

Proposal Name	7266 07 Commensal Rodents & Urban Wildlife IPM Area Advisor Santa Clara Alameda Contra Costa San Francisco San Mateo
Project Summary	The Area IPM Advisor will develop IPM strategies to effectively manage vertebrate pests in urban areas, with special emphasis on commensal rodents such as rats and mice infesting areas in and around dwellings and other structures. Effective management of these pests protects both public health and the environment.

About the Position Proposal Development

What is your title / representation to submit this proposal?	Regional Team Leader
Please indicate the groups that co-developed the proposal. Group type(s): for Advisor proposals - Regional Team number (1-5), REC System, Program Team(s); for Specialist proposals - which Program Team(s) the initial idea came from.	Regional Team 5, The UC Statewide Integrated Pest Management Program (UC IPM), the UC ANR Pest Management Program Team, Urban IPM Advisor Andrew Sutherland, Human-Wildlife Interactions Advisors Niamh Quinn and Carolyn Whitesell, and Regional Director Sheila Barry. External stakeholders which provided input into this proposal included the County of Santa Clara (IPM Program, Office of Sustainability), the City / County of San Francisco (Department of the Environment), Alameda County Vector Control Services District, the Contra Costa County IPM Advisory Committee, and the Pest Control Operators of California (PCOC).

About the Proposed Position

What is the proposed headquarters? For Advisor proposals, enter UCCE county office. For Specialist proposals, enter campus acronym and name of department or center.	Santa Clara
For Advisor proposals only: Enter the names of the county(ies) that the proposed position covers. For Specialist proposals, enter "Statewide".	Santa Clara, Alameda, Contra Costa, San Francisco, San Mateo

Contacts

Name	Position	Affiliation
Stephanie Larson	Principal Investigator	Sonoma County

Area IPM Advisor: Commensal Rodents & Urban Wildlife UCCE Santa Clara - San Francisco Bay Area

- **Developed and proposed by:** The UC Statewide Integrated Pest Management Program (UC IPM), the UC ANR Pest Management Program Team, Urban IPM Advisor Andrew Sutherland, Human-Wildlife Interactions Advisors Niamh Quinn and Carolyn Whitesell, and Regional Director Sheila Barry. External stakeholders which provided input into this proposal included the County of Santa Clara (IPM Program, Office of Sustainability), the City / County of San Francisco (Department of the Environment), Alameda County Vector Control Services District, the Contra Costa County IPM Advisory Committee, and the Pest Control Operators of California (PCOC).
- **Position Title:** Area IPM Advisor – San Francisco Bay Area: Integrated management of commensal rodents and urban wildlife in urban communities.
- **Position:**
 - The Area IPM Advisor will develop IPM strategies to effectively manage vertebrate pests in urban areas, with special emphasis on commensal rodents such as rats and mice infesting areas in and around dwellings and other structures. Effective management of these pests protects both public health and the environment. Key clientele groups include public agencies, pest control operators, licensed pest management professionals, and other practitioners in the public health and pest control sectors.
 - A minimum of a master’s degree in wildlife management, pest management, applied vertebrate ecology, or a closely related field is required at the time of appointment.
 - This position will be headquartered in the UCCE Santa Clara County office and will also serve Alameda, Contra Costa, San Mateo/San Francisco Counties. This is not a remote position. The Area CE Advisor will serve under the administrative guidance of the UCCE Santa Clara County Director and under the programmatic guidance of the UC IPM Director. The Area IPM Advisor will work closely with other members of UC IPM’s Urban and Community IPM Team.
- **Justification:**
 - Needs: Commensal rodents are considered “pests of significant public health importance” by the US EPA and are among the most important of all urban pests worldwide, with billions spent annually on prevention, control, and mitigation measures. These pests cause direct damage to structures, infrastructures, and human health as well as serious indirect damage to public health by harboring biting arthropods and infectious parasites, and therefore vectoring significant human diseases; including murine typhus, leptospirosis, salmonellosis, ratbite fever, and plague. Roof rats, *Rattus rattus*, have increased in range in recent years and are considered major pests in most of California’s communities. Norway (or sewer) rats, *Rattus norvegicus*, are also very common, especially in inner cities with aging infrastructure and large communities of unhoused residents. Mice, including the house mouse *Mus musculus* and several native *Peromyscus* deer mice species (known to vector hantavirus) are also very common within

California's dwellings and other structures. Urban uses of anticoagulant rodenticides have recently been restricted or removed (AB 1322, AB 1788, AB 2552) in CA due to legitimate concerns about secondary poisoning of wildlife, disruptions to local food webs, and acute hazards to people and pets. There is a huge and growing need for development of alternative chemical tactics, best practices for existing chemical tactics, holistic IPM programs, and advanced monitoring and trapping programs in the state. New technologies such as remote sensing and notification systems associated with physical traps are quickly entering the marketplace, warranting evidence-based evaluation of best protocols and efficacy.

- This position will primarily address the UC ANR condition change of 'promoting healthy people and communities' but will also contribute to 'safeguarding abundant and healthy food', 'developing a qualified workforce', and 'promoting economic prosperity.'
- **Extension:** Activities will include coordinating with local public agencies, pest management professional groups (such as PCOC), the UC IPM Program, and campus-based faculty and CE Specialists to develop, implement and participate in train-the-trainer programs and hands-on workshops for urban pest management professionals. The Advisor will coordinate or participate in projects that demonstrate IPM practices to local audiences, either directly (for example, pest control operators and vector control biologists) or indirectly (for example, through UC Master Gardeners). The IPM Advisor will develop information for trade journals as well as UC ANR educational materials such as UC IPM's *Pest Notes*, *Quick Tips*, and other UC ANR publications for clientele.
- **Research:** Projects will focus on development and evaluation of IPM programs to address high priority vertebrate pests in and around structures, with emphasis on commensal rodents. The Area Advisor will be expected to identify local research needs with statewide implications, develop teams to address them, and establish metrics to indicate progress. The expected outcome of the Urban IPM Area Advisor's program will be increased use of IPM practices that improve management of urban pests, address pests of public health significance, reduce unnecessary or unsafe pesticide use, and reduce pesticide exposure to natural ecosystems. Success will be measured by change in practices, increased use of specific IPM strategies and tactics, and increased awareness of proper pesticide application and safety. It is expected that the Area IPM Advisor will publish in the relevant public health and pest management journals, such as *One Health*, *Pest Management Science*, *Journal of Applied Ecology*, *Journal of Integrated Pest Management*, *Pathogens*, and other scholarly journals.
- **UC ANR Network:**
 - UC ANR only has one academic (Area CE Advisor-Human / Wildlife Interactions, based in Orange County) working on this IPM system. Several CE Advisors and one CE Specialist (UC Davis) work on vertebrate IPM in agricultural settings and may serve as general collaborators. The UC IPM Urban and Community Team already successfully interfaces with similar professional clientele as those identified for this Area Advisor and will serve as client-specific colleagues.

- **Network External to UC ANR:** The Area Advisor will be expected to collaborate with local vector control and other public health agencies to develop and evaluate rodent monitoring, prevention, and control programs, especially when faced with new or emerging public health issues. The Advisor will also be expected to work with PCOC, the National Pest Management Association, and other pest control trade organizations to assess needs, extend information, and resources, and, in some cases, secure funding for research.
- **Support:** UCCE Santa Clara will be the headquarters for this position and will provide travel support, office space, and administrative support. Local collaborators have agreed to provide access to lab space at the UCCE Contra Costa and UC Berkeley Richmond Field Station facilities. Some supplies and equipment at these locations will be shared and available to the Area Advisor. UC IPM provides resources to IPM Advisors annually to support dissemination of IPM information and resources and to promote IPM adoption.
- **Other support:** Urban public health and pest management are systems of significant interest to national and state government agencies, municipalities, tribes, school and housing districts, and residential communities. This interest creates ample opportunity for grants and sponsorships to support applied research programs. For instance, the US EPA, the National Institute of Health, the California Department of Pesticide Regulation, the California Department of Consumer Affairs, and other agencies collectively release tens of millions of dollars to support extension and research programs that control pests, safeguard public health, protect consumers, and reduce unnecessary pesticide applications. Achieving the goals of the state's *Sustainable Pest Management Roadmap* will necessitate increased research and extension education funding to realize the goal of eliminating use of high risk and high hazard pesticides by 2050. Furthermore, national, regional, and state-focused trade associations prioritize applied research to develop and evaluate new IPM tools; these groups often award competitive funding for applied projects. Urban pest control is a \$4 billion industry in California. Commensal rodents, especially rats, are considered among the most important general pests managed by this industry. Extramural funding opportunities will be amply available.
- **Headquarters and Coverage Area:** The San Francisco Bay Area includes dense urban areas, several active and supportive client groups, high pressure pest systems, and regulatory initiatives that will inform the work of this Advisor. The proposed five-county region of coverage includes more than six million residents. The proposed administrative home of the Area Advisor, the County of Santa Clara, is the sixth most populous county in the United States with almost two million residents. Santa Clara has a very strong collaborative relationship between UC ANR and its county based IPM programs. Several municipalities within the region include progressive IPM programs that mandate prevention, monitoring, and selection of pesticides that represent reduced risk to the environment and the community. Rats and other vertebrate pests are extremely common in the urban and suburban communities of the region. Lastly, the space and infrastructure at UCCE Santa Clara can accommodate a new academic program and CE Advisor.