UCLA Sustainability Action Research

INTEGRATED PEST MANAGEMENT AT UCLA

Informing Ecological Pest Management Practices for UCLA's Integrated Pest Management Plan

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2025 Final Report

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ABSTRACT

Pest management is a complex challenge that requires a balance between effectiveness, environmental impact, and public health considerations. Integrated Pest Management (IPM) is a sustainable approach that prioritizes prevention, monitoring, and the least toxic control methods. Researching and implementing ecological pest management practices aligns with UCLA's outlined sustainability goals. The 2024 University of California IPM Policy serves as a basis for UCLA's current efforts in drafting and implementing a campus-wide IPM plan which is to be finished September 2025. This research builds on the work of a previous Sustainability Action Research team in 2017 that studied on-campus rodenticide use and a team in 2023 that studied native bees. Our two research questions are (1) *How can insights from institutions with established IPM programs, along with UCLA's existing pest data, inform the development of a comprehensive IPM plan at UCLA?* and (2) *How can best practices in IPM and UCLA's specific pest patterns be integrated into an effective outreach campaign to increase awareness?* Pest issues and excessive pesticide use on campus affect all members of the community and can negatively impact the environment. It's important to address health and safety concerns regarding pest management in an urban environment like UCLA while upkeeping sustainability goals. Our research methods include interviews with experts, site visits to campus hot spot areas, GIS mapping, and data analysis to aid UCLA's IPM committee as they draft UCLA's IPM plan. With our deliverables we identified and presented hotspots in trouble calls and pesticide usage trends, compiling findings into communication materials to educate community members on their role in pest management and prevention.

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INTRODUCTION

IPM is an approach to pest control that emphasizes prevention, monitoring, and the use of least-toxic methods before chemical interventions (EPA 2024). Over the last several months, our team has been working to support our stakeholders in developing and updating UCLA's campus-wide IPM plan. This plan, which is set to be completed in September 2025, is the foundation and driving force behind our research. More specifically, the new UCLA IPM Plan will align with the updated 2024 UC IPM Policy, which ensures pesticides are used only after a thorough evaluation and when alternative strategies have proven ineffective. UCLA's IPM program is overseen by an IPM Committee, consisting of over a dozen members responsible for guiding implementation and ensuring policy adherence. Among these members is Paul Townsend, head of AIPM, UCLA's pest management contractor and our stakeholders Katz and Bentzin, with Katz serving as IPM coordinator. Working together, representatives across UCLA's IPM committee ensure that pest management is a coordinated effort spanning the entire campus, including Facilities, Housing, Athletics, Health Systems, ASUCLA, Asset Management, and research laboratories, to reflect a united approach to campus wide pest control (UCLA Sustainability, n.d.). UCLA's commitment to sustainability and reducing pesticide use has earned it the distinction of being the first California campus awarded a Green Grounds Certification (Crystal & Hallisey, 2025). This recognition highlights UCLA's dedication to improving human health and the environment by minimizing the use of pesticides on campus.

Our research focuses on two key questions: (1) *How can insights from institutions with established IPM programs, along with UCLA's existing pest data, inform the development of a comprehensive IPM plan at UCLA?* (2) *How can best practices in IPM and UCLA's specific pest patterns be integrated into an effective outreach campaign to increase awareness?* We

hypothesize that studying successful IPM programs at other institutions and leveraging UCLA's existing pest data will help identify areas for improvement in the current pest reporting and documentation system. These insights will ensure cleaner, more informative data collection that can be more easily referenced and leveraged for future analysis. Additionally, we expect that a well-designed outreach campaign will create a positive shift in the campus "culture" surrounding pest incidents and management.

Past SAR projects have focused on reducing rodenticide use or supporting specific biodiversity, such as native bees. This project expands the scope to include a comprehensive approach to pest management, addressing ants, cockroaches, and rodents across campus. Our work is grounded in three key methods: interviews, data analysis, and site visits. Using these methods and following the principles of IPM, which emphasize addressing the root causes of infestations while minimizing pesticide risks to campus ecosystems, we aim to support the work of UCLA Facilities Management, UCLA Sustainability, and other campus programs in creating climate-resilient landscapes that promote both human and ecological health. As part of this effort, we developed educational materials for campus and committee members, alongside recommendations to improve the current pest reporting and documentation system. Our recommendations are informed by our research and data analysis and are designed to help advance the goals of a more sustainable, effective pest management system.

METHODS

Interviews

To gather insights on best IPM practices, our research team conducted in-depth interviews with three pest management experts, focusing on understanding IPM implementation and effectiveness within the UCLA campus context. These interviews provided a

behind-the-scenes understanding of how pest matters are handled at UCLA. Interviews were performed with Kairann Smutz, an Operations Analyst for UCLA Facilities Management; Paul Townsend, Operations Manager at Animal & Insect Pest Management (AIPM, UCLA's pest management contractor); and Eric Middleton, the Area IPM Advisor for UC Agriculture and Natural Resources. In addition to these long form interviews, we also corresponded with UC San Diego's IPM coordinator and IPM Superintendent, Todd Schmidt, via email, asking him a series of questions in order to learn how a similar institution has embraced the IPM process in light of the UC IPM policy.

Site Visits

Our team held site inspections as another component of research. They were led by one of our team stakeholders Bonny Bentzin, the Deputy Chief of Sustainability Officer of UCLA, and Ivan Sanchez, who is a representative of AIPM. The purpose of the site visits was to obtain a better understanding of how AIPM manages pests on campus and identify areas that face persistent pest issues. We mainly explored loading docks across campus, which show frequent signs of pests due to large amounts of food and trash. For the first walkaround, we visited the loading dock at the Ackerman building, which is near a food court with a high student population density. Next, we visited the Center for Health and Sciences (CH&S) building, which has a comparatively high number of trouble calls on campus. For the second walkaround, our team visited the loading dock at Ronald Reagan Medical Center in order to identify and learn from effective hospital sanitization procedures. During these site visits, we posed questions to Bentzin and Sanchez, to understand site contexts and common pest patterns.

Data Analysis

For quantitative data, our research team received four different data sets. The first was from UCLA Facilities Management, detailing every trouble call relating to pest infestation from 2021-2024. This data had the site location, date, as well as a description of the event (e.g, rat found in ceiling, beehive forming on windowsill, etc.). We also received the UC system's Hazard Tier list (see Figure 1), which outlines ranks for chemicals used in pest management on a tier scale. Tier 3 is green and is considered unhazardous, Tier 2 is yellow and is mildly hazardous, and Tier 1 is red and hazardous. As part of the UC statewide IPM program, we also looked at the Pesticide Use Authorization (PUA) approval matrix which was often referred to in IPM Committee meetings. PUA administration for products in the yellow or red tier are determined based on available alternatives, specific application scenarios, and overall IPM practices (see Figure 2). Next, our research team received two correlated datasets from AIPM: one for materials used and one for technician notes, both describing fiscal years 2021-2024. The materials used data had every visit to UCLA buildings, including for inspection only purposes, as well as the location, material used, active ingredient of the material, active use percentage, date of visit, and notes on the visit. The technician notes dataset had notes that pest technicians left about their pest control visits, and was used qualitatively to inform research decisions, but was not analysed qualitatively. All data, except for the technician notes, was then cleaned and analyzed in GIS and Excel.

To analyze the data for GIS use, it was first necessary to clean the data. The Facilities Management data was cleaned by changing the description of the event to a category of pest. Using a combination of Chat GPT and manual checking, descriptions were shortened to key tags of the pest present. For example, 'Dead animal found in ceiling' was tagged as 'DEAD,' 'ants

and roaches crawling around' was tagged as 'ANTS, ROACHES.' All data cleaned by Chat GPT was verified as correct by filtering the AI tags and referencing the notes to ensure that the notes did in fact reference the pest tagged. Any dead animal found was tagged only as 'DEAD' due to the large numbers of unidentifiable dead animals reported. The latitude and longitude coordinates for every building were then manually input for geolocating, using an online map of UCLA available to visitors for navigation.

AIPM data was then cleaned by changing the units used to a standardized unit of ounces, and correlating it with the Hazard Tier list. Every pest control used was tagged with a number based on its tier: 0 for green, 1 for yellow, and 2 for red. Pest controls whose brand name was untagged on the Hazard Tier list were tagged to the closest matching pest control based on active ingredient. The hazard level was then calculated using the following formula. The summation indicates that the total hazard level was calculated using the summation of this formula for every ingredient used per building.

$$\sum \textit{Hazard Level} * (\textit{Active Ingredient}\ [\text{oz}] * \textit{\% Active Ingredient})$$

After the datasets were cleaned, the data were then plotted using ArcGIS. For the Facilities Management data, it was geocoded using the latitude and longitude coordinates. For the AIPM data, ESRI's Geocoder function was used, and the building address was inputted to save time. It is important to note that as a result of this, two buildings may not have the same overlapping point on the GIS maps. Any inconsistencies with ESRI's geocoder were corrected, and then a basemap of UCLA's campus and buildings was added for context. Example maps are available in Appendix C and final maps were sent to the IPM committee.

CHALLENGES

Throughout this project, we faced several challenges when applying methods, redefining the scope, and analyzing data. However, we worked through these challenges together and learned how to adapt to circumstances outside of our control.

Data Analysis

Although a good portion of the project focused on data analysis, there were several limitations and setbacks regarding the data used. First there was the challenge of deciding how to best visualize each dataset in the most clear way possible. Some datasets, including the technician notes from AIPM, included detailed descriptions of comments from technicians, but not all entries had a concrete action taken. Therefore, we had to decide how to incorporate the technician notes into our deliverables, while also ensuring a clean final product. Throughout this process, we discussed ideas with each other and considered several drafts before deciding our final deliverables. Another obstacle was the lack of a standardized reporting system for the different datasets–many entries just said “other pest” or “dead” for the pest type. This issue was addressed by creating an “other” category for the final visuals. Experiencing this terminology inconsistency highlighted the need for a more centralized pest reporting system in the future. While working with data pertaining to pesticide hazard tiers and GIS mapping, our research team had to carefully navigate which parts of deliverables would be public-facing versus which would be used solely for internal review by the IPMC. This issue was managed by openly communicating with the stakeholders and incorporating their feedback into the final products.

Project Scope and Deliverables

IPM intersects with numerous fields and departments across campus, hence a primary challenge was establishing a clear, focused project scope. For much of the winter quarter, we focused on data analysis, GIS mapping, interviews, and literature review. During spring quarter, we shifted focus to communications materials and site visits. During the site visits, we were introduced to multiple individual trouble areas and hotspots, but given the limited time left for the project, we decided it was best to keep their scope more broad, while making recommendations that a future SAR team could utilize later to tackle individual projects. Regarding designing the communication materials, several rounds of editing and revisions with feedback from stakeholders were needed in order to best balance professionalism with graphic design elements. Feedback from the IPM Committee was also considered for the communication materials to make sure that the interests of different departments at UCLA were adequately considered. Initially, many education flyer drafts were produced, but we had to work together to narrow down the final products and prioritize certain designs above others.

RESULTS

Interview Results

I. Kairann Smutz – Operations Analyst, UCLA Facilities Management

II. Paul Townsend – Operations Manager, Animal & Insect Pest Management (AIPM)

III. Eric Middleton – Area IPM Advisor, UC Agriculture and Natural Resources (ANR)

IV. Todd Schmidt – Superintendent & IPM Coordinator, UC San Diego

First, we interviewed Kairann Smutz, a Facilities Operations Analyst at UCLA, to get a better idea of the report process, AIPM response, follow-up, and remediation efforts. Smutz plays a crucial role in connecting the campus with AIPM, UCLA's pest management vendor. We learned about how responses are tailored to specific complaints and building needs. We also gained a behind-the-scenes insight into how detailed reports can be from AIPM. Smutz talked about the day-to-day happenings of pest management at UCLA, and provided a realistic sense of how long it takes for issues to be resolved. Once pests are removed, remediation is essential, she emphasized. This involves patching and sealing any potential entry points to prevent future infestations. Follow-up may include sanitizing the area, putting up signage to promote keeping spaces clean, and educating building occupants. Smutz suggested that having a pest control web presence would be beneficial to educate the campus community on best practices, reiterating that awareness is key.

Next, we interviewed Paul Townsend, AIPM's operations manager. He provided a deeper look into strategies and challenges for pest control on UCLA's campus. He described how trouble calls are reported and the three main pests the university manages--ants, rats, and cockroaches. Townsend emphasized the importance of GIS mapping and electronic pest traps. These tools help track trends and target treatment more effectively. He also stressed the importance of cultural and behavioral change in pest management. Some easy fixes could include preventing doors from being left open and not letting trash cans overflow. Pest prevention helps address the root of the problem and reduce the overall chemical load used. AIPM always aims to go with lower toxicity products first and follow up if necessary, he said. Townsend also emphasized looking at larger-scale trends and the bigger picture to achieve long-term prevention goals.

Finally, we talked to Eric Middleton, a UC ANR IPM Advisor for the LA, Orange, and San Diego counties. Middleton has a strong background in agriculture and entomology, so he thoroughly described the challenges that are specific to UCLA's campus and climate. These challenges include LA's mild climate, its proximity to international ports, and the use of invasive ornamental plants on campus and in surrounding neighborhoods. Also, the heavy pedestrian presence means a decreased tolerance for both overall pesticide use and acceptable pest thresholds. We learned that effective IPM on campus requires addressing these unique circumstances. Notably, Middleton emphasized that educating the campus community about the many benefits of beneficial organisms is key to limiting pesticide use and lowering pest thresholds. He also discussed the importance of reframing our perspectives of how natural spaces should look and adjusting our previous viewpoints. He told us, “If you are trying to keep your outdoor plants looking totally clean, totally unaffected, you are going to be applying pesticides.” We learned that sometimes a few pests are okay, and in fact, they are a part of the natural ecosystem, so it is important to change campus’ cultural views surrounding pests as well.

We also conducted outreach to IPM professionals at other institutions, to perform external research on campus IPM best practices. The IPM experiences of UC San Diego were studied through an email communication with Todd Schmidt, their superintendent and IPM coordinator. We gained valuable insight on their management services, report and response process, how they are promoting cultural change on campus, and how they balance least hazardous pest management techniques while maintaining high levels of efficiency in pest management. Connecting with other universities, especially those within the UC system with developed IPM plans, is crucial as UCLA continues to develop its own IPM plan. We hope to stay in touch with other universities’ IPM coordinators and learn from their best practices.

Site Visit Results

A key takeaway from the first walkaround was that garbage trucks pick up trash at around 4 PM, which is before all the ASUCLA restaurants throw away their trash bags. As a result, food and garbage remain and get piled up overnight, which can attract various pests and rodents. This can cause contamination in the surrounding area. In order to prevent a pest issue, there should be coordination between ASUCLA, UCLA Facilities Management, and any relevant contractors, in order to discard and collect trash at an appropriate time, so that dumpsters remain empty overnight. From observations from both tours and insights from Sanchez, the AIPM associate, we discovered that the most common signs of pest infestation are droppings and black smear marks. Smear marks are oily substances that coat the fur of rodents, and are transferred to surfaces from their fur and tails. These signs are often visible when rodents pass through an area. On UCLA campus, students and faculty members should watch for signs of droppings and black smear marks, as they are clear indicators of a pest problem in a particular area on campus or inside a building. Lastly, our team discovered that mechanical traps and bait stations are used frequently throughout campus. However, an important future consideration could be extending a network of electronic and bluetooth traps on campus, so that pests can be managed more effectively and efficiently by the AIPM team.

Data Analysis Results

Our analysis draws from several sources, including Facilities Management trouble call reports from fiscal years 2021–2025, and internal pesticide materials and usage data, and technician field notes, from AIPM. These datasets together offer a multi-dimensional

understanding of pest activity, response patterns, and the nature of pest management across campus (see Appendix B).

Facilities Management trouble call data in Figure 8 shows a significant increase in reported cases beginning in FY 2022–2023, peaking at 755 incidents. This represents a substantial rise from 521 incidents in FY 2021–2022. The following year (FY 2023–2024) remained high with 712 incidents, before dropping to 476 reported incidents in FY 2024–2025. These trends may reflect both a genuine rise in pest activity and improved awareness or reporting mechanisms on campus.

Across the four years of data, invertebrate pests comprise the overwhelming majority of incidents. As seen in Figure 7, ants alone represent 36.6% of reports, followed by cockroaches (18.5%), and flies (5.2%). Bees and wasps together account for over 10% of incidents, suggesting a notable frequency of stinging insect encounters. Rodents, a category containing rats, mice, and squirrels, while less frequent overall (12.7%), remain a consistent concern in technician notes, likely due to their potential for structural damage and health risks, along with their intelligence providing a significant challenge for trapping and baiting efforts. A small portion of reports (0.8%) involved birds, while miscellaneous invertebrates and “dead” pest discoveries accounted for 2.6% and 1.3%, respectively.

Importantly, the vast majority of incident reports originate from general campus areas rather than housing. This may reflect both the distribution of pest attractants (e.g., food waste, green spaces, and moisture zones) and the areas prioritized by AIPM staff, with maintenance crews for on-campus housing possibly resolving small pest incidents on their own. However it is

also important to note that the origins of the data are biased towards Facilities Management, because they predominantly describe incidents under their jurisdiction.

The 2021-2024 AIPM internal datasets provide a deeper view into response strategies and chemical use (see Figure 3). Materials records indicate the use of approximately 25 distinct active ingredients delivered in various forms, including baits (solid, soft, gel, and pack), foams, powders, sprays, aerosols, and liquid solutions. Records of pesticide materials used from 2021 to 2024 indicate that a significant portion of interventions relied on either non-chemical strategies or materials categorized as Tier 3 (least hazardous). Specifically, 38.0% of all interventions used no materials, while an additional 8.9% used only physical traps. This means that nearly half of all pest responses avoided the use of hazardous chemicals altogether. However, the use of more hazardous substances remains prevalent, with Tier 1 pesticides accounting for 24.9% of all interventions (after speaking with Townsend, we also noted that many of these chemicals are included in bait stations or not widely sprayed on campus), and Tier 2 (yellow-tier) accounting for 4.8%. A substantial 21.9% of interventions involved products not officially tiered by the UC hazard tiering system.

The relative use rates of specific pesticide active ingredients reveal important patterns that underscore the prominence of chemicals targeted at rats, ants, or cockroaches and the continued reliance on red tier pesticides in some interventions for structural pest management. While this is undesirable, it is relevant to note that many red tier pesticides are applied using methods that restrict contact with non-target organisms.

In addition to material and product data, AIPM technician notes and scheduling data were used to chart pest interventions over time, offering further insight into the rhythm and drivers of

pest issues on campus. Figure 4 illustrates an overall upward trend in daily pest responses over the three-year period. This data also aligns with qualitative insights gathered from AIPM technician interviews, which note that rainfall events often lead to a temporary spike in pest incidents due to flooding of nests or increased indoor movement of insects.

Monthly data aggregated by year and by average month highlight both long-term and seasonal trends. Figure 5 shows a slight but steady increase in total monthly response counts, reflecting the broader rise in incidents also noted in campus-wide data. Meanwhile, Figure 6 reveals clear seasonality in pest activity. The summer and early fall months show the highest intervention rates, likely due to a combination of biological factors (e.g., breeding and swarming cycles) and operational cycles, where pest interventions may increase as a result of leftover food and waste or decreased human presence on campus during the summer months.

Technician field notes, collected during routine response visits, shed light on the qualitative elements of pest control activity. Ants, rats, and roaches are the most commonly documented pests, consistent with overall report frequencies. Technicians routinely inspect for signs of nesting, infestation, or access points, employing interventions such as sealing entryways, removing food sources, and placing traps. These notes, often accompanied by photographs, are highly informative for tracking recurring issues and monitoring the effectiveness of interventions over time.

Together, these visualizations and data reinforce the importance of year-round pest monitoring and non-chemical intervention strategies, while also pointing to the need for more transparency and refinement in the classification and use of pesticide materials.

Deliverables

GIS Deliverable:

Beyond statistical analysis of pest patterns, our team sought to represent these trends in a visual manner using GIS maps to quickly inform pest management decision-making. As such, GIS maps represent an essential aspect of our team's deliverables. To view examples of this research component, see Appendix C.

Communication Materials Deliverable:

Another major component of our deliverables was communication materials in the form of posters, flyers, and stickers. This addresses the educational and outreach objectives of the research scope. During interviews with Townsend and Middleton, they both emphasized how community-scale cultural change is the first and most important step in pest prevention, which ultimately leads to more sustainable and ecological pest management. In collaboration with the stakeholders, our team concluded that creating communication materials like posters and flyers that highlight how community members can get involved would be most effective at fostering a cultural shift toward more sustainable pest management practices and increasing public awareness of IPM at UCLA. Our team aims to support a campus-wide IPM outreach campaign using these communication materials.

Through background research, stakeholder consultation, and expert interviews, we established four general themes for the posters that highlight the most important components of IPM and how these involve community engagement. First, to highlight how to prevent pests through best practices, posters were developed that explain cultural and behavioral changes like keeping areas clean of food and water sources, removing clutter for shelter, avoiding overflowing

trash cans, and sealing cracks by closing windows. Next, the second theme focuses on educating the community about signs of infestations, especially from most common pests like rodents, cockroaches, and ants. These signs generally include droppings, grease tracks, gnaw marks, odor, shed skin, and food contamination. The third component of IPM we highlighted was the trouble call process, urging students, faculty, and staff to report pest issues through the UCLA 3-1-1 app. Through this mobile app, requests for non-urgent repairs and services are sent to Facilities Management and users can view the work status of their repair or service request. Existing requests can be viewed and managed through an interactive campus map. The materials also describe how Facilities Management and AIPM respond to these reports, sometimes through additional monitoring, treatment, or repairs. Lastly, we highlighted the importance of supporting beneficial species like butterflies, bees, and spiders, alongside general biodiversity on campus since they serve as key indicators for the ecological health of an area.

Our team also gained a better understanding of how students and faculty are involved in the current pest management process at UCLA. It was clear that each group plays a different yet important role, so our team separated the communication materials into three categories. First, they created student facing posters that are more simple and eye-catching, describing ways to take action and featuring pictures for easy identification (see Appendix D). The second category was professional flyers catered toward building managers and faculty, providing detailed information about how to aid pest prevention and management (see Appendix E). Lastly, the third category of communication materials focused on simpler, smaller handouts to the larger community. This involves eye catching business cards with information about common species and stickers reminding people to not use overflowing trash cans and to close windows to prevent pest infestations (see Appendix F).

Working closely with UCLA's IPM committee, we incorporated their feedback into the designs and their content to create communication materials for current and prevalent issues on campus. Notably, one of the committee's goals is to establish an online presence for IPM at UCLA through an informational website. We hope to publish these posters and flyers to this online resource for the public to access, alongside conventional postings in public spaces and handouts to occupants and managers. This final step would greatly increase access to pest education resources relevant to UCLA community members.

DISCUSSION

The completed GIS maps will be provided to the UCLA IPM committee for internal review, and will help guide future pest management decisions by providing informative visualizations of campus pest trends. In addition, communication materials will increase awareness of pest management and promote community engagement with IPM on campus. Besides the final deliverables, the IPM committee plans to hold an online presence via a website containing the 2025 SAR IPM project and other related information in order to help implement a more effective strategic pest management plan on campus. Through interviews and insights from pest management experts, our research team learned that it is crucial to shift the cultural perception of pests on campus. It is important that increasing numbers of students and faculty members are aware of the possible issues they may cause to the environment and health of our community. Encouraging the implementation of preventive measures and everyday practices for sanitation and cleanliness is a critical step for solving pest problems as a community rather than as individuals. The UCLA IPM plan is expected to be published by September of 2025. The IPM plan is contributed by AIPM, the Sustainability department, Environmental Health & Safety (EH&S) department, Housing, Residential Life, and ASUCLA. Through having access to our

team's GIS map, interview findings, and communication materials, IPM committee experts will have access to extensive research materials that they can use to supplement their work. Finally, future IPM projects under SAR can tackle remaining issues related to IPM, especially given the all-encompassing nature of campus IPM. They can tackle the issue of irrigation lines on campus, which are constantly chewed and damaged by animals, causing significant repair costs. Future SAR members can also use equipment that was not utilized this year, such as watch cameras to assess the behavior of certain pests over an extended period of time. Perhaps most important of all, future SAR projects can also identify and make recommendations for adjustment of trash disposal patterns on campus to reduce habitat suitability for pests, alongside pursuing continued promotion of cultural awareness of pests on campus. IPM is a continuous process that requires coordination between all parties, but such extra steps save money, and, more importantly, they facilitate more ecological pest management that support community health and further campus sustainability goals.

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APPENDIX

A) UC Statewide IPM Policy

Figure 1) UC Pesticide Hazard Tiering System

Hazard	Red (high)	Yellow (moderate)	Green (low)
Signal word	Danger	Warning	Caution or none
Restricted use (Federal or California)	Yes	-	No
Cancer (see Table 1)	Known or Probable	Possible	Unclassifiable, Not Likely, Not Listed
Reproductive or Developmental Toxicity	Listed	-	Not listed
Endocrine disruption	EC category I or II	-	EC category III or not listed
Water pollution	303(d) listed	-	Not listed
Hazard to birds	"Extremely toxic" or "Highly toxic" according to product label, or high product toxicity based on LC_{50} or LD_{50} (see below)	"Toxic" according to product label, or moderate product toxicity based on LC_{50} or LD_{50} (see above)	No warning on product label, or low product toxicity based on LC_{50} or LD_{50} (see above)
Hazard to aquatic life	"Extremely toxic" or "Highly toxic" according to product label, or high product toxicity based on LC_{50} (see above)	"Toxic" according to product label, or moderate product toxicity based on LC_{50} (see above)	No warning on product label, or low product toxicity based on LC_{50} (see above)
Hazard to bees	"Extremely toxic" or "Highly toxic" according to product label, or high product toxicity based on LD_{50} (see above).	"Toxic" according to product label, or moderate product toxicity based on LD_{50} (see above)	No warning on product label, or low product toxicity based on LD_{50} (see above)
Soil mobility	-	GUS ≥2 or DPR classifies AI as exceeding SNVs	GUS <2 and Not listed by DPR as exceeding SNVs.
PBT	Listed	-	Not listed

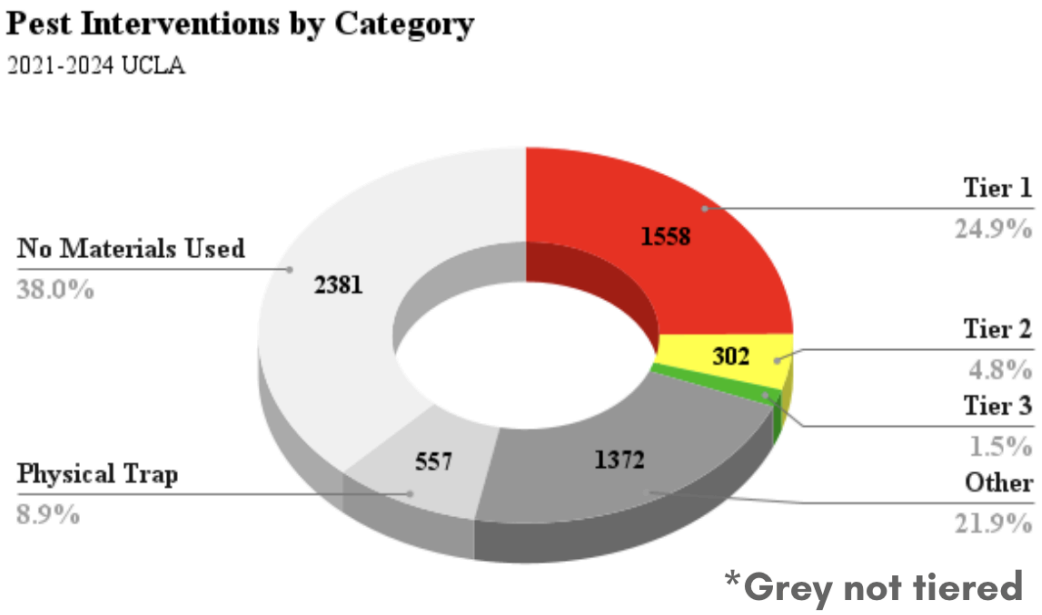
Figure 2) Pesticide Use Authorization Approval Matrix – Created by UC Systemwide Pesticide Oversight Committee

PUA Type	Description	Integrated Pest Management Committee (IPMC) Review	PUA Approval Time	Eligible Tiers		
				Green	Yellow	Red
Automatic	Preferred when the IPMC wants no oversight of the pesticide use other than a one-time designation to permit this use in the local Integrated Pest Management (IPM) Plan.	Once - only a one-time decision to include the approval in the IPM Plan.	Instantaneous	Y[1]	Y[2]	N
Generic	Allows for automated PUA approval in the PUA Platform. The template has general parameters of use.	Annually - IMPC reviews and approves on an annual basis.	Instantaneous	Y	Y	Y[3]
Specific	Requires explicit parameters necessitated by the particular case. Multiple treatments can be performed over time under a single Specific PUA.	Each Specific PUA is approved separately by the IPMC.	Days - Weeks	Y	Y	Y - Required[3]
Emergency	A pest emergency is one in which the pesticide treatment cannot be planned more than 3 days in advance.	Initial review can be performed by the IPM Coordinator. Post application reviewed by the IPMC.	Hours - Days	Y[4]	Y[4]	Y[4]

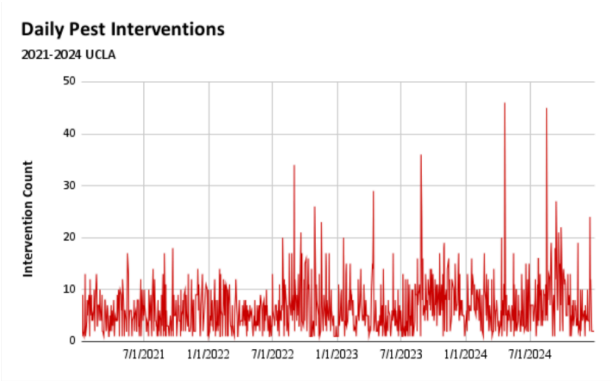
1. Green-tiered pesticides, by default, are eligible for an Automatic PUA unless the IPMC decides differently.
2. An Automatic PUA is allowed for Yellow-tiered pesticides if approved by the IPMC in the IPM Plan.
3. A Specific PUA is required for Red-tiered pesticides unless the IPMC has established a Generic PUA for the particular Red-tiered pesticide.
4. When Automatic or Generic PUAs can apply, Emergency PUAs likely will not be requested.

B) Data Analysis

Figure 3) Pest Interventions by Category



Figures 4 and 5) Daily and Monthly Pest Interventions



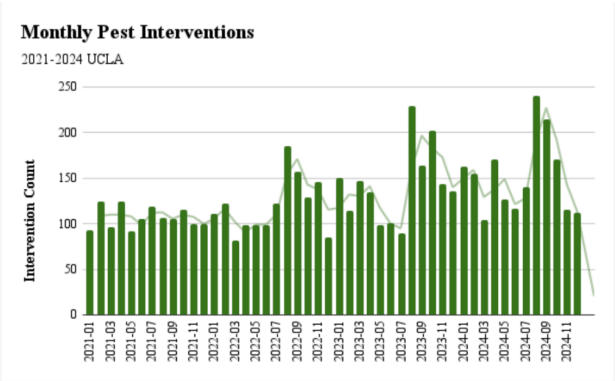


Figure 6) Total Pest Interventions by Month

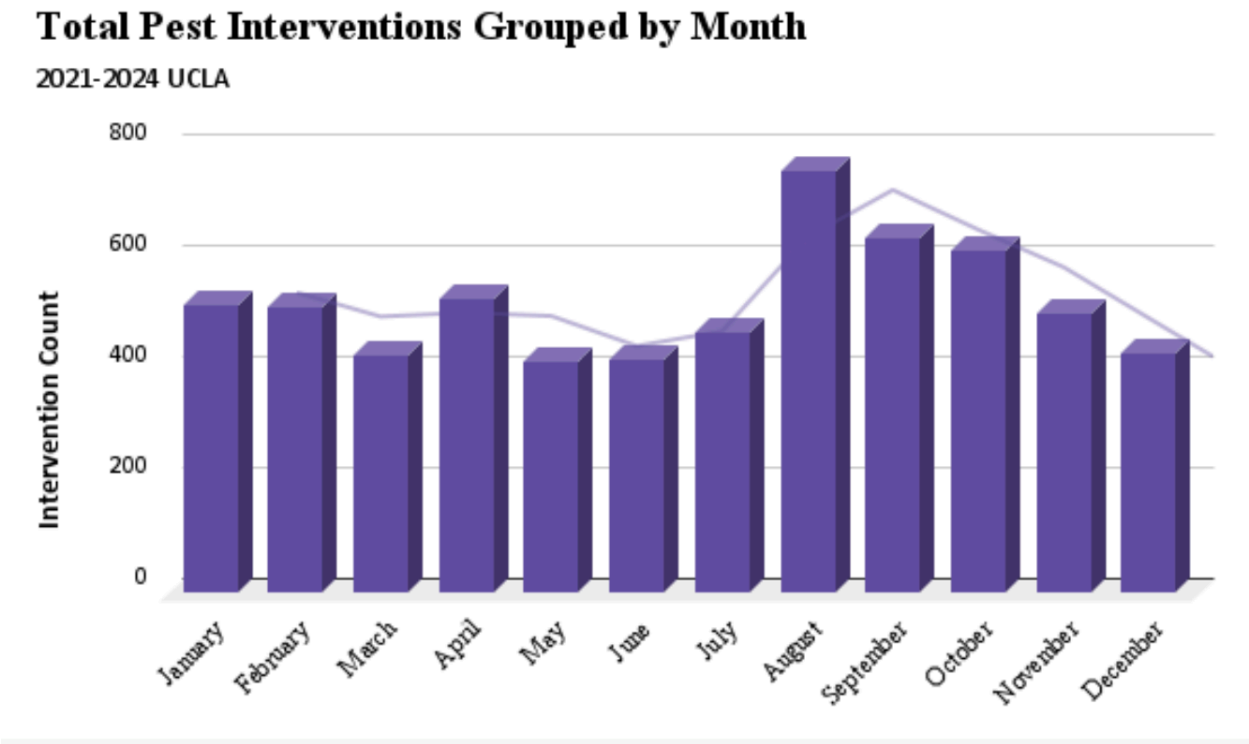


Figure 7) Pest Types from Pest Control Data (Ticket Reports)

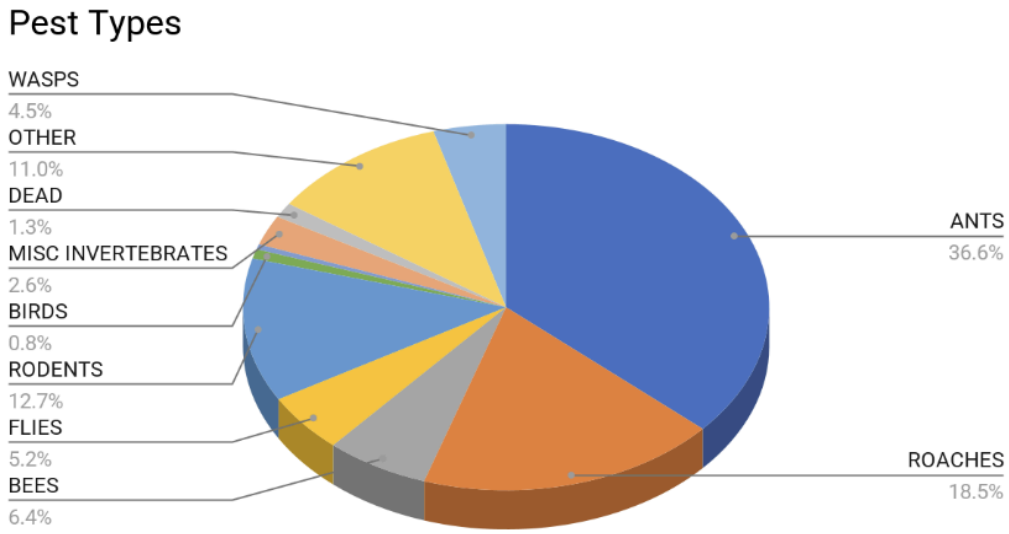
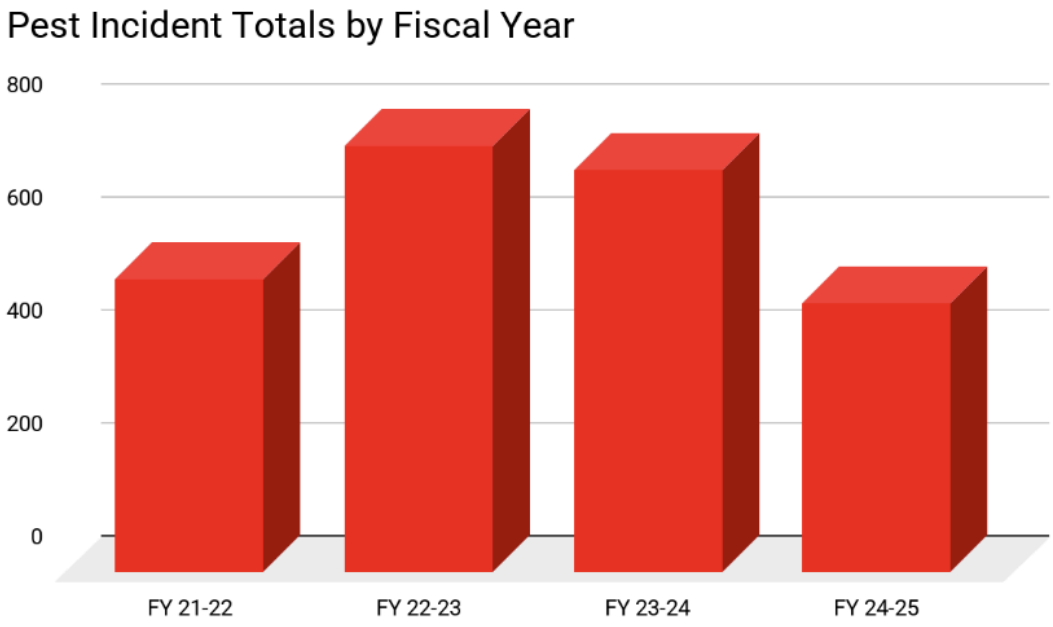
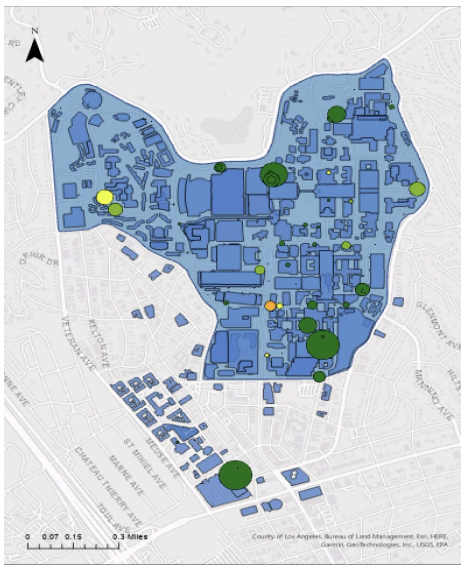


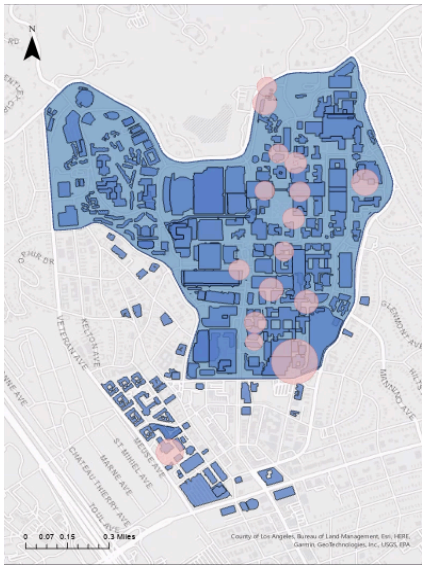
Figure 8) Pest Incident Totals by Fiscal Year from Pest Control Data (Ticket Reports)



C) GIS Maps



Map 1: Pest Control Locations*



Map 2: Pest Reports*

D) Student Facing Posters

E) Professional Flyers

UCLA Facilities Management

https://sustain.ucla.edu
310-206-6667

HELP PROTECT CAMPUS WILDLIFE – DO NOT FEED THE SQUIRRELS

DON'T FEED SQUIRRELS

Feeding wildlife can be dangerous to both animals and people.

PREVENT CAMPUS DAMAGE

Feeding squirrels can damage irrigation and infrastructure as they search for food and water.

RISKS TO WILDLIFE

Squirrels that rely on human food can stop naturally hunting or foraging.

BETTER MANAGING PESTS AT UCLA

01. What is Integrated Pest Management (IPM) ?

Integrated Pest Management (IPM) is a sustainable approach when managing pest issues that prioritizes prevention, monitoring, and the least toxic control methods. It is an effective approach used across all UC campuses and other schools nationwide. It minimizes the use of pesticides by combining biological, physical, and cultural controls strategies. UCLA uses a proactive approach to manage pests in order to minimize risks to people, research, and the environment. Response strategies include installing bait stations, routine monitoring and blocking entry ways.

02. Common Signs of Infestations

Common signs of a pest infestation are: droppings, grease and dirt buildup, unusual smell or noise, damaged fabrics or furniture, signs of nesting, and gnaw marks. All these signs can be found throughout UCLA campus. According to AIPM, UCLA's primary pest control service, the most common signs found on campus are droppings and grease marks. If you find any of these signs inside buildings on campus, you should report immediately.

03. Preventative Measures

1. Keep windows shut and seal any entry points to prevent pests from entering building / facility.
2. Close any food / water containers overnight or when being out for a long period of time. Store food in sealed containers, preferably in a refrigerator or a freezer.
3. Regularly clean and disinfect areas that contain a lot of food or trash. Dispose of garbage and trash properly in sealed containers.
4. Change cultural awareness of pests on campus! Inform residents / building occupants of the negative health impacts that pests can pose to our UCLA community.

04. UCLA 311

Students can submit a service request in the UCLA 311 App to resolve any pest issues! Download the app or call 310-825-9236 if you see a pest! When submitting a request, students will be asked to identify the location and describe what kind of pests they are seeing. Students should not attempt to trap or handle pests themselves, as the IPM crew can remove pests safely and properly.

Got any questions?

Visit the UC ANR IPM website to check state-wide integrated pest management program or UCLA sustainability website to explore how IPM relates to our Sustainability Plan on campus!

UCLA Facilities Management

INTEGRATED PEST MANAGEMENT

FACTS SHEET

UCLA

PREVENTING RATS & MICE

RODENT SIGHTINGS

Mice and rats are very common during the fall and winter, when they enter buildings in search of food and shelter. Mice can fit through openings as small as a dime.

More than just a nuisance, rodents pose serious risks to health, research, and campus safety

Know the Signs

Rodents often leave behind clear signs of their presence. Be alert for small, dark droppings; gnaw marks on wires, packaging, or wood; scratching or movement sounds in walls or ceilings; greasy rub marks along walls; and nesting materials like shredded paper or insulation. A strong, musty odor may also indicate an active infestation. Early detection helps prevent larger problems, report any signs right away.

Prevention Tips

Rodent-proof your space by sealing all gaps or cracks larger than ¼ inch. Keep food in sealed containers, clean up crumbs and spills promptly, and avoid clutter that can provide hiding or nesting spots. Regularly empty trash and keep bins tightly closed. Small actions make a big difference in keeping rodents out.

When and How to Report Rodents

If you see signs of rodents, such as droppings, gnaw marks, or live sightings, submit a service request through the UCLA 311 App. Include the location and a description of what was observed. Do not attempt to treat or trap rodents yourself. IPM staff are trained to manage infestations safely.

Rodents and Safety

Rodent activity in labs and research areas can compromise sensitive equipment, contaminate materials, and risk regulatory violations. If you work in a research environment, take extra care to store food properly, reduce clutter, and maintain a clean workspace.

UCLA IPM Response

UCLA's Integrated Pest Management (IPM) team uses a proactive approach to control rodent activity while minimizing risks to people, research, and the environment. Our response includes routine monitoring, bait stations, humane trapping, and exclusion methods to block entry points. We coordinate closely with Facilities Management to ensure targeted, effective, and sustainable solutions across campus.

https://sustain.ucla.edu
310-206-6667

UCLA Facilities Management

HOW TO REPORT PEST ISSUES ON CAMPUS!

Help us stay ahead of pest issues—early reporting helps prevent bigger problems!

HOW TO REPORT

Step 1: Submit a Service Request
Use the UCLA 311 App

- **Category:** Pest
- **Details:** Describe the issue (ex. ants, roaches, mice, bees/wasps)
- **Priority:** Low, Medium, High, Urgent
- **Attachments:** Upload photos to assist technicians

Submit a trouble call ticket on the UCLA 311 App

Step 2: Response & Follow-Up

- Licensed pest control technicians will respond based on the urgency and type of pest, often the same day.
- Depending on the situation, follow-up may include additional monitoring, treatment, or repairs.

REPORT → RESPONSE → RESOLUTION

See a pest? Report it—don't try to handle it yourself!

SIGNS OF PESTS

Droppings – small dark pellets, often from rodents or roaches
Live or dead insects/rodents – alive or dead near food, water, or trash
Gnaw marks - chewed wires, wood, or packaging, common around storage or utility areas
Grease marks or tracks – along walls, floors, or baseboards

UCLA 311

If you notice any of these, submit a service request through the **UCLA 311 App.**

@UCLA 311 App

F) Stickers


Close Me!
Don't Invite Critters!


Close Me!
Don't Invite Critters!


Don't Overfill!
Prevent Pest Problems!


Close this window!
Don't invite critters!

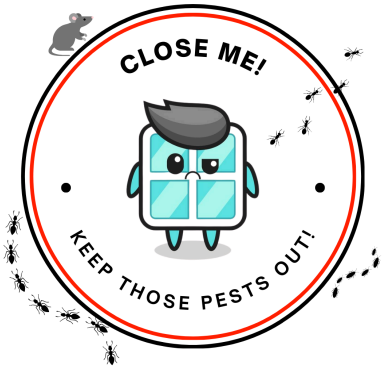

Don't Overfill Trash!
Use next nearest trash can
prevent pest problems!


COMPOST
WHERE I BELONG


RECYCLE • RECYCLE • RECYCLE • RECYCLE


LANDFILL
USE ME!


SPIDERS ARE FRIENDS NOT FIENDS
SPIDERS ARE FRIENDS NOT FIENDS


CLOSE ME!
KEEP THOSE PESTS OUT!


I ♥ NATIVE BEES & NATIVE PLANTS