

CITY OF ST. LOUIS
DEPARTMENT OF HEALTH
Bureau of Environmental Health Services



ENVIRONMENTAL HEALTH
2014 ANNUAL REPORT



Francis G. Slay, Mayor

Table of Contents

Contents

Message from the Director	2
Food & Beverage Control	3
What We Do	3
Accomplishments	4
Inspections.....	4
Grades	4
Foodborne Illness	6
Community Sanitation	7
What We Do	7
Accomplishments	8
General Sanitation	8
Refuse	10
Mold.....	11
Insufficient Heat.....	12
Bed Bugs	13
Administrative Fine Ordinance 69821	15
Environmental Child Care	15
Lodging Establishments	16
Recreational Water Facilities	16
Fumigations	17
Air Pollution Control	18
What We Do	18
Accomplishments	18
Animal Care & Control.....	20
What We Do	20
Accomplishments	20
Enforcement of Local Ordinances	21
Animal Bite Investigations	22
Animal Care and Control Shelter	22
Vector Control	24
What We Do	24
Accomplishments	24
Mosquito Fogging	24
External Rat Infestation Treatment.....	27

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Message from the Director



Message from the Director

The City of St. Louis Department of Health's Bureau of Environmental Health Services (EHS) strives to assure a healthy community through quality public health services and partnerships by providing continuous protection, prevention, and promotion for the public's health. EHS is organized into five sections: Food & Beverage Control, Animal Care & Control, Community Sanitation, Air Pollution Control, and Vector Control.

This report looks at the regulated environmental health issues in the City of St. Louis. These threats to health must be monitored to assure our citizens of a healthy environment. This is achieved by caring, qualified, culturally-competent Department of Health (DOH) employees who are responsive and proactive to community needs. We work closely with the Citizens' Service Bureau (CSB) to address the public's concerns about environmental risks to animal and human health.

Melba R. Moore, MS, CPHA
Acting Director/Commissioner of Health



Food & Beverage Control

Food & Beverage Control

Food safety is essential to protect the public from foodborne illness, a preventable public health problem. The food industry is responsible for producing safe food for consumers, while the government is responsible for conducting inspections and ensuring that standards are met. Regulated factors that determine the safety of our food supply include the manner in which food is handled, prepared, and stored. Failure to follow regulations can result in fines, legal action, or even worse, cases of foodborne illness.

What We Do

The Food & Beverage Control section is responsible for verifying that all food establishments follow well-recognized procedures to provide safe and wholesome food to the public. The DOH adopted and enforces the regulations in the 2009 Food & Drug Administration (FDA) Food Code. This includes all operations that provide food to the general public, such as restaurants, taverns, carry-outs, grocery stores, caterers, and child care centers. Both permanent and temporary operations are regulated.

Food inspectors routinely inspect all food establishments. The frequency of regular inspections depends on the complexity of the operation. For example, a gas station that sells pre-packaged food would be inspected less often. A restaurant serving a complex menu of easily perishable items would be inspected more often. All operations are inspected annually, but some are inspected twice or even three times a year.

Additional inspections are done when a permanent food establishment opens up, or when complaints are called in to the Citizens' Service Bureau. If problems are found, follow-up inspections are done to ensure compliance with regulations.

Whenever a temporary operation is set up, such as a food stand at a public event, food inspectors verify compliance before food is allowed to be served.

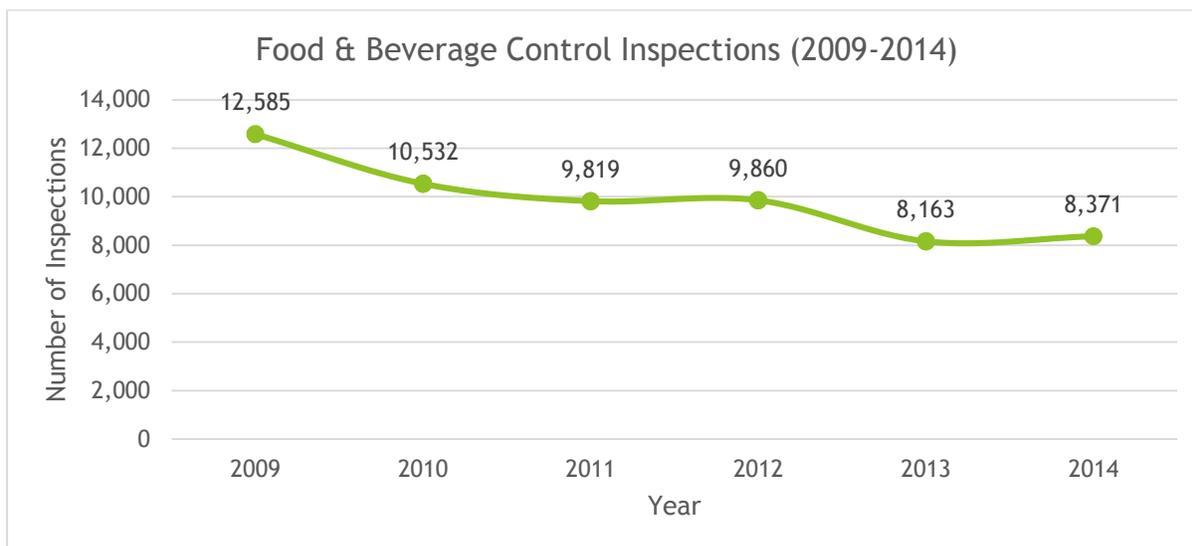
During an inspection, problems are identified and reported, and the food establishment is given a list of problems to be addressed. Some problems can be fixed before the inspector leaves the establishment. Others take more time, and the inspector returns to verify that the problems have been resolved. This results in a second inspection report, which generally finds that problems have been resolved. If not, then subsequent inspections will occur until all problems are resolved. If the food establishment is unable to resolve problems, then various fines and sanctions can be imposed. In extreme cases, food operations may be shut down until problems are resolved.



Accomplishments

Inspections

In 2014, Food & Beverage Control conducted 8,371 inspections, issued 292 permits for new establishments, and renewed 2,015 permits for existing establishments. This was a slight increase from 2013, although the number of inspections has been on a gradual decline since 2009. A combination of internal quality improvement processes can be attributed to this trend. In 2011, internal policies updated the inspection frequency from a quarterly schedule to a risk-based (high/medium/low) frequency. Additionally, in 2012, the food inspectors adopted new technology to track complaints, inspections, permits, and billing details.



Grades

Specific types of violations are scored by the risk they pose to the public. A point system is used, whereby points are deducted for each violation. A score of 100 is given when there are no violations. Scores are summarized into a general health grade for each inspection.

- Grade A is for scores 85-100
- Grade B is for scores 71-85
- Grade C is for scores under 71

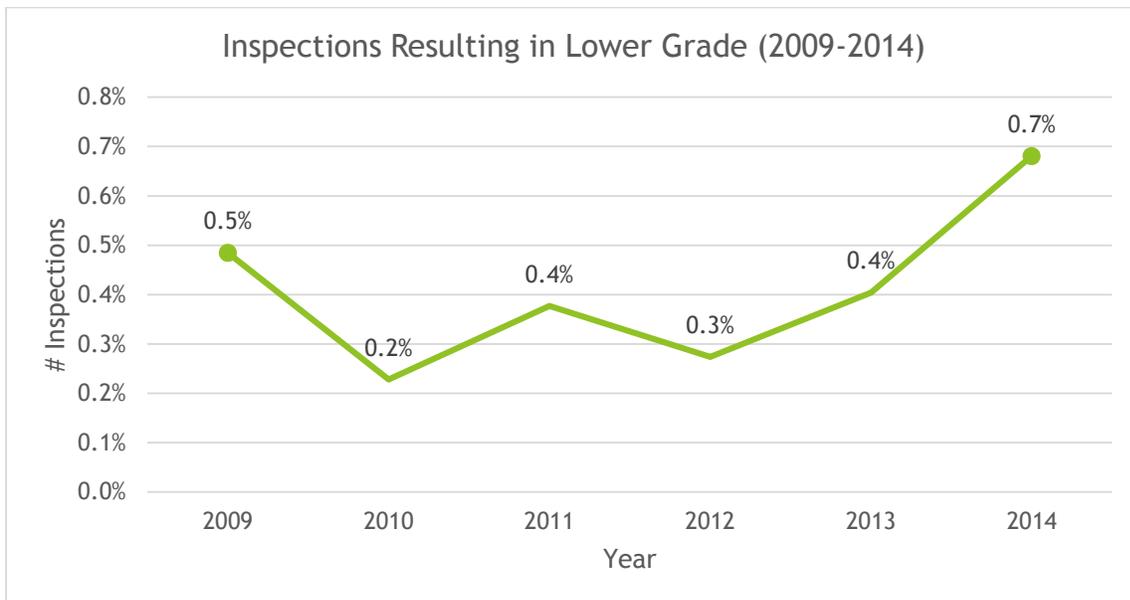
Some violations are considered “critical”, and must be immediately remedied. When 2 of these occur during an inspection, the Grade is dropped to “B” or “C”.

If two or more critical violations occur during an inspection, the health grade is dropped. Operations that are given a “B” grade must improve within a relatively short time to avoid further sanctions. Often, downgraded establishments decide to suspend operations until they can regain their “A” rating. Operations with a “C” grade must improve immediately to avoid permanent closure. With “C” ratings, the DOH may insist that operations be suspended until problems are resolved.



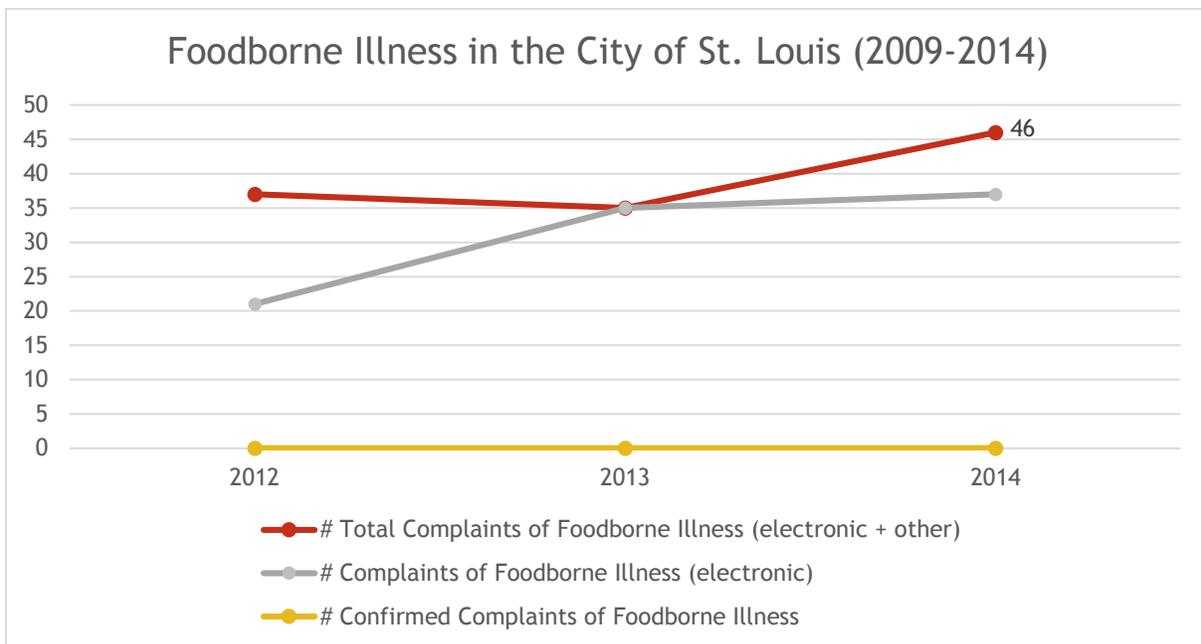
In 2014, out of 8,371 inspections that were conducted, 57 inspections resulted in a lower grade (about 0.7% of inspections). In more meaningful terms, about 1 out of 147 inspections last year resulted in a lower grade. Compared with previous years, 2014 saw the highest ratio of these particular inspections.

Year	# Total Inspections	# Inspections resulting in a lowered grade	% Inspections resulting in a lowered grade
2009	12,585	61	0.5%
2010	10,532	24	0.2%
2011	9,819	37	0.4%
2012	9,860	27	0.3%
2013	8,163	33	0.4%
2014	8,371	57	0.7%



Foodborne Illness

A safe food supply leads to longer and healthier lives, less burden on the healthcare system, and consumer confidence in the food safety system. Young children and the elderly are more susceptible to serious conditions and hospitalizations from infections originating from contaminated foods. Preventing foodborne illnesses is a challenge in the food industry. The Food & Beverage Control section of the DOH works hard to investigate complaints of food problems, foodborne illnesses, and illegal establishments. Food inspectors routinely check for safe-food handling certifications and will often observe the food preparation process. In 2014, there were 46 complaints from the public for foodborne illness. Each complaint was investigated: the complainants were interviewed and the establishment was inspected thoroughly. While inspectors found violations at most of the establishments, they did not confirm any links between the reported illness and particular food items or the food establishments.



Community Sanitation

Community Sanitation

Sanitation is a cornerstone of public health. Adequate sanitation, good hygiene, and water supply are essential for public health, urban growth, and economic development. Lack of sanitation can cause transmission of bacteria, viruses, and parasites to humans and the contamination of water, soil, and food can accelerate the spread of diseases. Sanitation in a community setting refers to the means of promoting health through enforcement of hygiene practices, wastewater disposal, and hazardous waste removal.

What We Do

The Community Sanitation section strives to ensure the citizens of St. Louis have a safe and sanitary environment. The section protects public health by responding to citizen complaints and enforcing codes in the following areas: inspecting for general sanitation, child care facilities, lodging facilities, and recreational water facilities.

The Community Sanitation section enforces certain state laws and local ordinances. The Environmental Health Officers (EHOs) have backgrounds in the sciences including chemistry, physics, biology, microbiology, environmental health, and public health. Inspections are conducted routinely in the following areas:

- Community Events
- Child Care Facilities
- Lodging Establishments
- Public pools

Community Sanitation works closely with the Citizens' Service Bureau and other City departments (Building Division, Water Division, Forestry Division, Refuse Division, Land Reutilization Authority) to investigate and mitigate public health threats. The EHOs respond to complaints received through the Citizens' Service Bureau, a call center that funnels citizen complaints to the appropriate agency.

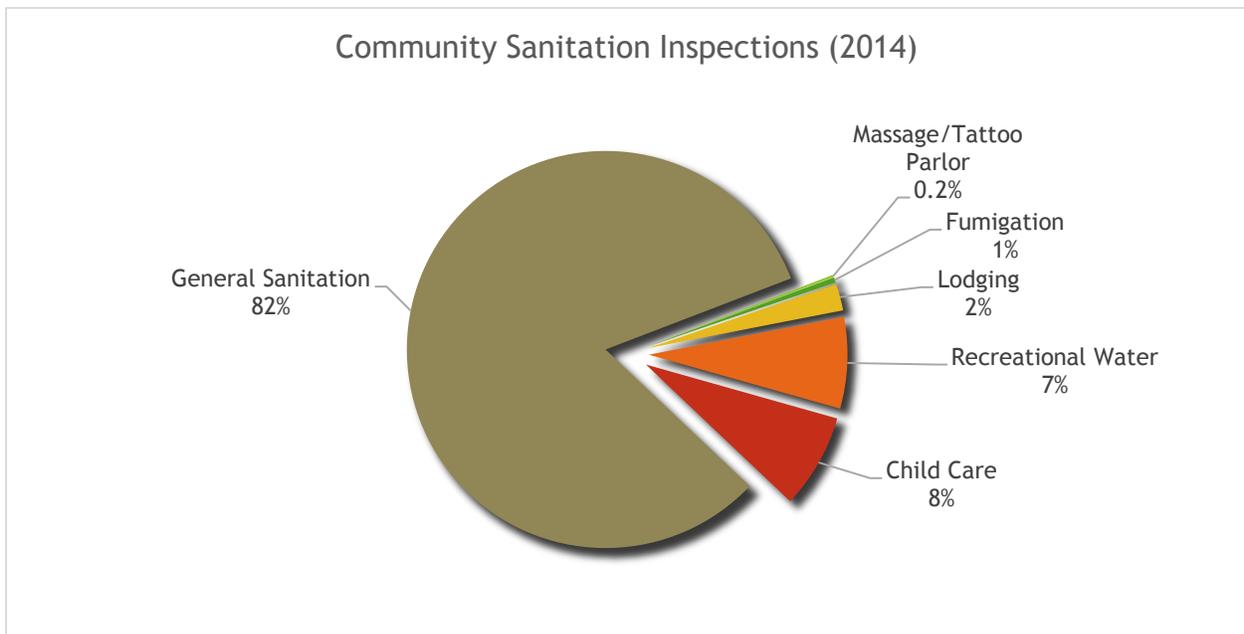
Investigations are conducted for housing/neighborhood sanitation, chemical hazards, sanitation practices, and other immediate threats to public health. These complaints are investigated for violations of local ordinances. As a rule, inspectors also check neighboring properties for exterior violations. Failure to comply with local sanitation regulations can result in administrative and/or legal action.



Accomplishments

In 2014, the Community Sanitation section conducted 4,534 inspections. The majority of inspections (82%) were conducted for compliance with general sanitation regulations. The number of general sanitation inspections have increased steadily since 2012, due to implementation of quality improvement processes within the DOH. By updating internal policies, improving workflow, training on new technology, and providing additional on public health laws, EHOs were able to perform their duties efficiently.

Number of Inspections by Establishment Type	2012	2013	2014
Massage/Tattoo Parlor	7	6	8
Fumigation	6	15	20
Lodging	65	82	98
Pool	322	434	337
Child Care	359	334	349
General Sanitation	1,368	2,879	3,722
<i>Total</i>	<i>2,127</i>	<i>3,750</i>	<i>4,534</i>

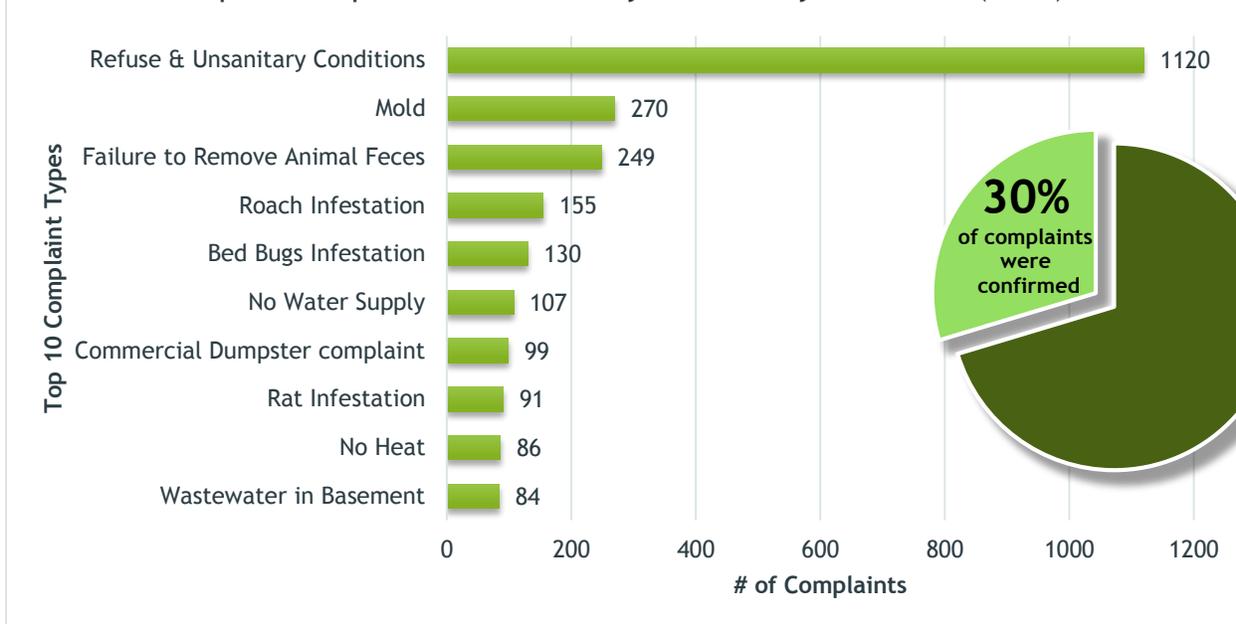


General Sanitation

In 2014, EHOs addressed 3,301 complaints from the Citizens' Service Bureau (CSB) and logged 3,722 sanitation inspections, a 29% increase in inspections from the year before. Only 30% of complaints were confirmed, the majority of them being for refuse accumulation or unsanitary conditions. Other common complaints that surfaced in the community were for mold, insufficient heat and bed bugs.

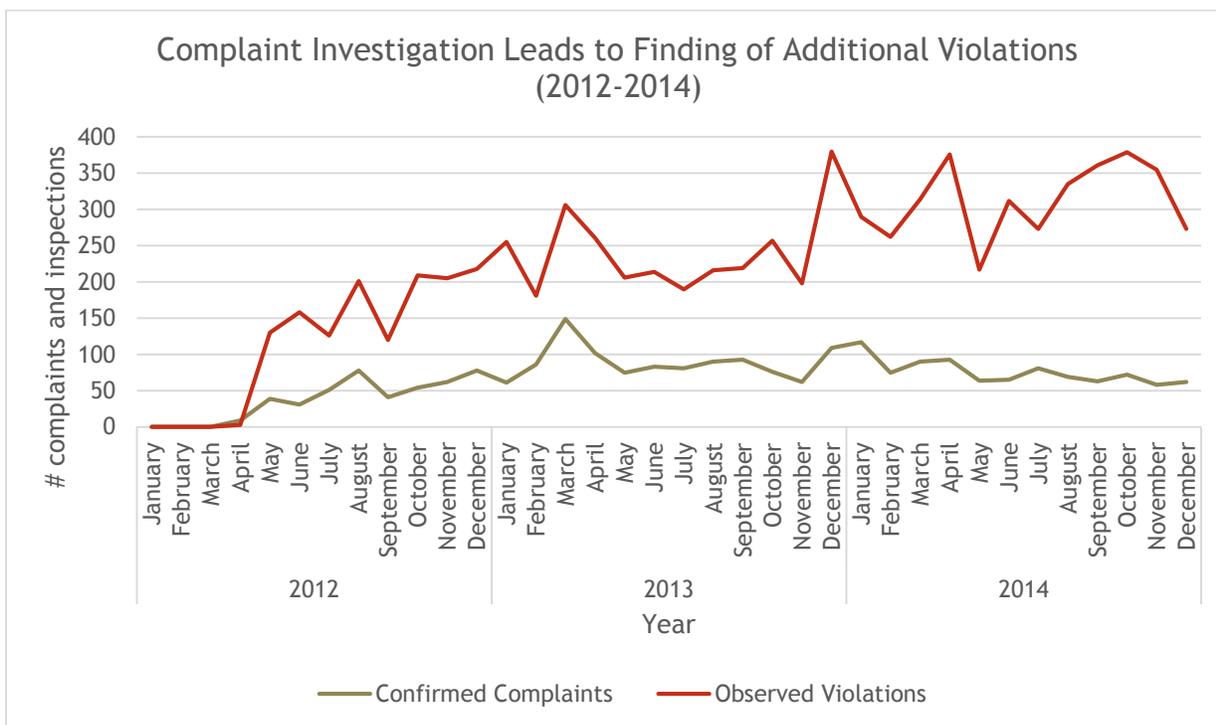


Top 10 Complaints Addressed by Community Sanitation (2014)



In 2014, EHOs confirmed only 30% (909) of complaints from the Citizens’ Service Bureau. While inspecting the complaint location, inspectors also observe adjacent properties for code violations. Last year, for every confirmed complaint EHOs logged an additional 4 sanitation violations. The graph below shows the electronic capture of complaint and violation data using a database implemented in April 2012.

Complaint Investigation Leads to Finding of Additional Violations (2012-2014)



Refuse

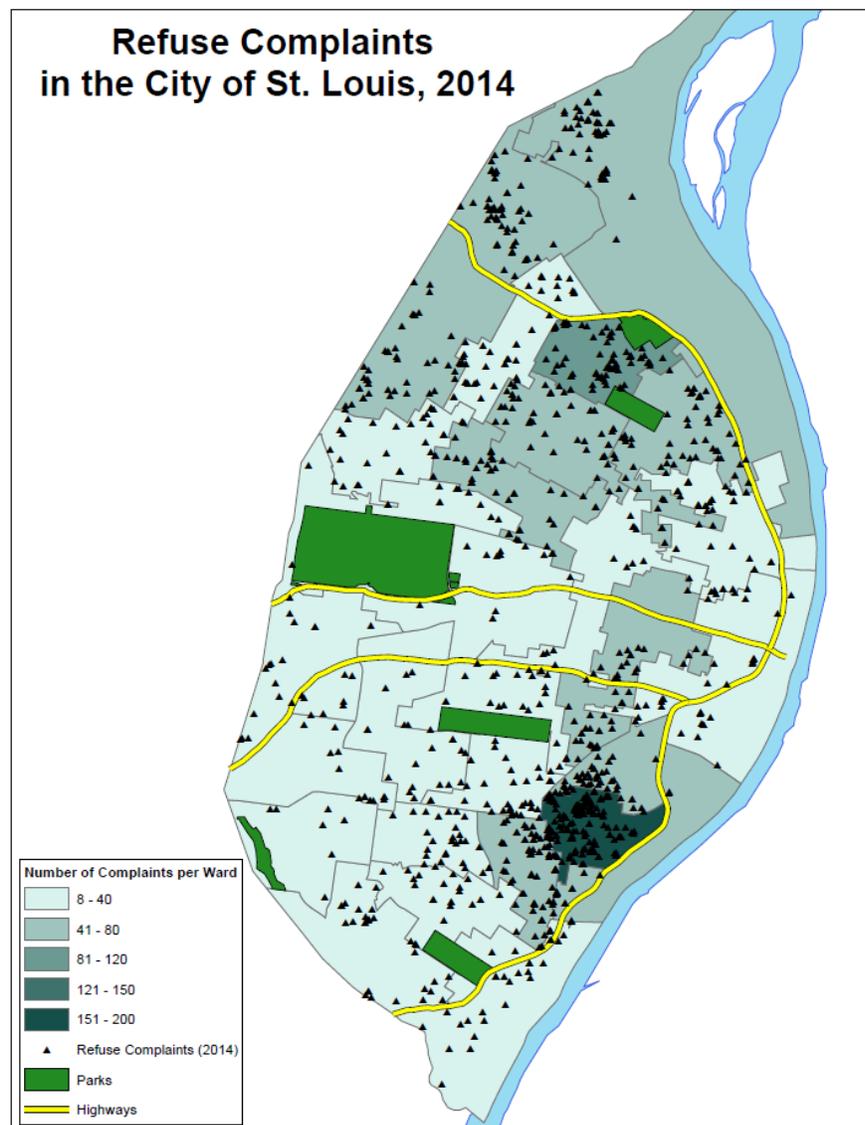
According to Healthy People 2020, exposure to the presence of trash can become a physical and social determinant of health, impacting a wide range of health, functioning, and quality of life outcomes. Accumulation of rubbish and illegal dumping can result in the spread of disease, vermin and rodent infestations, fire or chemical hazards, and nuisances.

Furthermore, sustained trash accumulation in certain areas signals urban disorder and social apathy, exacerbating unsanitary conditions. The atmosphere created in these areas make enforcement a challenge. Proper containment and disposal of refuse by citizens is essential for improving public health in the St. Louis City community.

In 2014, EHOs investigated 1,120 complaints pertaining to refuse, conducting multiple inspections to achieve compliance. Overall, EHOs observed and cited for over 1,800 violations pertaining to the accumulation of trash, improper commercial/residential refuse storage, and the instigation of rat harborage conditions.

The majority of complaints were seen in the north, north central, and southeast areas of the City.

The majority of complaints originated from callers in Ward 20; this can be attributed to the alderman's efforts to clean up unsanitary conditions.



Mold

The second most common complaint (7%) in 2014 was from citizens who found what appeared to be mold in their residences. While there are over 100,000 types of mold, only a very small amount of them pose a risk to human health. Due to the ubiquitous nature of mold spores, the City of St. Louis does not have any local ordinances governing mold levels. Likewise, the Environmental Protection Agency (EPA) does not have any standards or Threshold Limit Values for airborne mold contaminants. The added burden of identifying mold spores is costly and intensive, so the DOH focuses on providing citizens with education on how to control indoor moisture factors to limit mold growth.



The root cause of a mold problem can sometimes be traced to a leaking pipe or plumbing fixture, which is considered a nuisance under general sanitation regulations.

In 2014, EHOs observed 420 interior violations for wastewater, water leaks, defective drains/sewers, and leaking pipes. After giving the owner time to comply with the law, 43% of the violations were still present on re-inspection, prompting administrative intervention and legal action in court.

Community Sanitation received an average of **18-19 wastewater complaints per month** during the last 2 years.



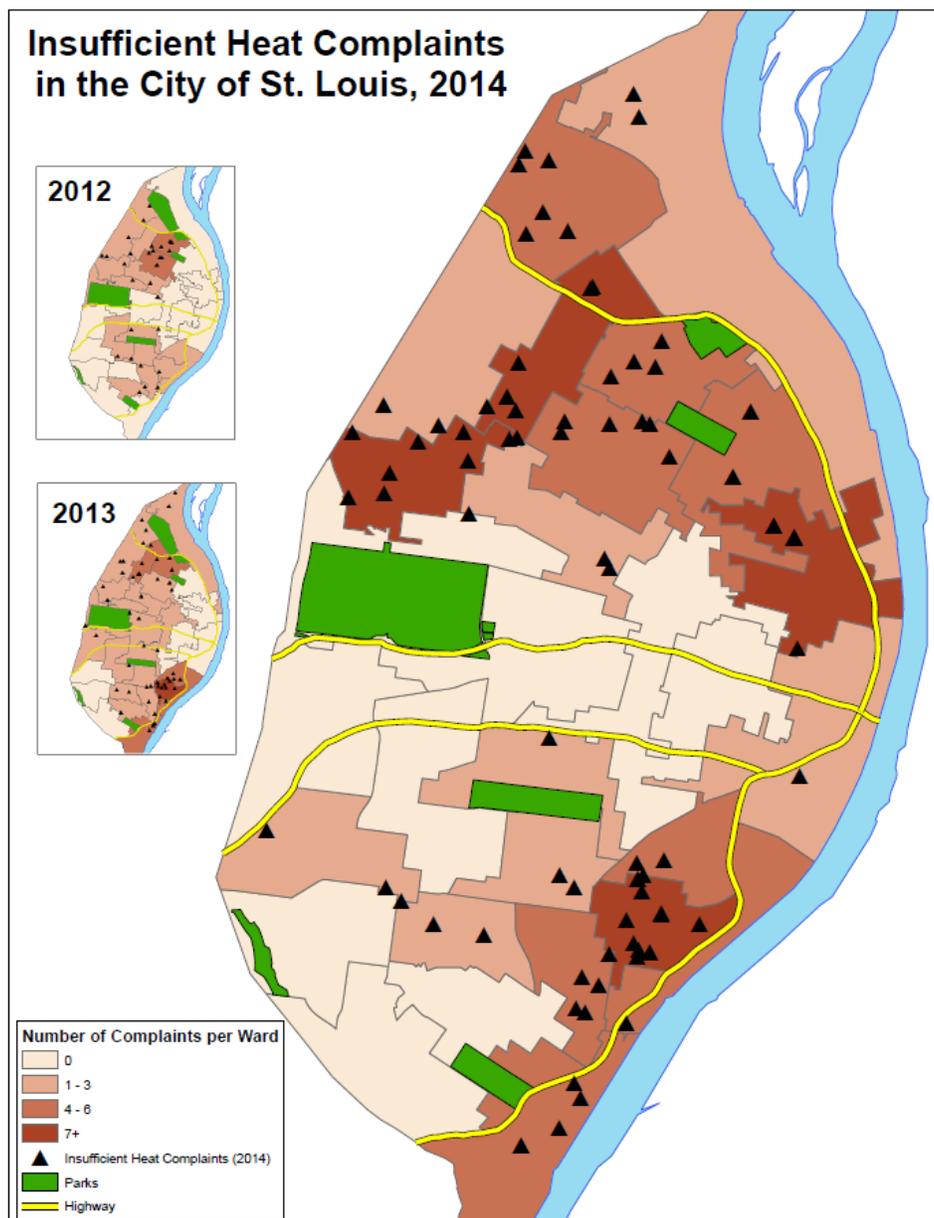
Community Sanitation received an average of **20-21 mold complaints per month** during the last 2 years.



Insufficient Heat

Between the cold-weather months of October through April, Community Sanitation receives complaints from citizens with insufficient heat. The effects of extreme weather can cause a significant impact on health. Acute exposure can lead to hypothermia, while exposure over time can exacerbate chronic health conditions. Thermoregulatory-impaired individuals and vulnerable populations are at increased risk of morbidity and mortality.

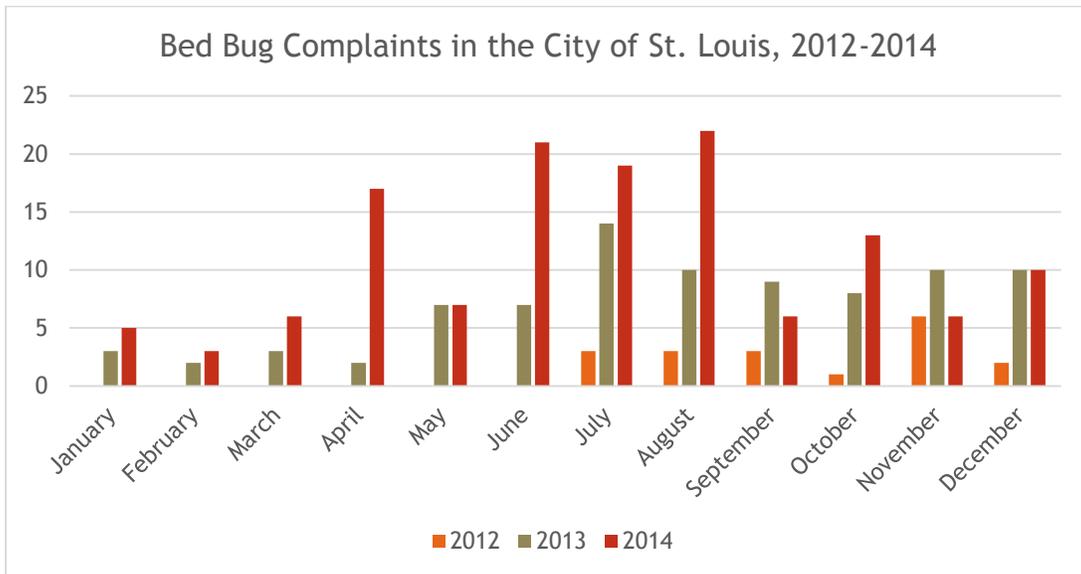
Commonly, City residents who have insufficient heat are found to have an inadequate or inoperable furnace, overdue gas bills, or lack insulated accommodations. Another hazard often observed is the inappropriate use of stoves and space heaters as a primary source of heat. EHOs respond to these complaints by assessing temperatures, enforcing local ordinances, giving verbal advice, and if needed, referring the complainant to utility assistance agencies. The majority of insufficient heat complaints came from Wards 1, 5, 26, and 20.



Bed Bugs

Bed bugs were eradicated in the 1950s with use of aggressive pesticides (DDT). They re-emerged in the 1990s due to increased international travel, insecticide resistance, and lack of awareness. While many agents of disease have been found within bed bugs, this ectoparasitic wingless insect is incapable of transmitting diseases. There have been no documented cases of disease transmission with the bed bug as a carrier.

In 2014, Community Sanitation responded to 143 complaints about bed bugs, but only confirmed 16% (24) of those complaints. The majority of bed bug complaints are seen during the summer months (see graph below). This is likely due to increased traveling, vacationing, common socializing, and moving from one residence to another. EHOs provide advice to the public on identification of bed bugs, prevention of infestation, and elimination of harborage conditions.

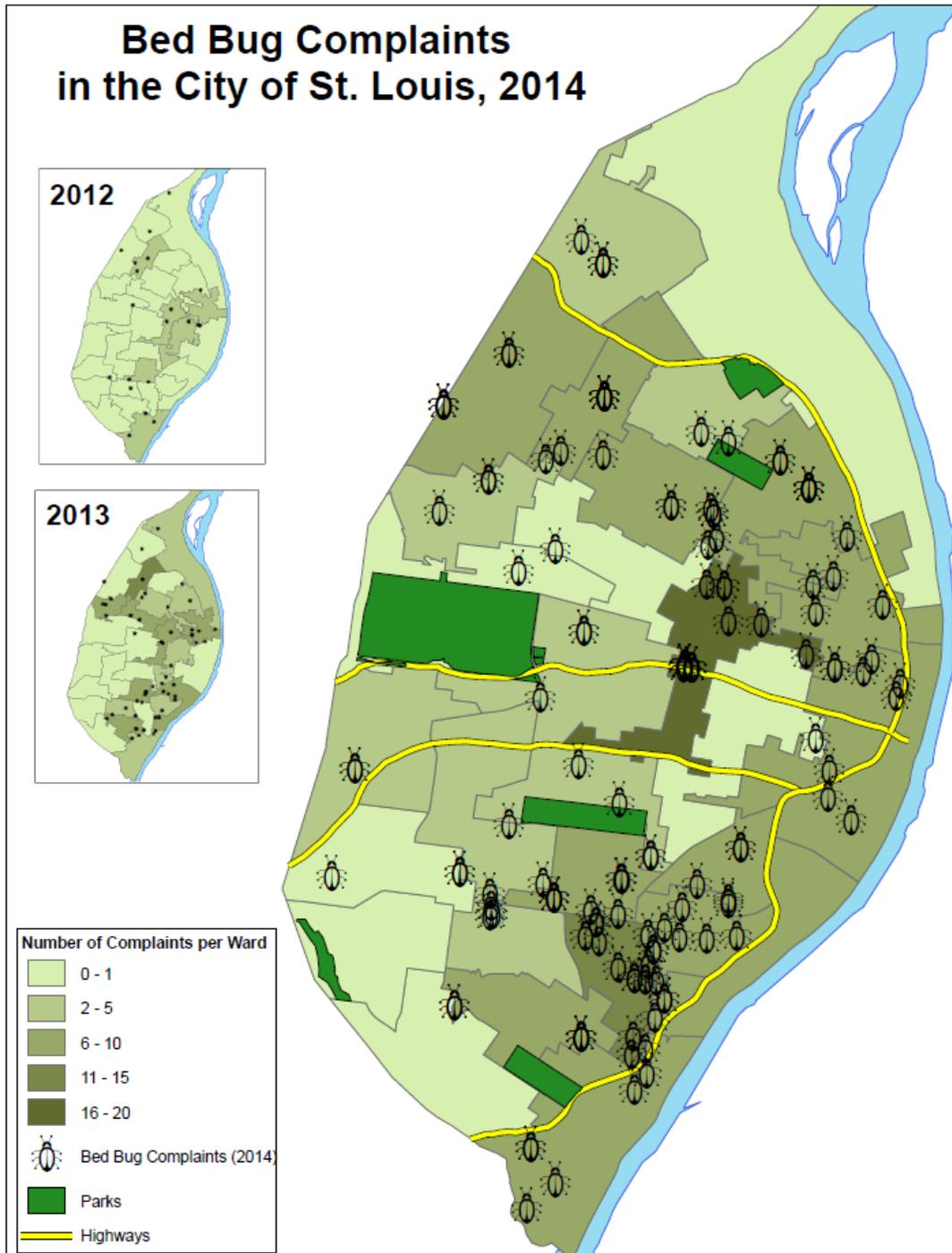


The City of St. Louis has seen an increase in the number of bed bug complaints in the past 3 years. In 2014, EHOs addressed 130 bed bug complaints, but only confirmed infestations at 18% of inspections. Challenges to confirming bed bug infestations included lack of knowledge and complainants' confusion with exposure to biological organisms or chemical agents that cause similar irritation. Likewise, a long-term challenge that residential areas face with eliminating bed bug infestations circles back to knowledge of preventing infestations. EHOs advise residents to mark infested belongings that will get thrown out to prevent another person from picking up infested furniture.

Bed Bug Complaints	2012	2013	2014
% Confirmed Complaints	5%	26%	18%
# Total Complaints	20	85	130



Looking at the distribution of bed bug complaints in the City of St. Louis over the last three years, an increase in complaints has been observed. The majority of complaints were seen in the north-central and south-central regions of the city.



Administrative Fine Ordinance 69821

Board Bill 94 was introduced and approved in 2014 for an Administrative Citation Fine Ordinance (ACF). This ordinance pertains to enforcement of code violations relating to health and safety, effective January 24, 2015. The Community Sanitation section prepared and began establishment of a systematic workflow for enforcing this ordinance in the latter part of 2014.

The DOH expends a great deal of energy, time, staffing, and resources addressing safety and health violations. This new ordinance holds people accountable for actions that impact the health of the community by allowing for the escalation of consequences. Violation of health and safety regulatory codes may result in property owners, occupants, and/or other responsible parties receiving an ACF instead of municipal court prosecution, although the possibility of municipal court prosecution is not eliminated.

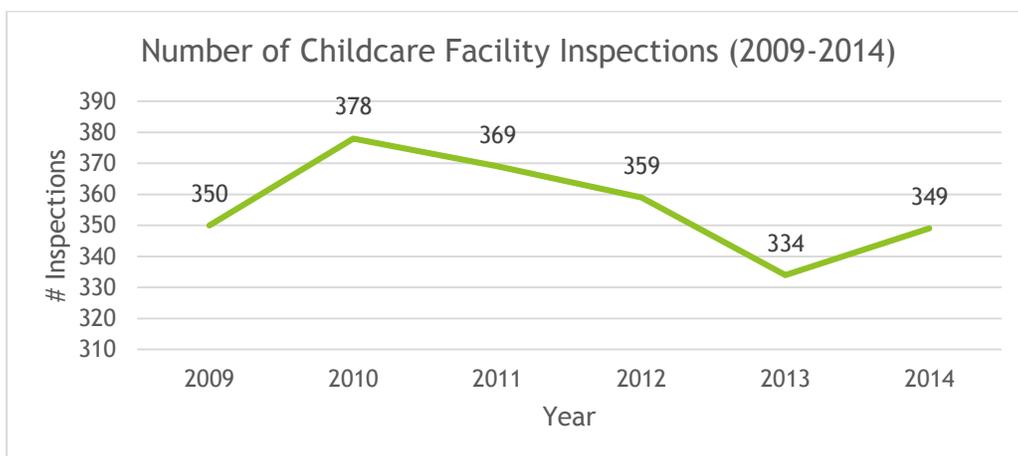
This ordinance gives the legal authority to levy an administrative citation fine, depending on the code violation. The benefits of ACFs include:

- increased and timelier compliance with escalating consequences,
- greater likelihood for health violations' abatement, and
- heightened awareness regarding code enforcement

Issuance of an ACF has the potential to make block survey requests unnecessary. Inspections for whole city blocks are time-consuming and pose many enforcement challenges. Out of a sample of block surveys requested in 2013, an inspector spent an average of 9.2 hours per initial inspection and 5 hours on each re-inspection (assuming half the properties are found with violations). Since it took an average of 3-4 re-inspections to close out each block survey, it is expected that the issuing of an ACF will save time by eliminating unnecessary re-inspections.

Environmental Child Care

Group child care homes, child care centers, family child care homes, and license-exempt child care facilities are inspected annually under state regulations. In 2014, there were 349 child care facilities that were inspected by EHOs at the request of the Missouri Department of Health and Senior Services Section for Child Care Regulation Division of Regulation and Licensure. This was a 4% increase in inspections, compared to the previous year.



Lodging Establishments

Lodging establishments, or hotels, are inspected annually under state regulations. Any operating facility that is a building or group of buildings where five or more guest rooms are provided, which is held out to the public for hire is considered a lodging establishment and must have a license. In 2014, 46 hotels passed inspection and were licensed for the 2014-2015 year. EHOs conducted 98 inspections and re-inspections at these facilities, a 20% increase in inspections than the year before (82 inspections in 2013).



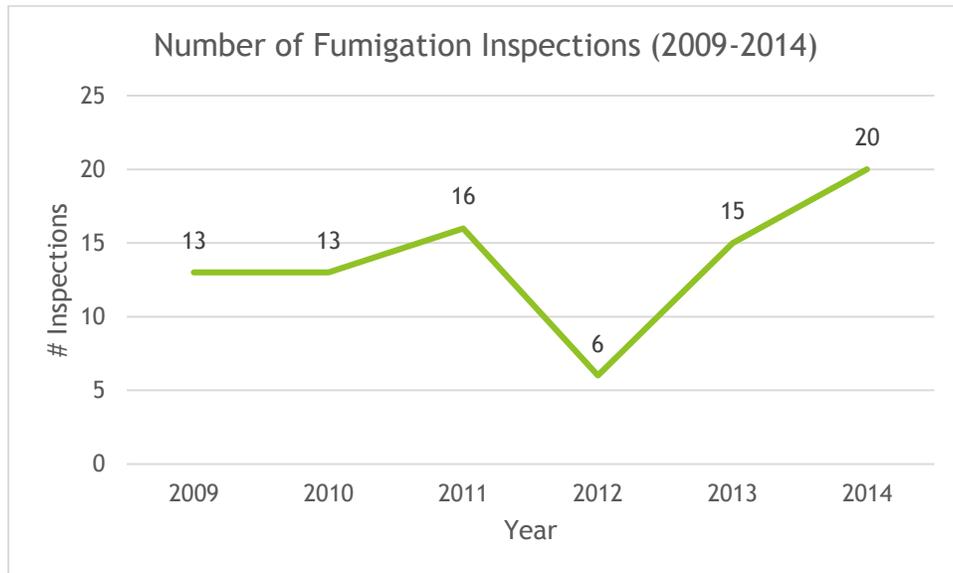
Recreational Water Facilities

Swimming pools, spas, wading pools, and sprinkler parks are inspected monthly under local recreational water facility ordinances. Swimming pools are treasure troves for bacteria, mainly due to vomit and fecal accidents. In order to protect the health of the public from these threats, EHOs conduct their inspection using a safety checklist and a water chemistry kit. Free chlorine, pH, water clarity, and total coliform counts are assessed in every pool. There are 122 pools under regulation in the City of St. Louis. Outdoor pools are closed seasonally (winter), but re-open after the Memorial Day Holiday. In 2014, 337 pool inspections took place, a 22% decrease compared to the year before; this was due to a number of pools closing for construction or maintenance.



Fumigations

Fumigants are important to extermination of insects, vermin, and rodents in manufacturing facilities or industrial settings. The area or building to be treated is sealed off, gaseous pesticides are released and allowed to percolate, and finally the area is ventilated to allow the gas to escape safely. Because this is considered a hazardous operation, the DOH permits and monitors fumigation activities. EHOs inspect the area before and after, checking seals and ventilation points for adequacy. In 2014, 20 fumigations were requested and completed by local businesses, with no adverse events occurring.



Air Pollution Control

Air Pollution Control

Over the past ten years, air quality in the St. Louis area has steadily improved due in large part to the implementation of the following control programs: improvement in motor vehicle technology; additional controls on industry and coal-fired power plants; centralized inspection of car emissions; the use of cleaner fuels throughout the region; and a range of transportation control measures.

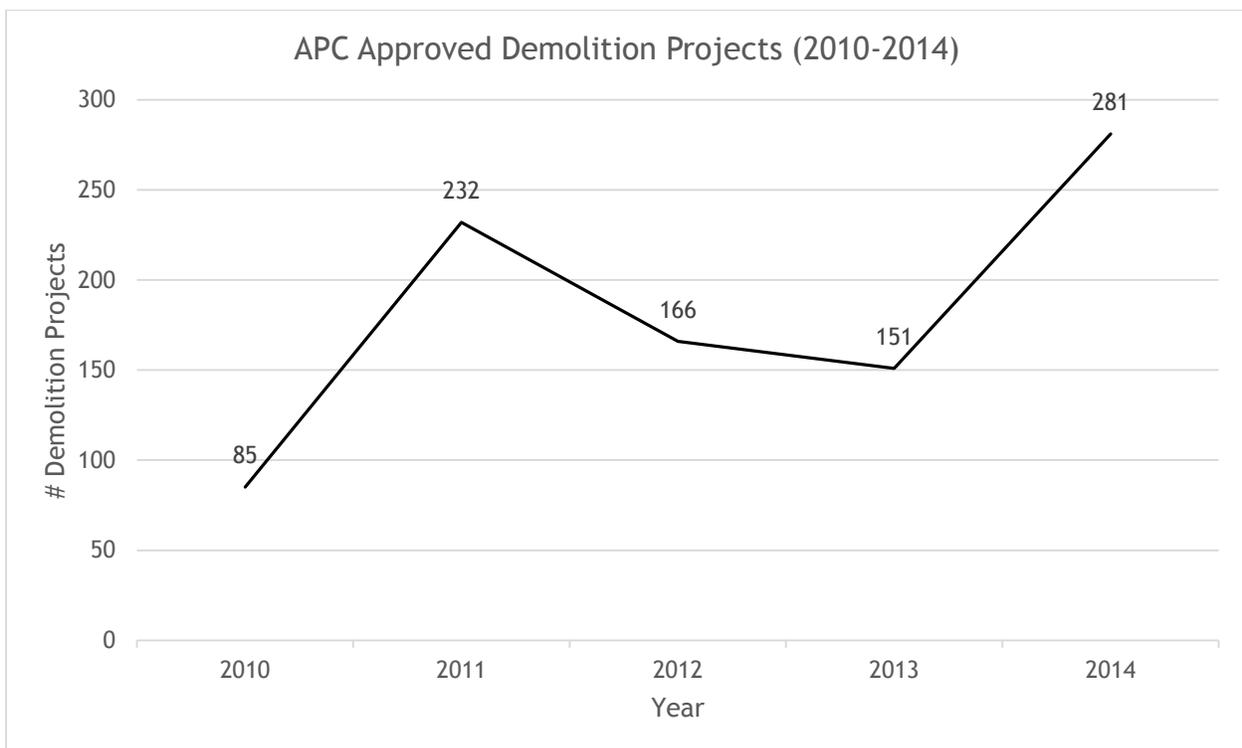
In 2011, funding for the local air pollution program ended, and the Missouri Department of Natural Resources absorbed the responsibility of enforcing the United States Clean Air Act. This consisted of permitting and monitoring sources of air pollution in the state. Following these drastic cuts, the City of St. Louis Department of Health Air Pollution Control (APC) section narrowed its focus to reviewing asbestos abatement and authorizing demolition permits.

What We Do

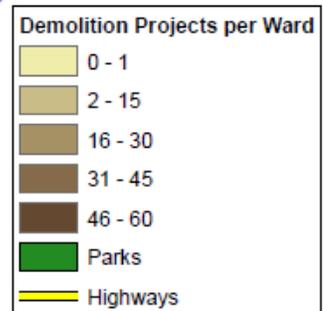
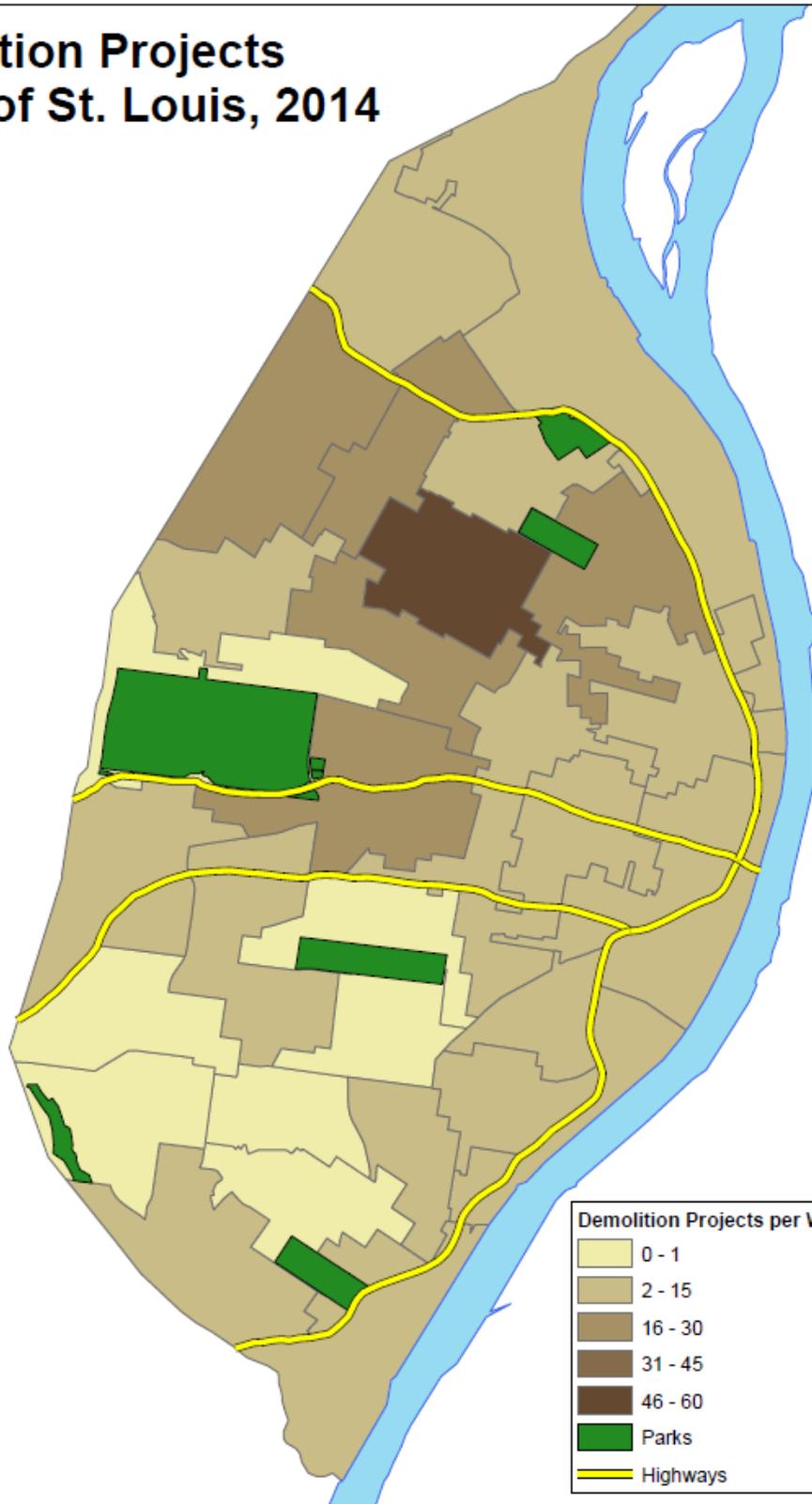
The Air Pollution Control (APC) section permits, inspects, and enforces local regulations for asbestos abatement and demolition projects.

Accomplishments

In 2014, 281 demolition permits were approved for construction projects. This was an 86% increase from the year before (see line graph). These projects were located primarily in the north and north-central regions of the City (see map).



Demolition Projects in the City of St. Louis, 2014



Animal Care & Control

Animal Care & Control

Human health is distinctly linked to animal health and the surrounding environment. Due to the large number of communicable diseases (zoonoses) that can be transmitted from animals to humans, the World Health Organization recognizes veterinary medicine as a contributor to the maintenance and promotion of public health. Local public health agencies often lead their community's animal control and health initiatives by providing shelter and veterinary services for animals in need.

What We Do

The mission of Animal Care and Control (ACC) is to ensure the health and safety of City of St. Louis residents and companion animals through the enforcement of pet-related ordinances, as well as the promotion of pet safety and responsible pet ownership. Animal Care and Control is dedicated to providing an array of animal control, health and pet-owner services to promote responsible pet ownership and humane treatment of animals among the citizens of St. Louis.

Services provided by Animal Care and Control include, but are not limited to: ordinance enforcement, apprehension and quarantine of biting/dangerous dogs, maintenance of rabies tag system and database, and promotion of responsible pet ownership.

Accomplishments

In 2014, ACC received and addressed 3,366 complaints. The most common complaint (44.1%) was for enforcement of local ordinances.

Other programmatic accomplishments included:

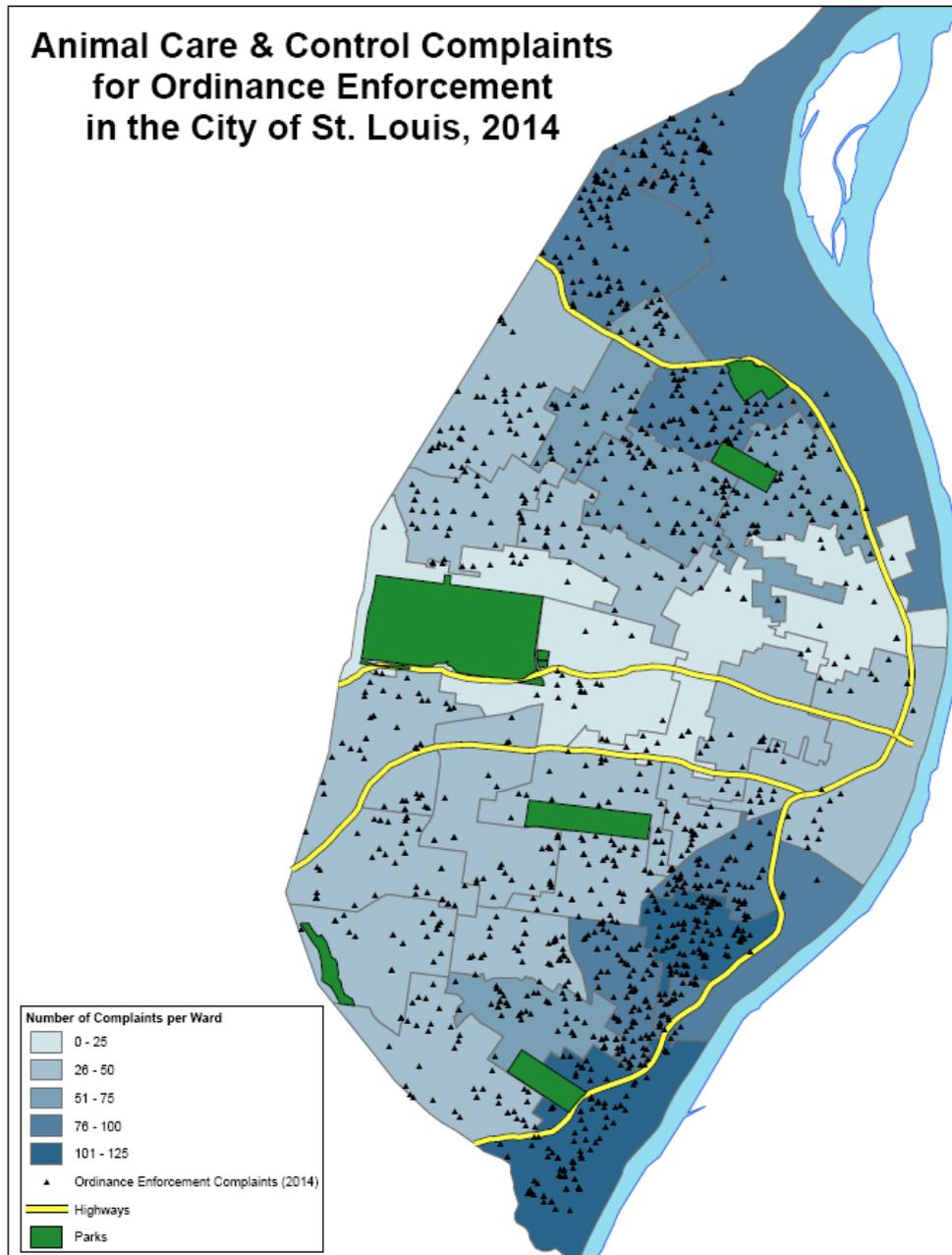
- 50% of Animal Care and Control Officers (ACCOs) achieved Missouri Animal Control Association certification.
- Hired an additional NACI-certified (animal investigation) staff person.
- Implemented animal enrichment tracking in the Animal Care shelter
- Procured and installed a grooming station and privacy curtains in the Animal Care shelter
- Adopted the TNR (Trap/Neuter/Release) Ordinance 69798 in July 2014.
- Acquired second climate controlled animal care and control van.



Enforcement of Local Ordinances

In 2014, CSB submitted 1,487 complaints to ACC for enforcement of local ordinances. These ordinances protect and promote the general welfare of the citizens and animals living in the City with strong emphasis placed on responsible animal ownership. Upon investigation, Animal Care and Control Officers (ACCOs) issued 74 court summons in 2014.

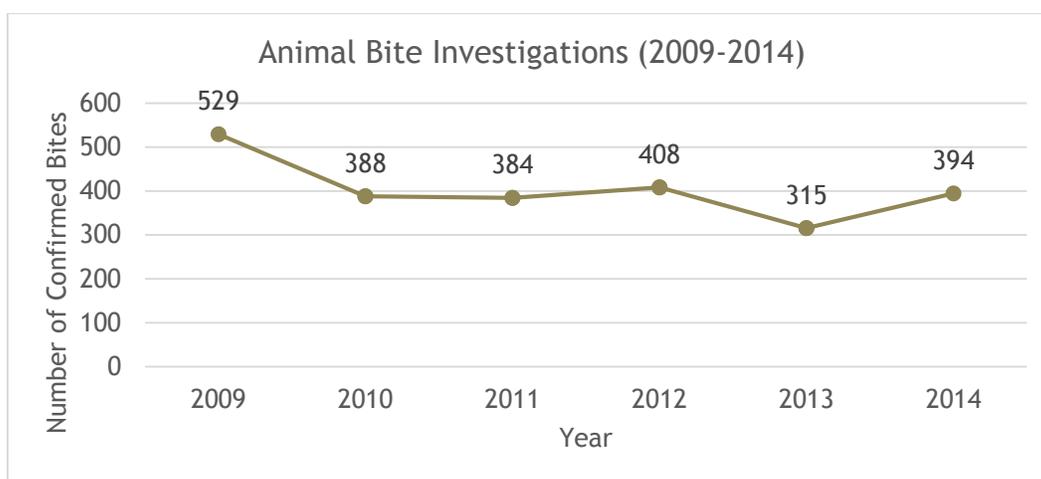
The main animal ordinances cover registration laws, vaccination laws, leash requirements, feces removal, tethering laws, pet limits, and prohibited pets. The majority of these complaints came from citizens in Wards 11 and 20.



Animal Bite Investigations

Animal bites pose a major public health concern because of the potential to transmit zoonotic disease and cause serious injury. The size and health of both the animal and the person dictates the health impact of each bite incident. Children are the most common victims of animal bites and are more likely to have serious injuries. In addition, animal bites have the potential for transmitting rabies, an almost-always fatal viral infection that attacks the nervous system and brain. For these reasons, animal bites are reportable in the State of Missouri. ACC investigates every bite report and checks rabies vaccination records, tests for rabies, and/or issues quarantine orders to determine whether the animal is free from rabies.

In 2014, there were 394 animal bites that ACC investigated and confirmed. While the majority of bite incidents involved dogs, ACCOs also investigated bites from cats, bats, ferrets, raccoons, horses, and other animals.



Animal Care and Control Shelter

In 2009, the aging ACC shelter facility located on Gasconade Street was identified by the Office of the Mayor and the Department of Health as being obsolete and unable to fully meet the community’s needs in providing a safe, healthy, and humane environment for shelter animals. Steps to improve enforcement and sheltering operations were identified, including closing the Gasconade Street facility and opening a new ACC shelter on Clark Avenue. Additionally, partnerships with other animal welfare organizations were established to support the goals of:

- Protect the public.
- Guarantee the humane treatment of companion animals.
- Reduce companion animal overpopulation.
- End companion animal abuse.

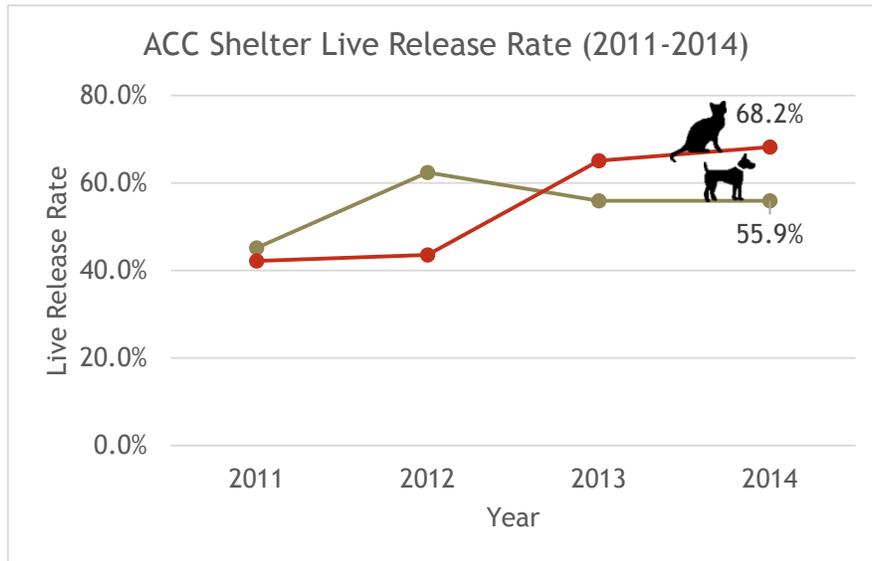
Between 2009 and 2013, the ACC partnership with Stray Rescue increased stray dog intake by 52%, adoptions by 20% and decreased euthanasia by 70%. For 2013, the combined euthanasia rate was at 6.9% and adoption was at 60.6%.

In 2009, Gasconade had cat intake of 1,424, of which 1,054 were euthanized, primarily as feral cats. In 2013, City ACC, Animal House, Tenth Life, and Stray Rescue had combined

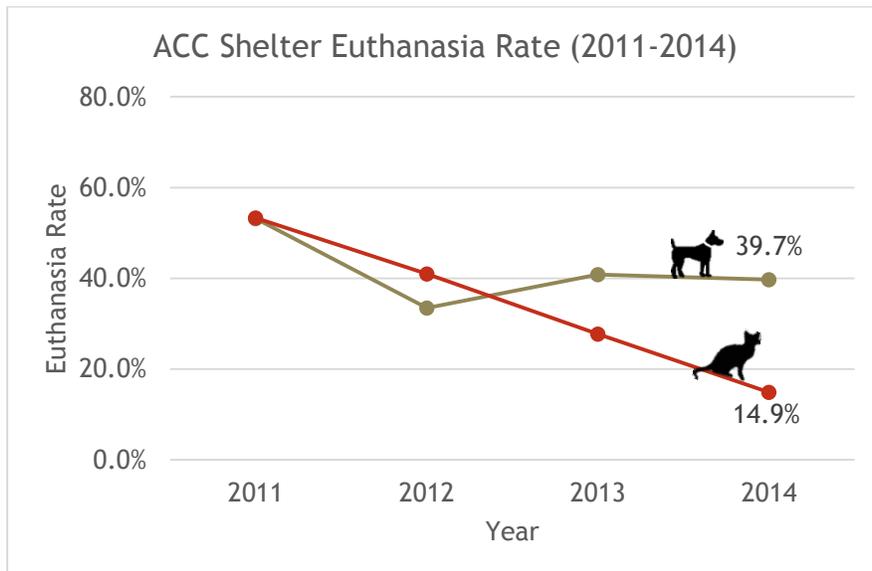


estimated intake of over 600 cats. For 2013, the TNR Task Force reported 908 cats spayed/neutered with DOH funds since 2012. With DOH funds in 2014, BARC spayed/neutered 250 dogs and cats; Animal House spayed/neutered and vaccinated 132 cats (they also rescued 287 and adopted 204 cats and kittens); and Tenth Life 91 spayed/neutered, vaccinated and microchipped 91 cats (they also rescued 287 and adopted 204 cats and kittens).

Between 2013 and 2014, the dog intake at the ACC shelter increased by 13.0% and cat intake more than doubled.



In 2014, the live release rate for dogs was 55.9%, which did not change from the rate in 2013. In 2014, the live release rate for cats was 68.2%, which was a 4.7% increase from 2013.



In 2014, the euthanasia rate for dogs was 39.7%, which was a 2.7% decrease from 2013. In 2014, the euthanasia rate for cats was 14.9%, which was a 46.2% decrease from 2013.



Vector Control

Vector Control

Vectors, or any agents that transmit an infectious pathogen to another living organism, can easily transmit diseases through animal-to-animal or animal-to-human contact. These vector-borne diseases can be controlled or eliminated through preventative measures such as chemical control and removal of harborage conditions.

What We Do

The Vector Control section helps to decrease the number of mosquitoes and rats, both of which spread disease and are considered a nuisance. Pest Control Workers (PCWs) respond to citizen complaints of these disease vectors. PCWs are state-licensed Category 8 public health pest control operators, and are well trained on identifying signs of vector infestations.

Accomplishments

In 2014, Vector Control addressed 1,286 requests and complaints for mosquito fogging treatments, mosquito breeding sites, and exterior rat infestations. These numbers were slightly lower than what was observed in 2013.

Mosquito Fogging

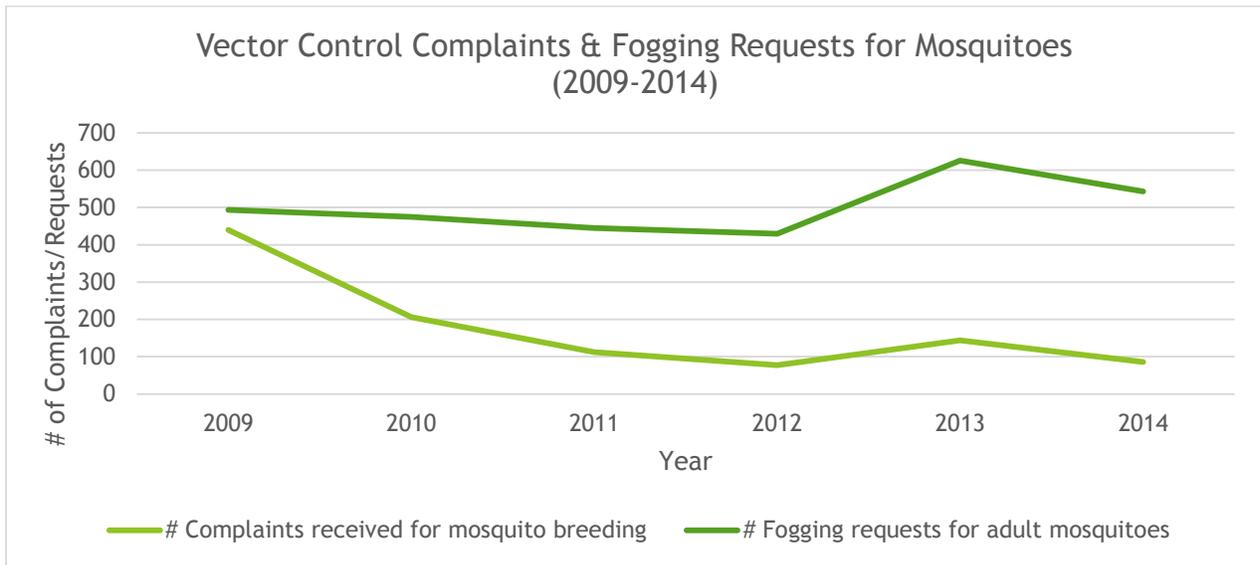
Mosquitoes can carry diseases which threaten the public health, including West Nile Virus, and several forms of encephalitis. In 2012, the United States experienced a deadly wave of West Nile Virus infections, killing 286 people. The City of St. Louis does not test birds or mosquitoes for West Nile Virus because it is considered to be an endemic pathogen in the United States. In an effort to protect public health, the DOH accepts requests and complaints from citizens to spray/fog areas from May-September annually.

The DOH uses a synthetic permethrin to spray for mosquitoes. It is similar to chemicals found in chrysanthemum extract. It is Aqua-Reslin, an Ultra-Low Volume Aerosol. The active ingredients are permethrin and piperonyl butoxide. The chronic toxicity of the product was found through studies not to produce a risk until FAR outside the anticipated human daily consumption and was stated as not indicating a health risk to human beings. The mutagenicity testing resulted in no production of any mutagenic effects. This information was found on the product's material safety data sheet. The product the DOH uses to combat mosquitoes has been found to not pose a health risk to humans. Fogging typically takes place after sunset, which minimizes the impact on butterflies, bees, and other pollinators.

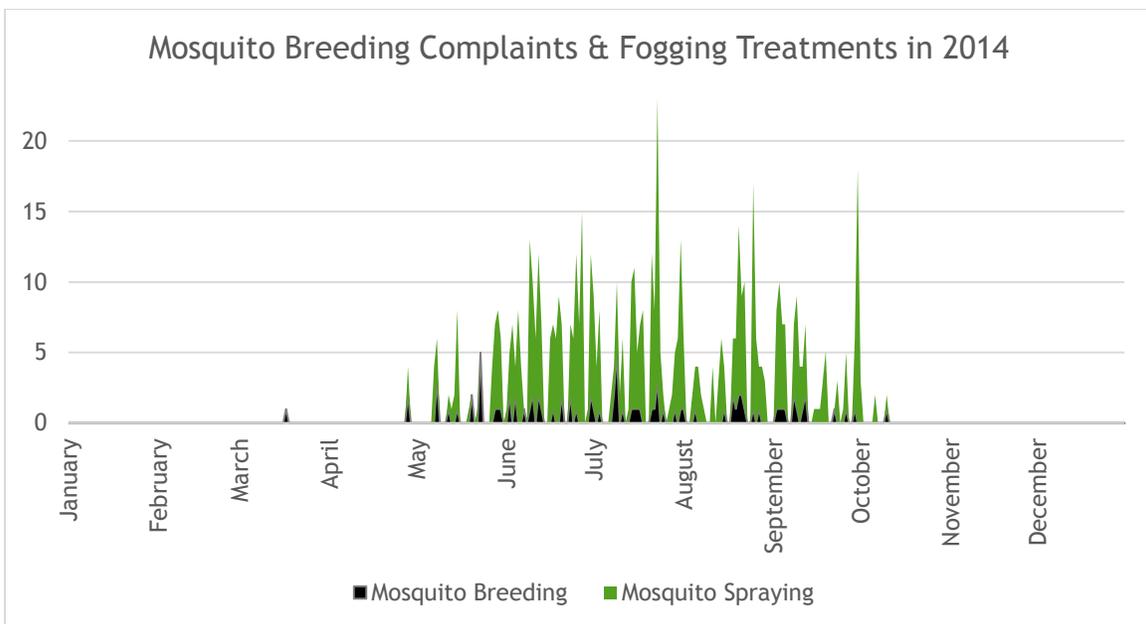
The City parks are routinely treated in the summer months. Aside from that, the Citizens' Service Bureau routes complaints and fogging requests to Vector Control. When the PCWs receive a fogging request for a city block, they treat the surrounding 2-block radius.



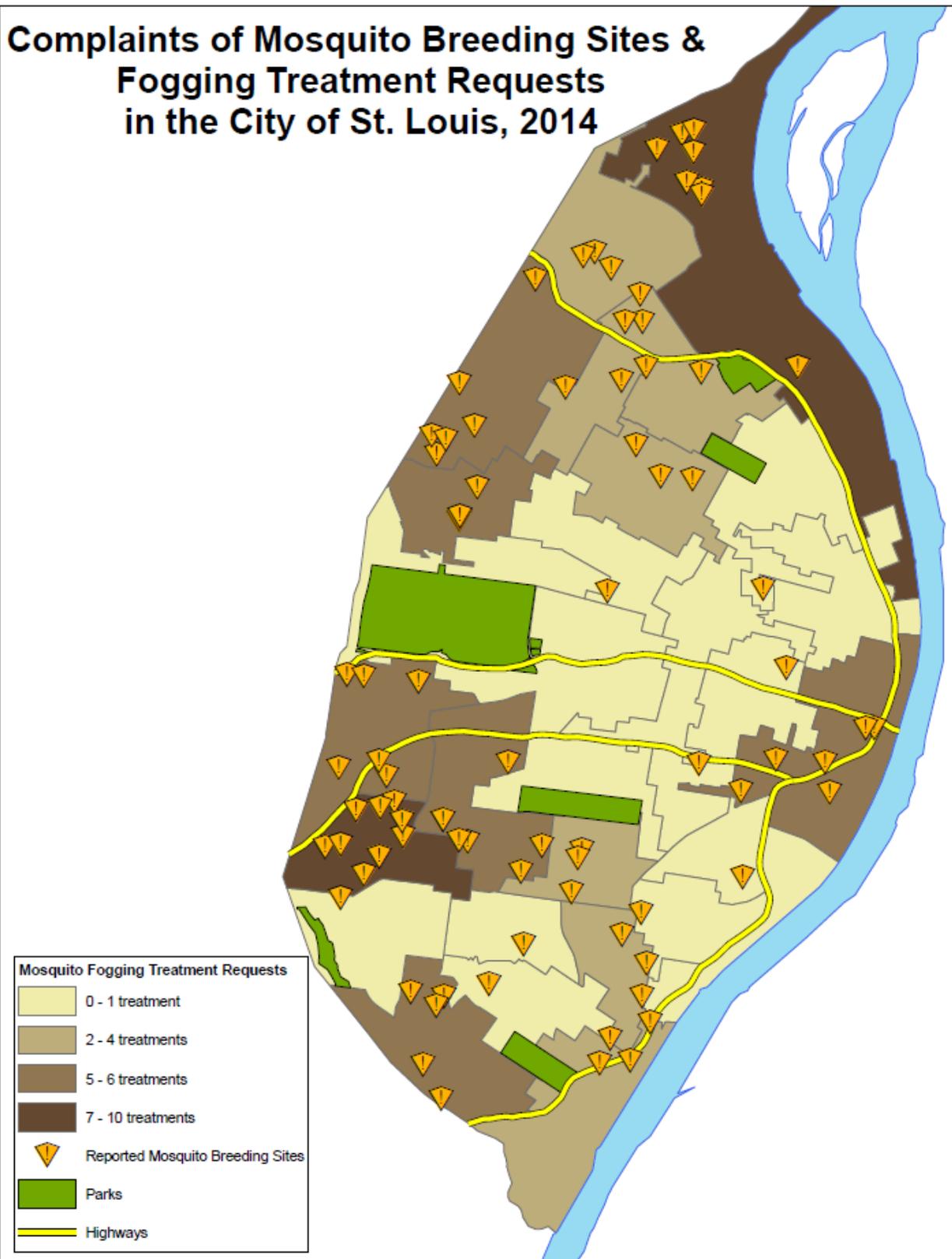
Historically, the number of complaints received from the Citizens' Service Bureau for reported mosquito breeding sites had been steadily decreasing from 2009 to 2012. In 2013, there was an increase in the number of complaints and fogging requests, likely because of heightened awareness and concerns about the West Nile Virus epidemic that hit the United States in 2012.



In 2014, requests for fogging peaked during the month of July and tapered off as the summer ended in mid-September. There was a sharp spike in fogging requests at the very end of September, which corresponded with the short transition in seasonal conditions from high temperatures to a temporary ambient and humid environment, ideal for mosquito breeding. The most fogging requests come from Ward 2, where the industrial factories and businesses sit along the Mississippi River.



Complaints of Mosquito Breeding Sites & Fogging Treatment Requests in the City of St. Louis, 2014

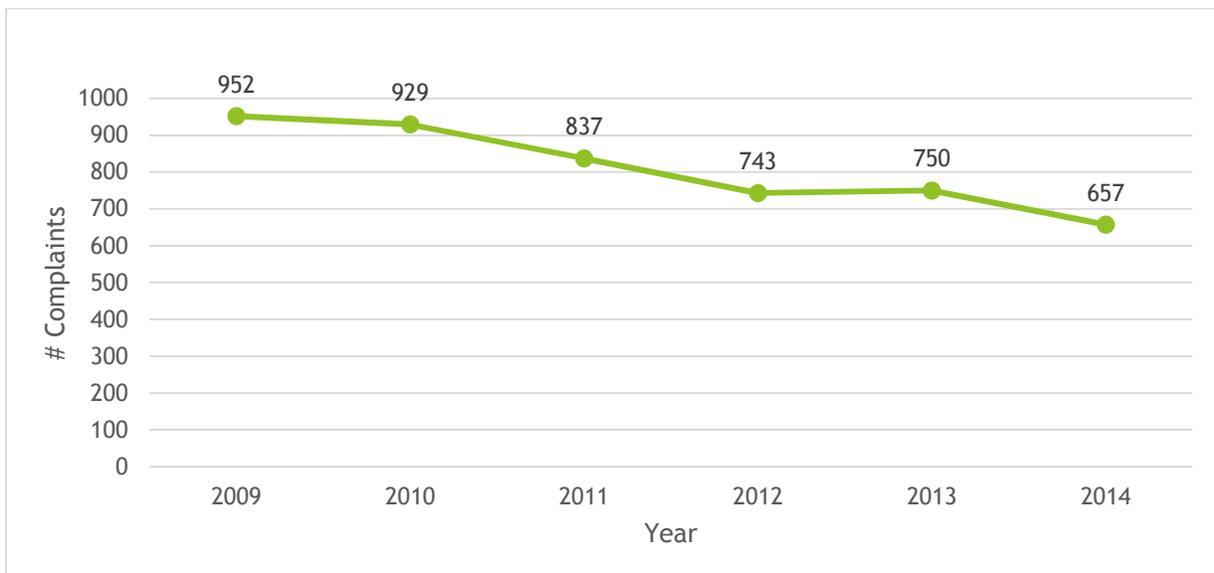


External Rat Infestation Treatment

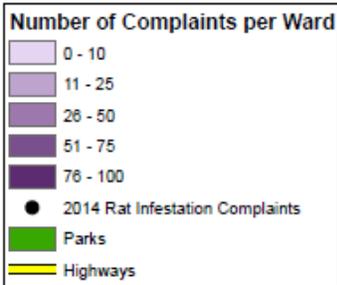
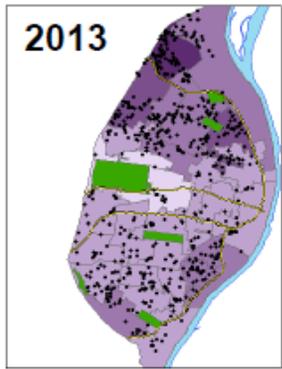
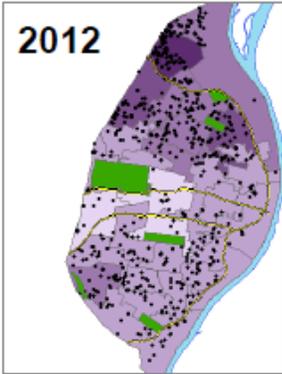
Rats are responsible for transmitting diseases and destroying property. Rat bites and scratches can result in diseases such as hantavirus infections, leptospirosis, and the bubonic plague. Their feeding, foraging, and nesting behaviors are considered a nuisance in the City of St. Louis. In order to protect public health from this environmental threat, the DOH recommends removing any outdoor conditions that provide harborage or food sources.

The Vector Control section works to address exterior rat infestations based on complaints received from the Citizens' Service Bureau. The PCWs investigate for signs of rat colonies, evaluate the environment for harborage conditions, and treat infested areas appropriately. The DOH uses a single-feeding anticoagulant with bromadiolone to treat rat infested areas. This is a USDA-approved rodenticide that kills Norway rats, warfarin-resistant Norway rats, and roof rats. Careful attention is given to the placement of bait, to prevent mammals, birds, dogs, cats, and other animals from accidental ingestion. For this reason, the bait is not placed openly above ground or applied directly to water sources.

The number of rat infestation complaints have gone down 31% in the last 5 years. In 2014, there were 657 complaints; the majority of them coming from Ward 1 and Ward 20 (see map).



Rat Infestation Complaints in the City of St. Louis, 2014



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