

# Rodent Control Program Assessment: Multnomah County (OR) Department of Public Health

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## Introduction

In response to the bubonic plague epidemic in San Francisco in the early 1900s, a city health official in Portland, OR, launched a response, helping to pass laws to fumigate all ships entering port, installing screens on buildings containing food, and paying rewards for captured rodents, which were burned immediately. Presently, in Multnomah County, rodent control is conducted by the Vector Control Program within the Environmental Health Services division of the Multnomah County Health Department.

The Vector Control Program has conducted rodent control activities for over 40 years. The program is funded through local support, and the funding for rodent control has decreased within the past five years. This decrease in funding has resulted in staffing and activity cuts to the program. In the past 15 years, the program has been reduced from 2.5 full-time employees to just one full-time employee. The program has lost the ability to test routinely for new rodent species and emerging or endemic rodent-borne diseases and has decreased some services and educational outreach.

## Rodent Control Activities

The Vector Control Program is complaint-driven and does not actively seek out rodent infestations. The program follows integrated pest management (IPM) concepts in rodent control efforts. For example, the program advises that individuals first use the least toxic form of rodent control and provides free, non-chemical, mechanical snap traps. Rodenticides are used only for complaint-based sewer baiting. Last year, the program responded to approximately 80 complaints per month, depending on the season. The most common rodent-related issues reported include unsecured food sources, housing infestations, and property damage. Complaints dictate what areas for the program to inspect, and staff address complaints in the order in which they are received. However, staff generally prioritize complaints that involve restaurants, schools, and public areas, among others, due to the number of individuals at risk of exposure. Staff track and record complaints and inspections in a database and associate them with a physical property address. Numerous components of this database are tracked and categorized for analytical purposes. The program references historical data and trends for internal purposes or media inquiries.

In Multnomah County, the most common rodents are the roof rat, Norway rat, house mouse, and deer mouse. The program actively captures rodents every few years but does not trap or test for pathogens or ectoparasites. The program uses tools



Photo courtesy of Multnomah County Department of Public Health

such as Geographic Information System (GIS) to support the monitoring of rodents. The program coordinates with experts in the Communicable Disease division and Oregon Health Authority to notify the program about rodent-borne diseases. While the program has been notified about no rodent-borne diseases in Multnomah County in the past year, the program had previously documented some particularly concerning rodent-borne diseases, such as Hantavirus and *Toxoplasmosis*. The agency's laboratory is capable of supporting investigations of rodent-related emergencies and protocols exist for collecting lab samples. The program also partners with the Oregon State Veterinary Diagnostic Lab. In addition, the program relies on the Communicable Disease division, public complaints, and medical centers for notification of rodent-related bites/injuries. Oregon registered only 17 rodent bites over the two years from 2010 to 2012, not one of them in or near Portland.

## Public Education and Partnerships

While the program does not have a rodent-specific communication plan, the health department does have a communications plan with guidance on developing materials for different audiences and communication channels. The program educates the public about prevention, control, and identification. Program staff speak at public events on the topic of rodent control, post rodent control information publicly, and provide information upon request. The program works with local departments and agencies, such as parks and recreation, and leads a local coalition where multiple partners have a forum to work together on rodent control activities.



## Policies and Regulations

Multnomah County Health Department has numerous policies for rodent control, ranging from field work to guiding principles for the program. The program's surveillance, education, and prevention and control activities are done in accordance with and authority granted from Oregon Revised Statute 452. One law relevant to Portland's rodent population, which was passed in the 19th Century and is still enforced, requires that trash be kept in sturdy rodent-resistant containers with tight lids. All laws and regulations related to rodent control are reviewed as needed. The program educates and informs the public about any changes in laws or regulations and assesses the ability of relevant community members to comply with the laws and regulations.

## Rodent Control Program Workforce

Processes are in place to ensure all employees have the proper certifications and trainings. The program has a workforce plan, but lack of funding has limited how strategic this plan can be.

## Evaluation and Research

The program does not have an official evaluation, but the public may take a survey through the health department's website to provide feedback on local vector control. The program partners with local universities to conduct research related to rodent control and other vector priorities. For example, a recent study investigated local Norway rats and roof rats and their prevalence for three zoonotic diseases—hepatitis E, *Leptospirosis*, and *Toxoplasmosis*. Of 142 serum samples, 5.63% tested positive for hepatitis E, 7.04% were positive for *Toxoplasmosis*, and 13.56% were positive for *Leptospirosis*. Three rats were found to be infected by more than one zoonotic agent.

## Conclusion

The most significant challenges for the program include the lack of funding, staff, and training opportunities. The limited budget for additional staff prevents the program from evolving beyond a complaint-based model. The program aims to incorporate more community feedback in rodent control work, but doing so is difficult with staff shortages. Overall, the program performs complaint-based inspections, provides technical assistance to property owners and community organizations, provides community education, and performs rodent surveillance for speciation, ectoparasite identification, and rodent-borne disease.

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