues to provide services to the facility with the goal of getting cockroach and bedbug populations under control and implementing long-term preventative strategies.
- In the spring, Pestec carried out a series of ground squirrel abatement trials using carbon dioxide injection at West County Detention Facility.
- In August, Pestec was awarded a competitively bid contract renewal for a three-year term with the option of two one-year extensions.
- Pestec personnel remained a reliable resource to consult with on numerous occasions that included topics as varied as lice-prevention protocols, urban agriculture gopher control, and civically-engaged rats.



2022 Work Plan of the IPM Advisory Committee

The IPM Committee will focus on the following objectives in 2022 that correspond to the four IPM Policy goals:

1. *Minimize risks to the general public, staff and the environment as a result of pest control activities conducted by County staff and contractors.*
 - a. **Help refine departmental IPM training to increase awareness to the County IPM Policy, departmental and facility IPM plans, The Pesticide Risk Footprint Tool, and help coordinate annual worker safety training, annual Healthy Schools Act (HSA) training, and continuing education for licensed applicators.**
2. *Create, implement and periodically review written IPM plans in the Agriculture, Health, and Public Works Departments specific to their operational needs and consistent with the UC definition and this policy.*
 - a. **Recommend County departments/divisions incorporate a Departmental IPM Plan template approved by the Committee to comply with the Administrative Bulletin 542.**
3. *Promote availability, public awareness and public input into written county pest management plans and records.*
 - a. **Investigate the feasibility of standardizing pest management recordkeeping across County Departments and centralizing reporting protocols.**
 - b. **Convene the TAC focusing on geographic information systems explore the possibilities of improving site-specific pest management data compilation and increasing the transparency of pest management decisions.**
4. *Create public awareness of IPM through education.*
 - a. **Develop an outreach strategy that supports the work of community partners and similarly-engaged public agencies.**
 - b. **Review properties leased by and leased to the County to identify areas for IPM-related outreach.**

