

LA CROSSE
WISCONSIN

City of La Crosse Fire Department
Community Risk Assessment

January 2021



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Report Background

The La Crosse Fire Department (referred to in this document as the department or LCFD) has been actively involved for many years in the traditional 3 E's of fire prevention: Enforcement, Engineering and Education.

In 2018, the department began an organizational and cultural transition of moving towards a department-wide "community risk reduction" focus. In 2019, this mission was defined, strengthened and incorporated into our five-year (2019-2023) Strategic Plan. We made a firm commitment to support community risk reduction as an integral part of our organizational foundation, and it has been incorporated as a priority focus throughout the department's management divisions and daily activities. LCFD leaders continue to identify and pursue opportunities to become more integrated, strategic, and accountable than ever before in our mission to protect our personnel and the citizens of the greater La Crosse community. The department has recognized that modern-day "Community Risk Reduction" focus was very different than the traditional "Fire *Prevention*" model, in that it should:

- Integrate all department personnel in all divisions
- Consider all risks and hazards, not just fire risks
- Incorporate all available data
- Support and foster community partnerships

However, before the risks could be reduced, they needed to be identified and prioritized. Department personnel – both civilian and sworn – invested several months during the second half of 2020 to craft this first-ever Community Risk Assessment (CRA) for the LCFD using existing data, knowledge, and feedback. Personnel from all LCFD divisions contributed to this document, and the compilation of the work was organized and completed by the department's Division of Community Risk Management.

Our department based this CRA document on the **National Fire Protection Association (NFPA) 1300 Standard**, which requires the consideration of nine community profiles in an organization's CRA:

- Demographic
- Geographic
- Building Stock
- Public Safety Response Agencies
- Community Service Organizations
- Hazards
- Economic
- Past Loss / Event History
- Critical Infrastructure Systems

The department received significant assistance in the development of this CRA with our inclusion in a collaborative and grant-funded pilot project between the NFPA and the data analytics company, mySidewalk. The department applied for this grant in the fall of 2019, and the grant was awarded in the spring of 2020.

This grant provided us access to a web-based community risk assessment tool (<https://dashboards.mysidewalk.com/la-crosse-cra-tool/nfpa-1300-crosswalk>). This online platform utilized multiple publicly-available datasets to create our community profile and further assessed and tabulated the department’s calls for service. Many of the maps, graphs and data tables you will see in this document have been made available by this grant-funded risk assessment tool.

The department is very grateful to have been given the opportunity to participate in this project and we acknowledge that it very much helped jump start our community risk assessment process.

A well-written CRA should provide multiple levels of information on the fire and life safety challenges facing a community, including broad stroke overviews and neighborhood-level perspectives.

Similar to the NFPA, Vision 20/20 – the national coalition of organizations and experts strategically focused on preventing fire and life loss – advocates that fire departments develop a CRA as their launching point for effectively managing increasingly complex layers of risks.

Vision 20/20 describes **community risk reduction as the “identification and prioritization of risks, followed by the coordinated application of resources to minimize the probability of occurrence and/or the impact of unfortunate events.”** Vision 20/20 sees that the CRA represents the first two steps in the 6-step community risk reduction process, shown in Figure 1:

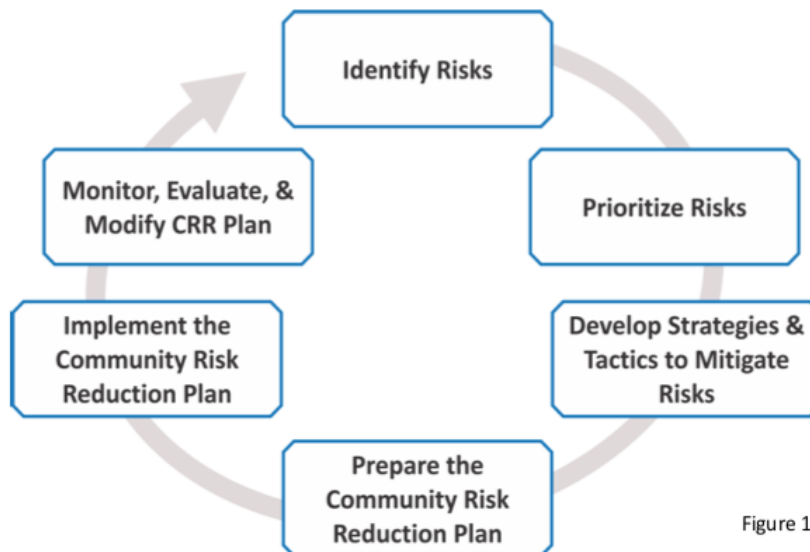


Figure 1

It should be noted that **this CRA document was created in midst of the Covid-19 pandemic.** The City is operating with all non-essential staff working from home or on modified schedules, and many city departments are closed or operating under modified protocols. Though this hasn't intrinsically affected the creation of this document, the significant disruption to regular life, and measures made to combat the virus, have presented unique challenges to our need to work closely and efficiently with our colleagues. The department's emergency incident response operations are status quo, though procedural adjustments have been made on calls for service to best protect patients, bystanders and responding LCFD personnel.

The department's Division of Community Risk Management has also crafted an assessment of the City's, County's and other partners' preparation and response to the Covid-19 crisis in our local area. This additional document contains some information response partners have asked to not be made public. In respect of this request, this document listed in Appendix A, is accessible via a link that can only be reached from a City computer with City credentials.

Risk Assessment Matrix

Definitions of "risk" can be found in a variety of publications, reports and other sources. Merriam-Webster's definition is: *the possibility of loss or injury; Someone or something that creates or suggests a hazard.* From an emergency response perspective, another simple definition of risk is: *the potential or likelihood of an emergency to occur.*

A "risk assessment" simply asks, "How risky is the situation?" Figure 2 displays a matrix that is utilized to classify hazards based on the probability and consequence of risk.

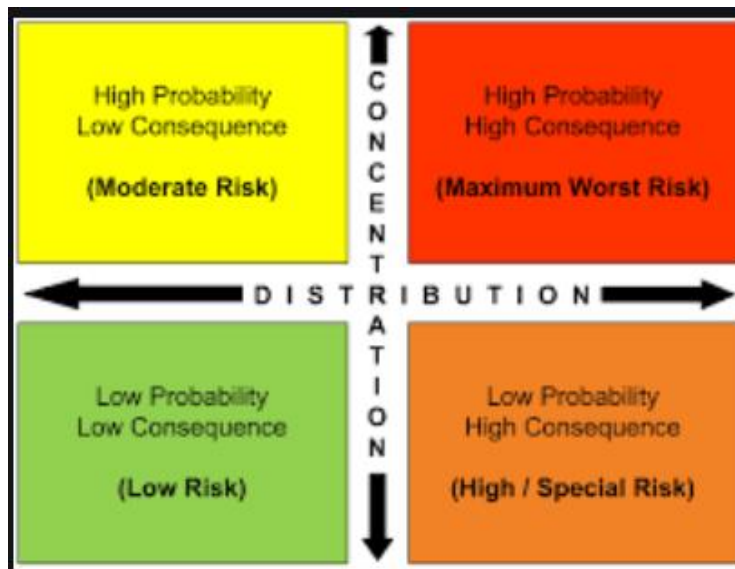


Figure 2

The two primary components of a risk assessment process are an analysis of probability and consequences. The factors used for this assessment are both physical and theoretical. Probability is the likelihood that a particular event will occur in a given time period.

There are three areas of concern when evaluating consequence:

- 1). Life safety (danger to citizens);
- 2). Economic (loss of property, income and assets); and
- 3). Environmental (irreparable or long-term damage to the environment).

Department Profile

The department provides services to the City of La Crosse's 51,666 permanent residents, its 100,000 daily workplace inhabitants, and 22 square miles of primary response territory. The department operates out of four fire stations and offices at City Hall, and our primary response area includes the La Crosse Regional Airport and contracted sections of the Town of Campbell on French Island.

Figure 3 details the department's response area and fire station locations. It should also be noted that the Town of Medary, located in the department's northeast coverage area, recently signed a 30-year contract for Firefighting, Rescue, and EMS services coverage provided by the department. The department is also actively supporting strengthened and expanded mutual-aid agreements with neighboring jurisdictions.

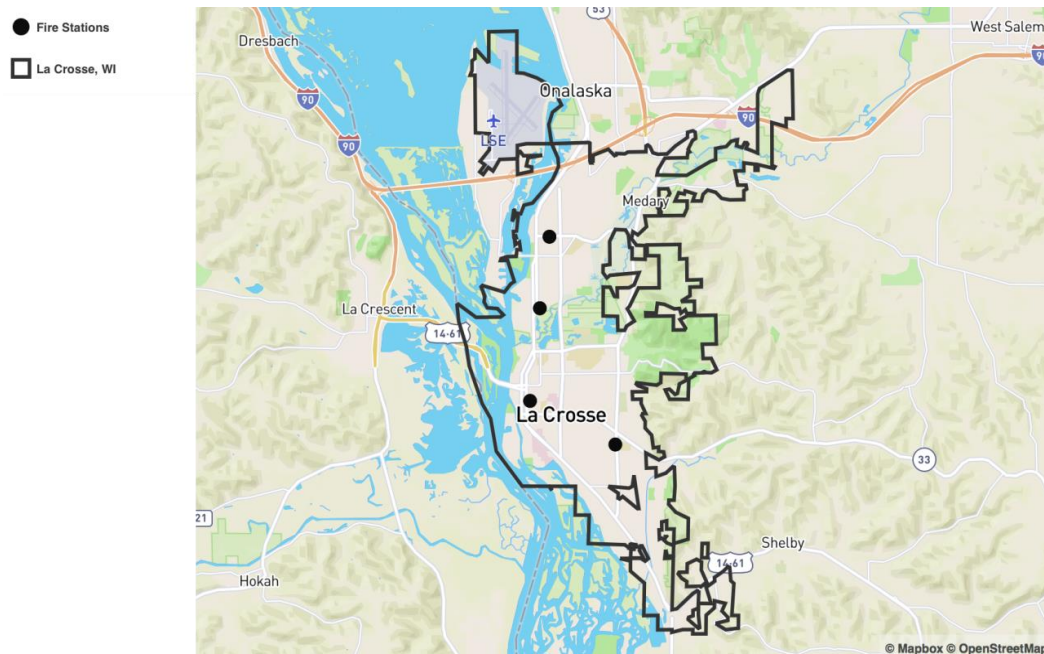


Figure 3

The department's response profile is unique in that the majority of the **response area falls under the urban/suburban designation**, though with the **addition of the Medary, parts of this township are closer to a rural** definition. Response times can be longer to the furthest reaches of Medary and much of the township is not equipped with water hydrants.

It is written in the City of La Crosse's municipal code that the city shall have a career fire department and numerous studies have supported the size, scope, and responsibilities of the department. The department is led by the Fire Chief, with management support of two Assistant Fire Chiefs, two Division Chiefs, and three Battalion Chiefs. The management structure is well defined through an organizational chart, with areas of management responsibility divided into "divisions". The division leaders are responsible for management accountability within their respective divisions, as well as cross-divisional support of department strategy and services.

The department's emergency response personnel are comprised entirely of fulltime, career firefighters. There are 96 sworn firefighters employed by LCFD, of which 84 are licensed as EMTs and 12 are licensed as paramedics. The department also employs 12 civilian staff to include Building Inspectors, Code Enforcement Technicians, Administrative Support Staff, and a Community Risk Educator.

The department's Division of Fire and Rescue Operations, managed by an Assistant Fire Chief, operates with a minimum-daily-staffing goal of 24 emergency responders on-duty at all times. This division is divided into three staffing platoons who work rotations of 24-hour work shifts. The platoons have a management rank structure that includes a Battalion Chief, and multiple Captains, Lieutenants, Engineers and Firefighters.

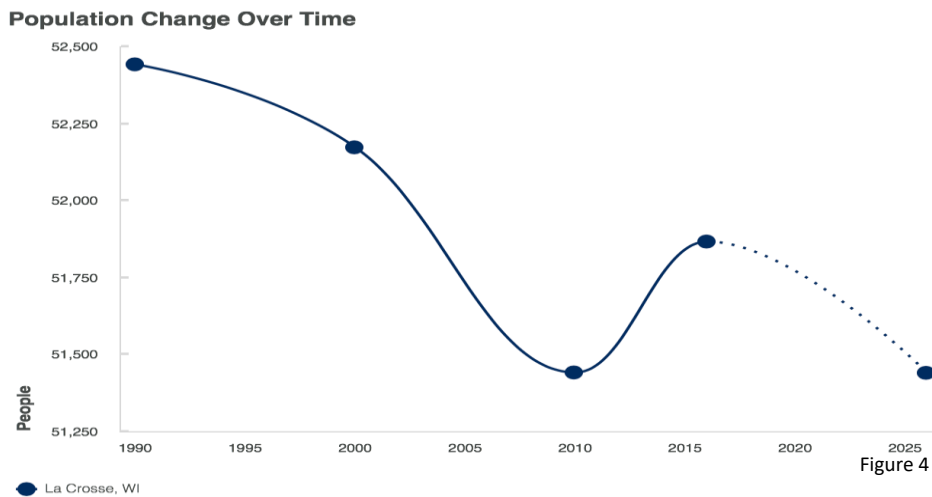
In addition to firefighting and emergency medical response, division personnel cross staff four Special Operations Teams; Hazardous Materials, Urban Search and Rescue, Water and Dive Rescue, and Tactical EMS which supports the Police Department's Emergency Response Team. This division also manages all department fleet and facilities matters.

The department's Division of Community Risk Management, managed by an Assistant Fire Chief, is responsible for fire investigations, building permits and inspections, city code enforcement, city emergency management support, and public education initiatives. The division also coordinates annual requirements for Fire and Life Safety Inspections at all commercial buildings in the city.

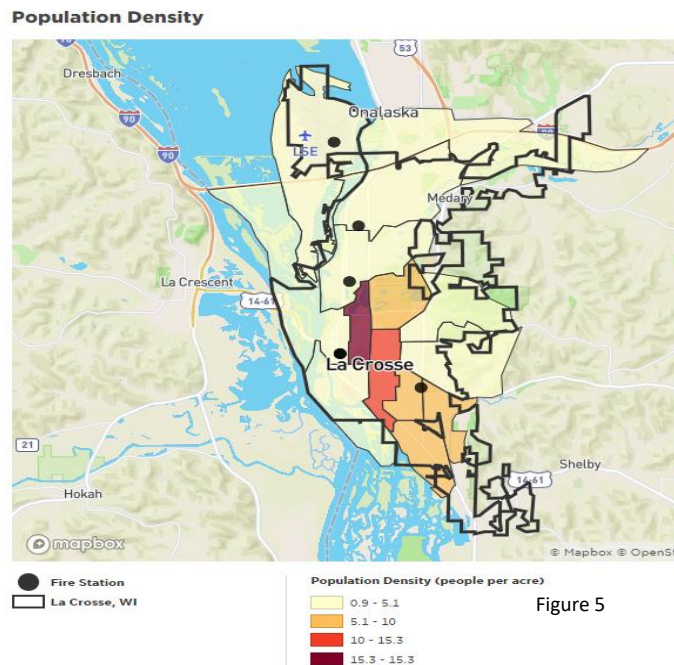
The department is also supported by a two-person Division of Training and Professional Standards. This division is managed by a Division Chief and is responsible for annual training goals, professional development goals, and occupational health and safety requirements for all members of the organization.

Community Profile

The City of La Crosse started out as a Mississippi River trading post and logging village. In 1856, the village was legally incorporated as a city, and in 1858 the La Crosse & Milwaukee Railroad was constructed. The advent of the railroad brought waves of immigrants to the city between the 1870s and 1890s. La Crosse’s population continued to grow steadily through the middle part of the 20th century, ultimately reaching its present-day ceiling in the early 1970s. Due to La Crosse’s unique physical land characteristics of steep bluffs to the east and south and the Mississippi to the west, the city had **maximized its land use in the 1970s and its resident population has remained relatively consistent to this day**. In fact, the city’s population has fluctuated nominally over the last 30 years. Figure 4 illustrates this.



Although a large portion of La Crosse’s 52,000 residents are distributed fairly evenly, **the central area of the city is significantly more densely populated**, as depicted in Figure 5.



The **daily growth of the city’s population during the typical workday** should also be considered when addressing the city’s population density distribution, with the overall **population nearly doubling**. Most areas less densely populated by residents tend to become the most densely populated by workers, as the majority of La Crosse’s businesses and other organizations are located in the northern and western sectors of the city. This is shown in Figure 6.

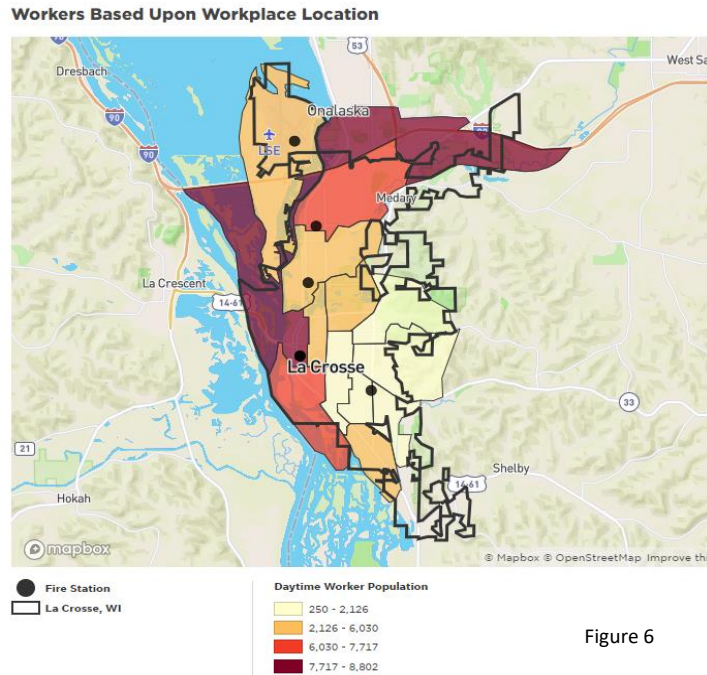


Figure 6

Sources: CTPP

La Crosse residents are collectively a relatively young city, at least in comparison to the rest of the State of Wisconsin. The city has a significantly lower age dependency ratio compared to the state, as illustrated in Figure 7.

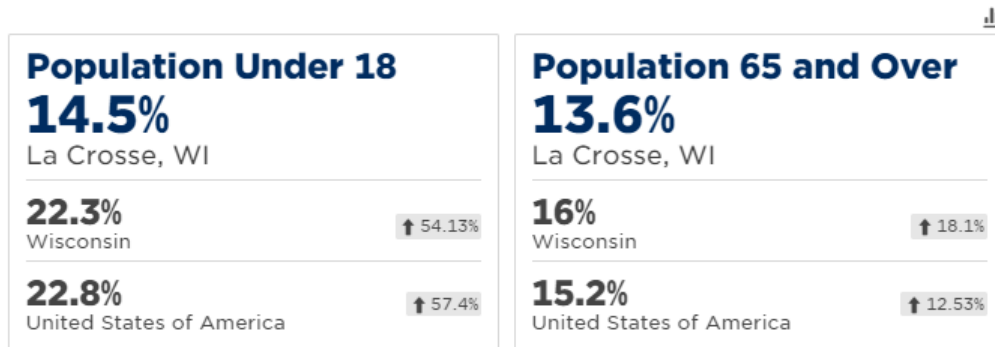


Figure 7

With a median age of 29, **La Crosse is 10 years younger than the rest of the State of Wisconsin and nine years younger than the national median age**. Just as relevant as La Crosse’s relatively young median age, is its age dependency ratio.

Just over 28% percent of La Crosse’s residents are considered dependents, meaning **roughly 3 in 10 people are under the age of 18 or over the age 65**. This is significantly lower than both the State of Wisconsin and the country as a whole.

Further distilling down La Crosse’s age demographics, we see some noteworthy findings with the city’s generational breakdowns, as shown in Figure 8.

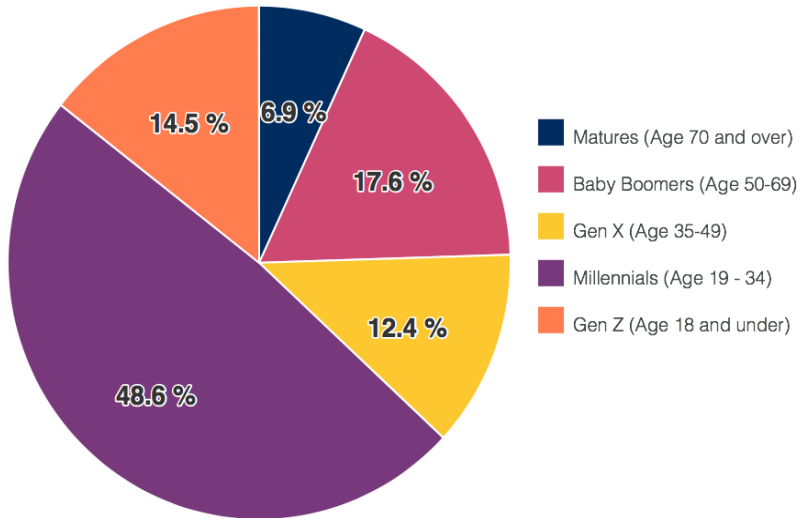
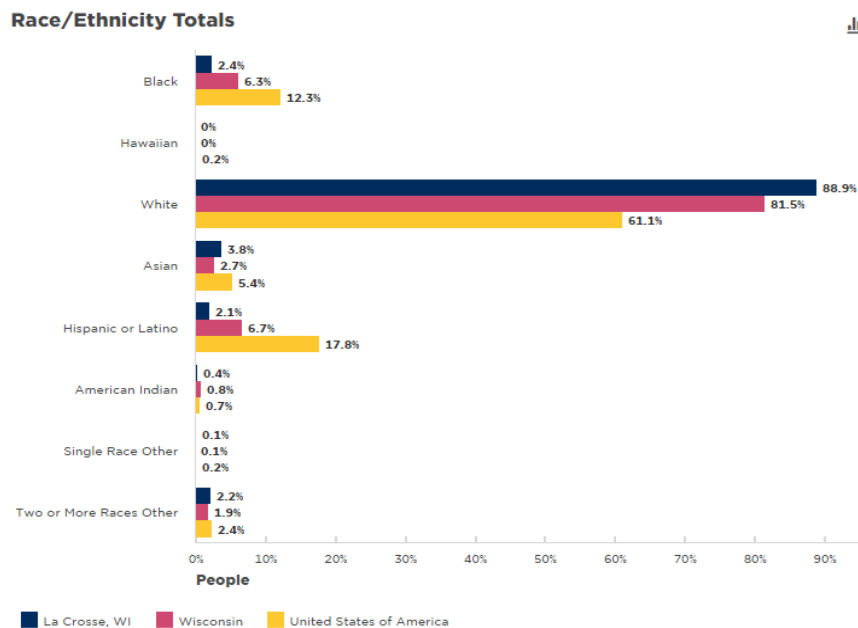


Figure 8

75.5% of La Crosse’s residents are under the age of 50, and 24.5% of the city’s population is comprised of “Baby Boomers” and “Matures” generations.

Figure 9 displays the racial makeup of La Crosse. Almost 89% of the community is white. The four next highest percentages of race/ethnicity demographics are Asian (3.8%), Black (2.4%), two or more races (2.2%), and Hispanic or Latino (2.1%).



Sources: US Census ACS 5-year. Values for Black, Hawaiian, White, Asian, American Indian, Single Race Other, and Two or More Races are all not Hispanic or Latino

Figure 9

There are roughly 1,500 foreign-born residents currently living in La Crosse and the majority of this group is comprised of residents from Asian countries. The next largest contingent of foreign-born residents is people from Latin American countries.

70% of La Crosse’s native-born residents were born in Wisconsin. English is the language predominately spoken in households in the city with 92% of households reporting it is the primary language spoken. 6% of households state an Asian language or Spanish is the primary language spoken at home.

Language Spoken at Home

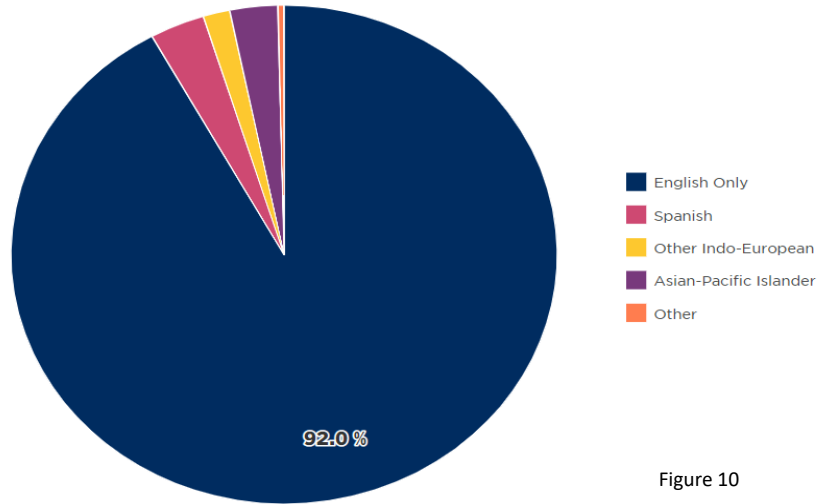


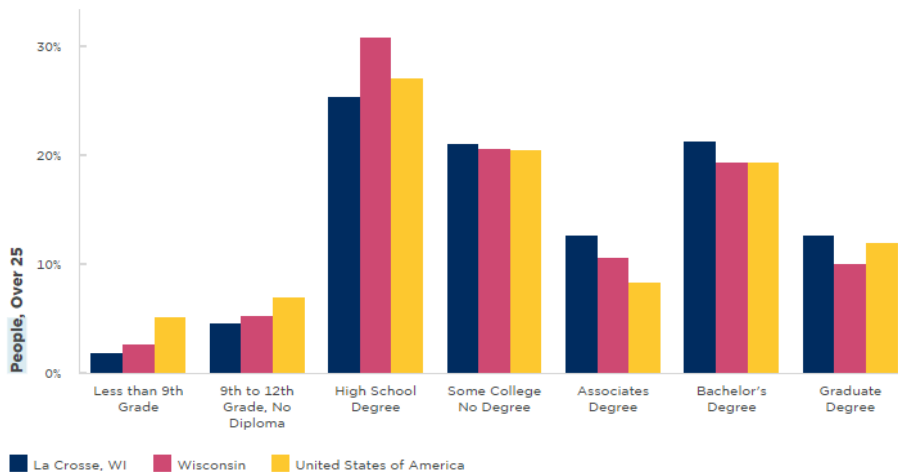
Figure 10

La Crosse, WI

Sources: US Census ACS 5-year

La Crosse is a well-educated community. The city’s average education percentages, for the most part, are higher than those of Wisconsin and the United States overall, as shown in Figure 11.

Highest Level of Educational Attainment

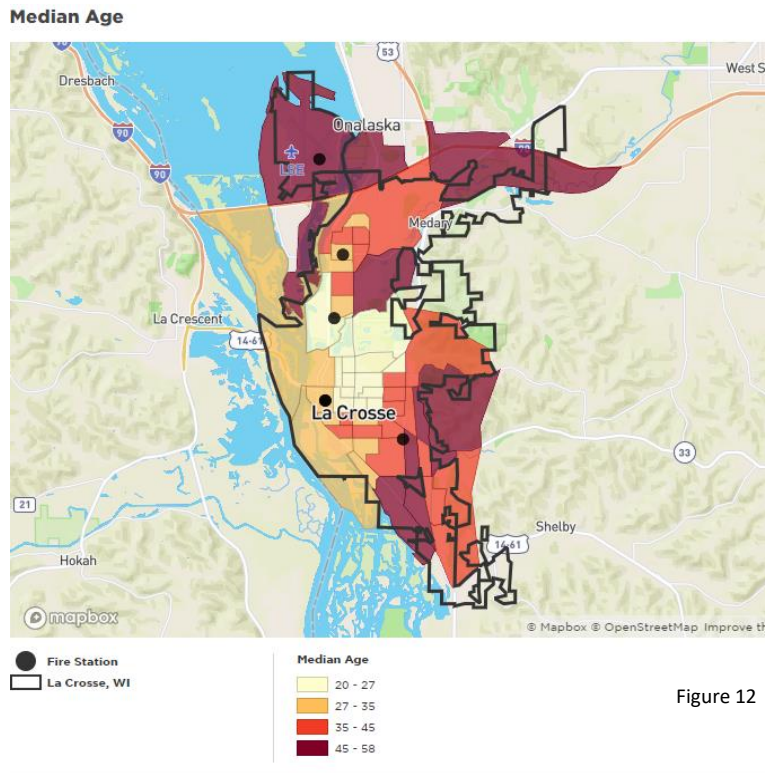


Sources: US Census ACS 5-year

Figure 11

La Crosse is home to two universities and one technical college, and the population's median age distribution reflects this. **The median age in central La Crosse, where all three of these institutions are located, ranges from 20-27 years old.**

The **older populations primarily occupy the southeastern and northern sectors of the city** as shown Figure 12. Note that the most densely populated areas shown above in Figure 5 are also populated by the youngest category of residents.

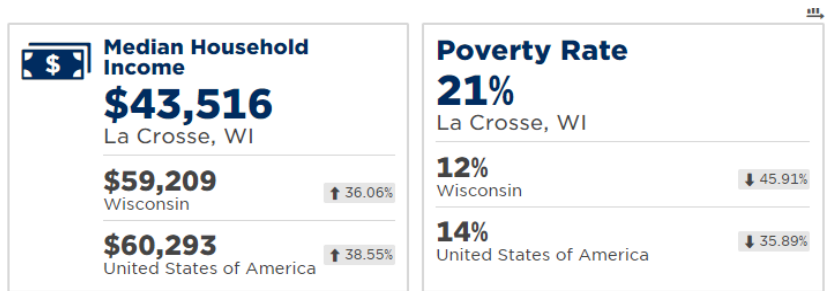


Sources: US Census ACS 5-year

The **median household income** in La Crosse is **just over \$43,500, opposed to the Wisconsin average of just over \$59,000**. Similarly, the **poverty rate** in La Crosse is at **21%**, almost double the **Wisconsin average of 12%**.

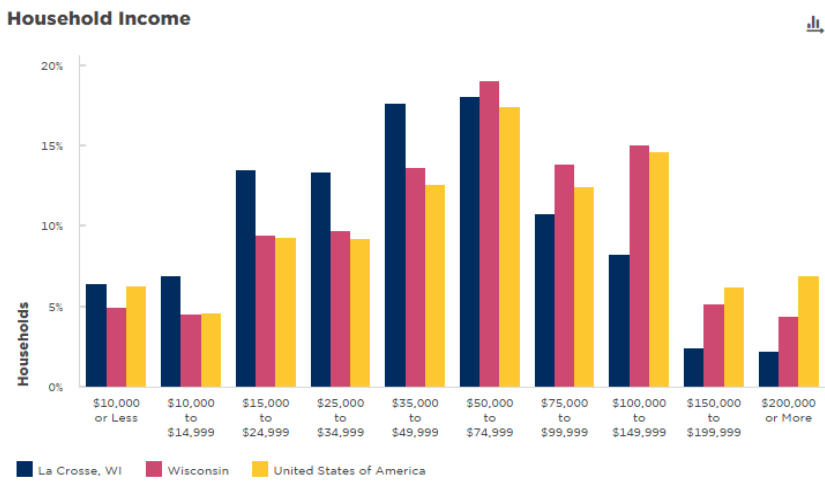
Inadequate income can impact an individual's ability to purchase, maintain, and utilize proper preventative products and services, and there are direct correlations between social determinants of health, poverty, and life safety.

This disparity in average income is reflected in Figures 13 and 14 on the following page.



*% Diff. shows the percentage increase or decrease as compared to the original geography.
Sources: US Census ACS 5-year

Figure 13



Sources: US Census ACS 5-year

Figure 14

Figure 15 illustrates the per-capita income distribution of La Crosse. As you can see, the per capita income is consolidated in the eastern edge, and southern and far northern reaches of the city.

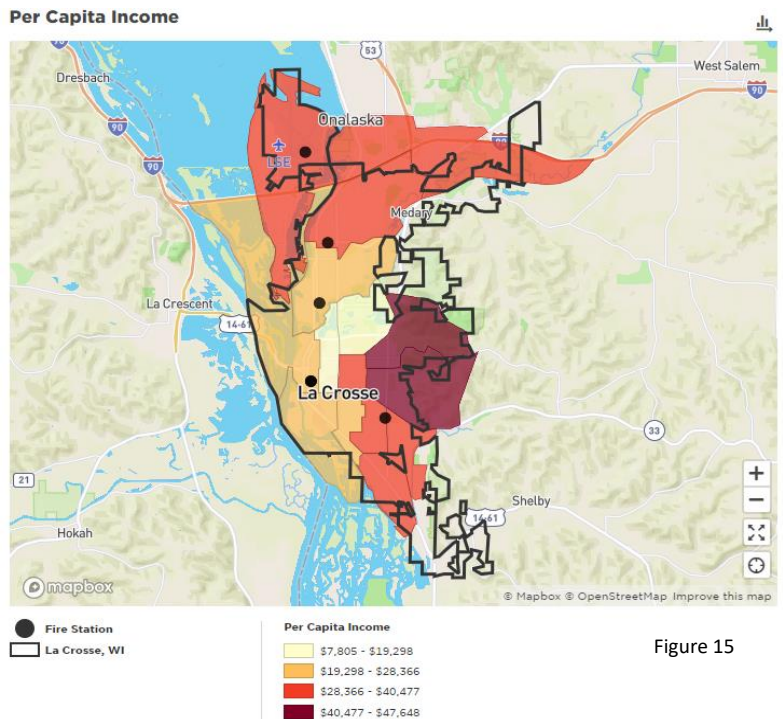


Figure 15

Figure 16 tables the workforce demographic data for La Crosse, WI as reported by the US Census.

Occupation	Number of People Employed	Percentage of People Employed
Management	3,319	6.4%
Business/Finance	2,074	4%
Computer/Mathematical	1,089	2.1%
Architecture/Engineering	726	1.4%
Life, Physical, Social Science	726	1.4%
Community/Social Service	1,349	2.6%
Legal	312	0.6%
Education, Training, Library	3,371	6.5%
Art, Design, Entertainment, Sports, Media	1,089	2.1%
Health Diagnosis/Treating Practitioners	2,386	4.6%
Health Technologist/Technicians	1,089	2.1%
Healthcare Support	2,749	5.3%
Fire Fighting/Prevention	571	1.1%
Law Enforcement	207	0.4%
Food Preparation/Serving	6,016	11.6%
Building, Grounds Cleaning, Maintenance	1,867	3.6%
Personal Care/Service	1,452	2.8%
Sales	5,238	10.1%
Office/Administrative Support	6,328	12.2%
Farming, Fishing, Forestry	156	0.3%
Construction/Extraction	1,193	2.3%
Installation, Maintenance, Repair	726	1.4%
Production	3,682	7.1%
Transportation	1,763	3.4%
Material Moving	2,230	4.3%

Major Community Events

Event Name	Location	Timeframe	# of Participants	Estimated Economic Impact
Oktoberfest	Throughout city; Downtown, Oktoberfest grounds	Last weekend in September	Approximately 150,000	Generated \$15 million and over 200 jobs
Riverfest	510 East Veterans Memorial Drive, La Crosse	July 1-4	About 25,000	Est. \$1,118,000 donated to local charities and organizations
WIAA State Track and Field Meet	Veterans Memorial Sports Complex	Early June	10,000+	Est. \$2.5 million
Moon Tunes	Riverside Park	Bi-monthly June-Sept, 530-8pm	2,000/wk	No response returned
Farmer's Market	Cameron Park	8am-1pm, Fridays and Saturdays, 5/16-10/31	2,000/wk	\$228,000 in local food sales
Rotary Christmas Lights	Riverside Park	Evenings late Nov-Jan 1 st	Nearly 160,000	~ 320,000 nonperishable food items,
Bass Fishing Tournaments	Mississippi River Pool 8	Various dates spring to fall	Varies	Est. \$1.5 million-\$3 million
La Crosse Loggers Games	Copeland Park	Various dates summer	Approximately 2,000-4,000/game	Almost \$4 million
Beer, Wine, and Cheese Festival	Southside Oktoberfest Grounds	Saturday, April 25	3,250 tickets available	Approx. \$516,000
Irishfest	601-615 2 nd Street, La Crosse	August 13-15	3,000	Approx. \$400,000
Wienerfest	Oktoberfest Grounds	Saturday, May 9; 5pm- approx. 10:30pm	1,000	Not returned by publishing
Steppin' Out in Pink	Gundersen Health System Trail	September	Approximately 8,000	About \$2 million fundraised

Public Safety Response Agencies

La Crosse Police Department (LCPD)

The City of La Crosse has a full-time police department with a total of **100 sworn personnel** and 31 civilian personnel.

The department is led by the Chief of Police and organizationally devised into “bureaus” with an Investigative Services Bureau, a Professional Standards/Community Services Bureau, a Field Services Bureau, and Administrative Services.

The **LCPD manages approximately 63,000 calls for service** annually.

Gundersen Tri-State Ambulance

Gundersen **Tri-State Ambulance (GTSA) is the ambulance service provider** for the City of La Crosse. GTSA provides EMS transport services in tandem with EMS first response from the LCFD. GTSA provides **Advanced Life Support (ALS)** level care via Paramedics staffed continuously on multiple ambulances throughout the La Crosse County area and surrounding region. GTSA ambulance response is operationally managed in a “**system status response**” mode, which moves and strategically stages available ambulances to meet their system-wide demands.

Gundersen Health System also operates a **Critical Care helicopter** out of its main hospital in the city of La Crosse.

La Crosse County Sheriff’s Office

The La Crosse County Sheriff’s office operates out of the La Crosse County Courthouse and Law Enforcement Center. Sheriff’s deputies assist LCFD personnel on-scene at incidents outside of the jurisdiction of the LCPD, and they partner with the LCFD at various public outreach and engagement events. The Sheriff’s Department is also responsible for managing the **La Crosse County Jail** and supporting the County Court system.

La Crosse County Public Safety Communications

All 911 emergency calls in La Crosse County are dispatched to the appropriate emergency response agencies from the La Crosse County Public Safety Communications Center. This dispatch center **dispatches all LCFD requests for service** and supports incident command needs for the duration of an incident. EMS incidents are dispatched direct to the LCFD and then callers are routed to GTSA’s in-house dispatch center who then dispatches its ambulances and provides emergency medical dispatching assistance.

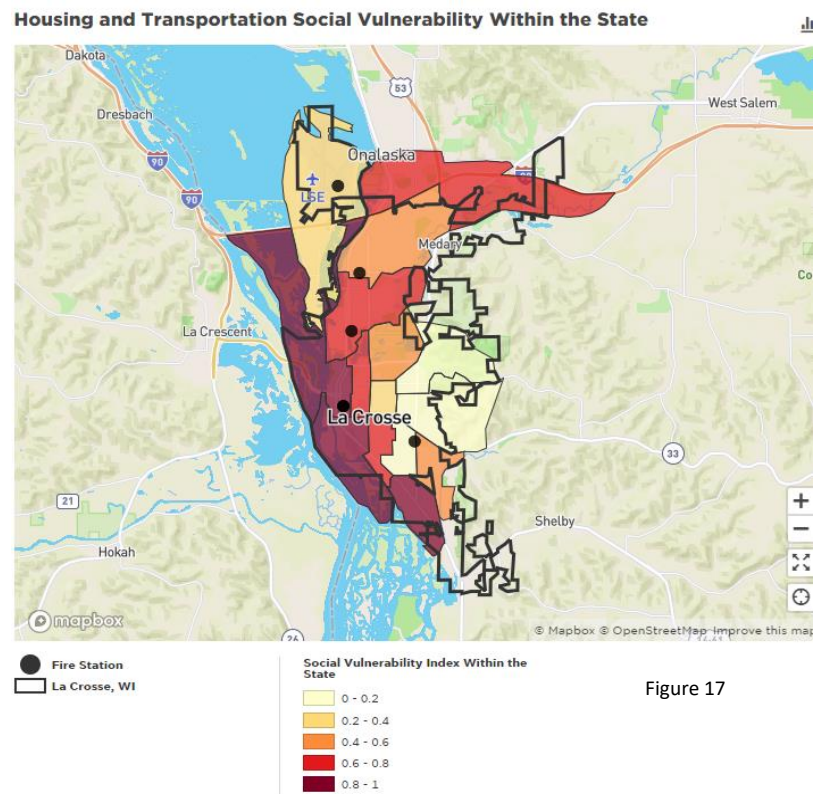
Mutual Aid Response Partners

The LCFD has **mutual aid agreements** with seven other fire departments in La Crosse County, as well as agreements with La Crescent FD in Minnesota and Stoddard-Bergen FD in Vernon County. The LCFD is also part of a statewide **Mutual Aid Box Alarm System (MABAS)** that expands our mutual-aid abilities across the state of Wisconsin.

Vulnerability

It is important to understand the **vulnerabilities residents experience in order to best assess risk** within a community.

Vulnerability exists in many forms and public health experts **correlate social determinants of health and a population's vulnerability** to the risk it faces. Some of these determinants include socioeconomic status, housing and transportation status, health, education, social matters, and the physical environment as a whole. The social vulnerability index takes all of these matters into account to form one core statistic, which is depicted in Figure 17. Figure 17 looks at the social vulnerability for the State of Wisconsin and extrapolates this to La Crosse's census blocks.



A key **aspect of an individual's vulnerability is wealth and affordability**. Although Figures 13, 14, and 15 illustrated general income and the poverty rate in La Crosse, the affordability of housing and the percentage of monthly income residents put towards housing also needs to be assessed to truly reflect economic status and potential vulnerability. 20.8% of La Crosse

homeowners and 48.4% of renters spend 30% or more of their income on housing costs, which is fairly consistent with the respective Wisconsin averages of 20.5% and 42.3 %.

According to Figures 18 and 19, the median rent prices and median home values in La Crosse are highest in central and eastern La Crosse. These **blocks with the highest rent prices and home values are the same blocks with the lowest scores on the social vulnerability index.**

Median Rent Price

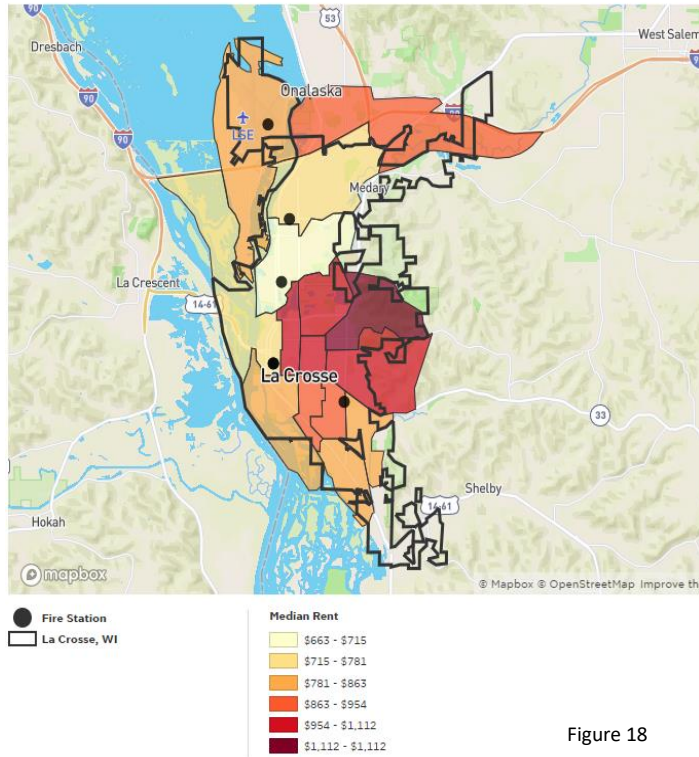


Figure 18

Median Home Value

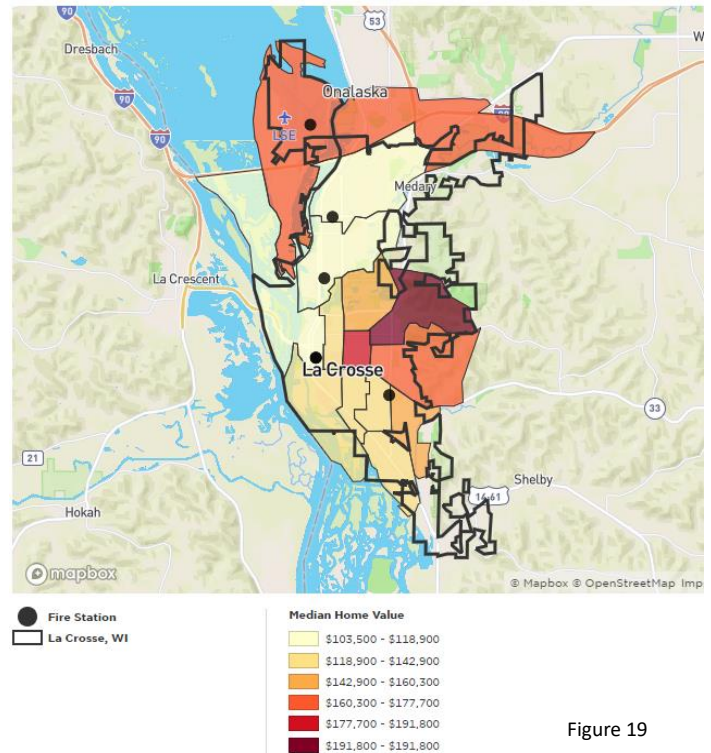


Figure 19

Sources: US Census ACS 5-year

Sources: US Census ACS 5-year

The unemployment rate in La Crosse is 5%, just above Wisconsin's average of 4%. However, this data was collected before the coronavirus pandemic in the spring of 2020. As of the fall 2020, the unemployment rate in La Crosse was at 5.3%, according to the US Bureau of Labor Statistics. This is a significant reduction from April's 12.7% and the height of unemployment during the pandemic.

As mentioned earlier, the age dependency ratio is defined as the percentage of residents under age 18 or over age 65, compared to working-age individuals age 18 to 65. In La Crosse, 14.5% are under 18 and 13.6% are over 65, lower than the respective Wisconsin ratios of 22.3% and 16%. This means that La Crosse has an overall age dependency ratio of 28.1%, significantly lower than that of the overall state of Wisconsin ratio of 38.3%.

Figures 20, 21 and 22 illustrate the distribution of dependents throughout the city. It is clear that the two age groups typically reside in different sections of the city, as most blocks dominated by those under 18 are the same blocks where much fewer individuals aged 65 and older live, and vice versa. However, one exception to this is the sector of La Crosse approaching

Onalaska to the north and stretching east. The low age dependency ratio in central La Crosse should also be pointed out, as this indicates a high population of college students and baby boomers.

People Age 65 and Over

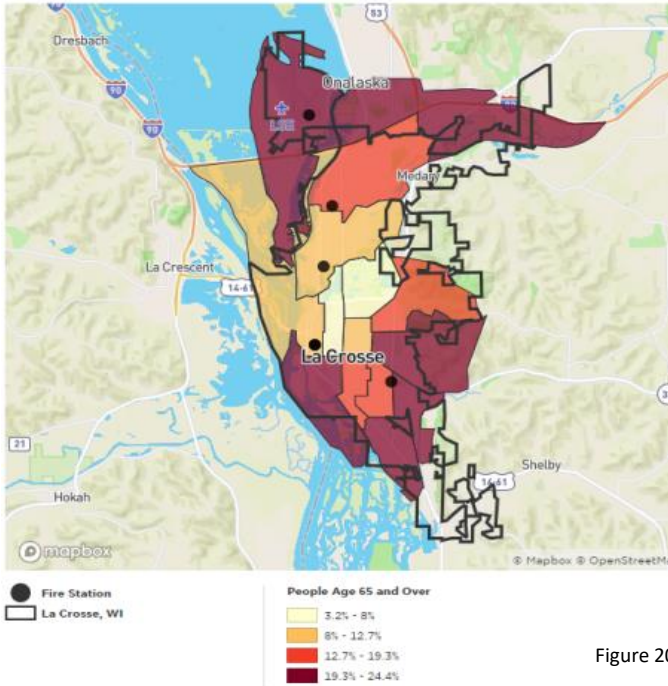


Figure 20

Sources: US Census ACS 5-year

People Age Under 18

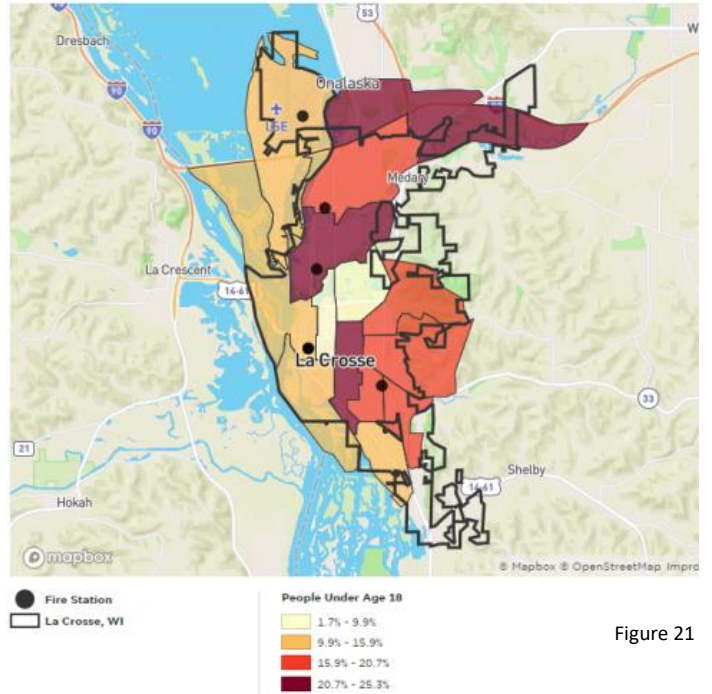


Figure 21

Sources: US Census ACS 5-year

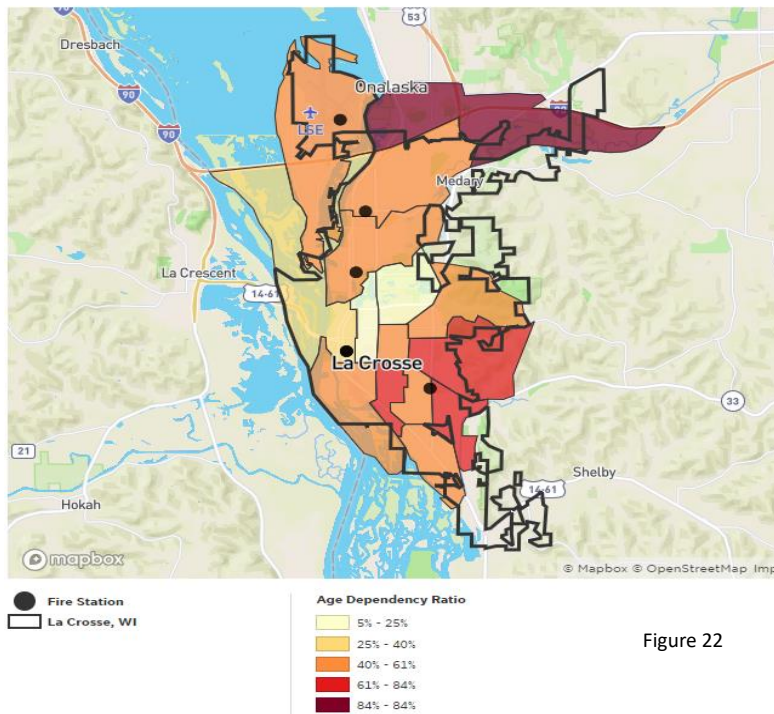


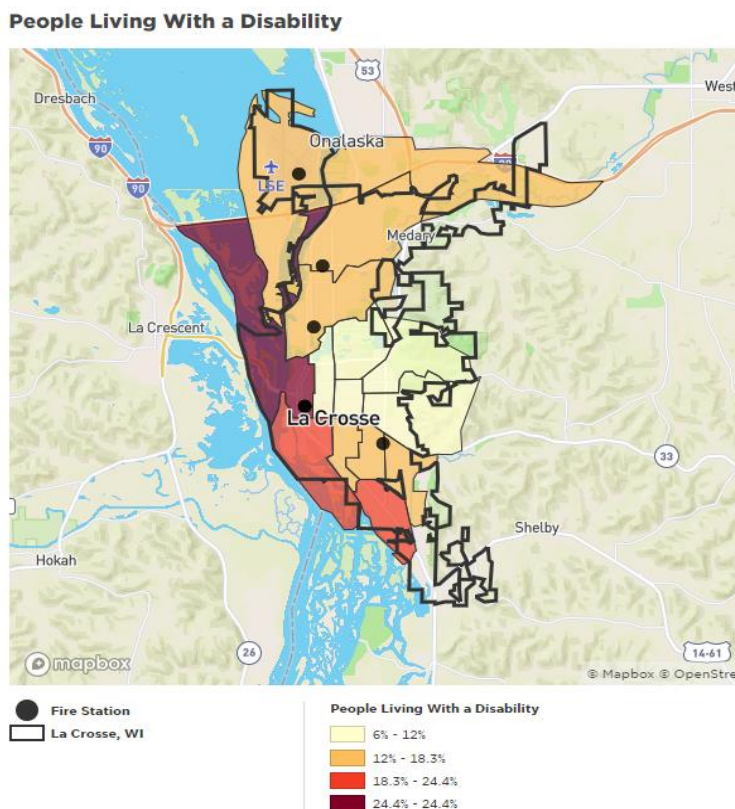
Figure 22

The US Census Bureau defines a disability as “a long-lasting physical, mental, or emotional condition. This condition can make it difficult for a person to do activities such as walking, climbing stairs, dressing, bathing, learning, or remembering. This condition can also impede a person from being able to go outside the home alone or to work at a job or business.”

More than 43 million Americans have a disability of some sort, and at any moment a member of any community could develop a disability for a short or long period of time. Currently **in La Crosse, 12.7% of the population lives with a disability**, roughly on par with the State of Wisconsin and the United States national population statistics.

La Crosse offers a number of disability service resources, such as the La Crosse County Aging and Disability Resource Center, Aptiv Inc., VARC, many faith-based organizations, among others. Similarly, organizations like the YMCA and the La Crosse Municipal Transit, and many programs between the various universities in the area, offer the community with disabilities resources pertaining to education, exercise programs, and transportation.

Disability is an **important factor to consider when it comes to the likelihood and severity of incidents**. For example, individuals with hearing impairments are likely to have difficulty hearing a smoke alarm. Someone with a physical disability may not be able to evacuate a building as quickly as someone without a physical disability. It is critical to educate this disabled citizen population regarding home safety education, emergency evacuation planning, cooking and electrical safety, and numerous other aspects of risk reduction strategy. Figure 23 illustrates the geographical distribution of the population with disabilities in La Crosse.



The risk of death or injury from fire and other mechanisms is not the same for everyone in a community. According to the 2017 Fire Risk Report from the U.S. Fire Administration (USFA):

“Casualties are not equally distributed across the U.S. population, and the resulting risk of death or injury from fire is not uniform. It is more severe for some groups than for others. Much can be learned from understanding why different segments of society are at a heightened risk... When determining fire risk, geographic, demographic and socioeconomic factors all come into play.”

In its report, the USFA shares the following and other observations on demographic risk factors:

RISK BY AGE

Older adults: Adults ages 50 or older have a greater relative risk of dying in fires than the general population. Those ages 85 and older have the highest risk of fire death. When physical and cognitive abilities are diminished, as is often the case for the elderly, fire risks increase. Nearly half of all older adults are on several prescription medications, which may cause drowsiness, especially when combined with alcohol. Nationally, many older adults live alone on meager incomes, often in substandard housing.

Young children: The very young (ages 4 or younger) are at a higher risk of fire death and injury than older children (ages 5+). The very young usually cannot escape independently from a fire, lacking the mental faculties and physical capabilities. Additional concerns are the thin, delicate skin of young children, their curious nature, and their inability to recognize danger. Some researchers have also found that sleeping children do not respond appropriately to smoke alarms compared to the general population, remaining quite groggy even when awoken by an adult during a fire.

Adults age 25-64: This age group is at a greater relative risk of fire injury than the general population.

RISK BY RACE

African Americans and American Indians/Alaska Natives are at greater risk of fire death than the general population. African American children constitute a large and disproportionate share of total fire deaths, accounting for 33% of fire deaths among children in 2015 but only representing 15% of the total population. American Indians/Alaska Natives are 40% more likely than the general population to die in a fire. This contrasts Asian/Pacific Islander Americans, who are 60% less likely to die in a fire than the general population.

RISK BY SOCIOECONOMICS

There is an inverse relationship between fire risk and income. Poorer population groups have the highest risk of fire injury or death, while the wealthiest have the lowest risk per national statistics. This is especially true for children in poor homes, who are more likely to be left alone than their affluent peers--often because they live in single-parent households.

RISK BY GEOGRAPHIC REGION

The risk of dying in a fire is greatest for people living in the U.S. Midwest (including La Crosse) and the South. This may be attributed to the intermittent need for occasional heating from portable heating devices. Other sources including the Hartford Insurance Index indicate lightning strikes as a common cause of fires in the Midwest and South.

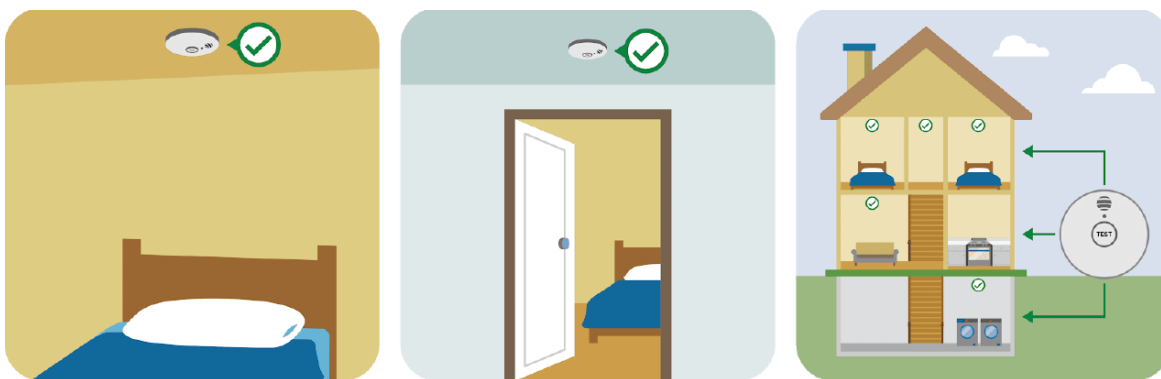
RISK BY LANGUAGE AND LITERACY

Illiteracy and language barriers are additional demographic risk factors for fire and life safety issues. While speakers of a foreign language might also have basic English competency, safety messages are often better understood and more readily acted upon in their native language.

According to NFPA, two populations at higher fire risk are immigrants and refugees: ***“Language barriers, cultural differences, and inexperience with unfamiliar home technologies are factors that mark the challenges of helping newcomers live safely from the threat of fire in the home.”***

The USFA goes on to explain that more than 30 million adults in the U.S. cannot read, write or do basic math above a third-grade level. Just because someone can speak a language (whether English or a foreign language) does not necessarily mean he/she can read and understand written messages from the fire department on signs, fliers, news media reports, or social media.

Effectively delivering safety messages to people from diverse linguistic and cultural backgrounds, who may have varying degrees of literacy, can be a major challenge to keeping communities safe. **Messages with pictures**, as shown in the below USFA pictograph illustrating where smoke alarms are needed in a home, can help overcome some communication barriers.



Housing Profile

Although they may carry historical significance or visual appeal, **older homes can pose several concerns when it comes to emergency incident likelihood, risk, and the overall health** of a community's citizens.

Older buildings may lack structural integrity, involve unsafe electrical wiring, and frequently fail to comply with modern building codes and specifications developed to save lives. Similarly, an older building is more likely to contain hazards like asbestos, lead paint, and mold. Exposure to these substances and other known health hazards potentially found in older buildings, can lead to an increased likelihood for undesirable health outcomes for the occupants. **According to the US Census, the median year of construction of homes in La Crosse is 1962**, which is 11 years older than the Wisconsin median and 15 years older than the US median. **More than one in four homes in La Crosse were built before 1939**, and almost three of every four La Crosse homes were built before 1980.

There is a correlative factor regarding this construction data when compared with La Crosse's population leveling since the 1970s. New homes are not being built at the rate seen in other municipalities, because the city is unable to physically expand outward due to its surrounding geographic limitations and jurisdictional boundaries. There is notable evidence of some new vertical construction of larger multi-family housing and this shift from single-family homes to multi-family high-rise also has effect on LCFD firefighting and emergency medical response strategies. Figure 24 shows the median home age based on location.

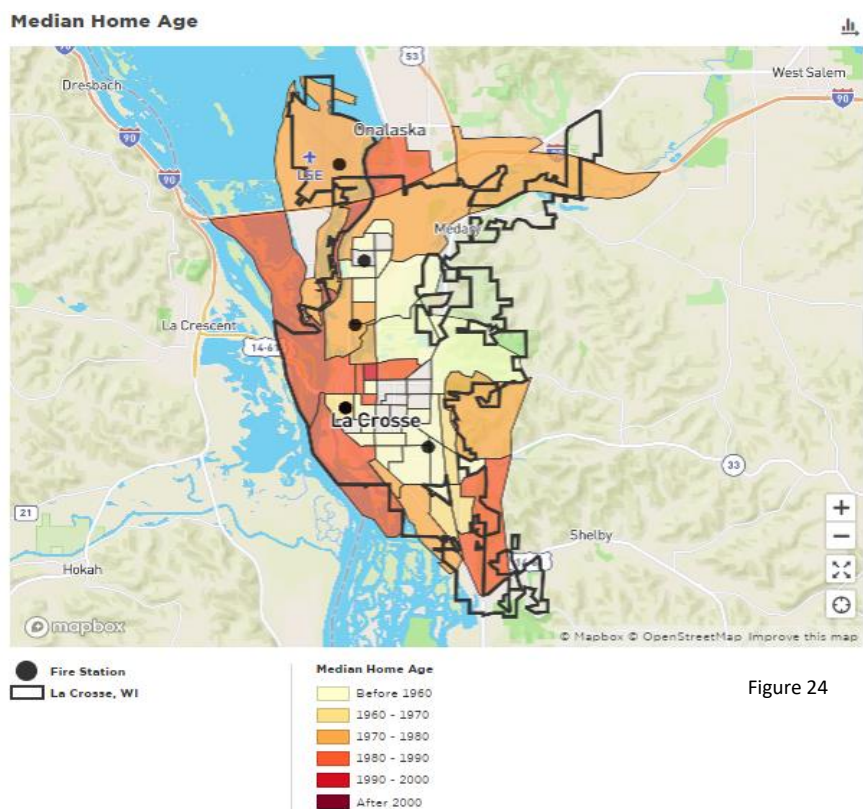
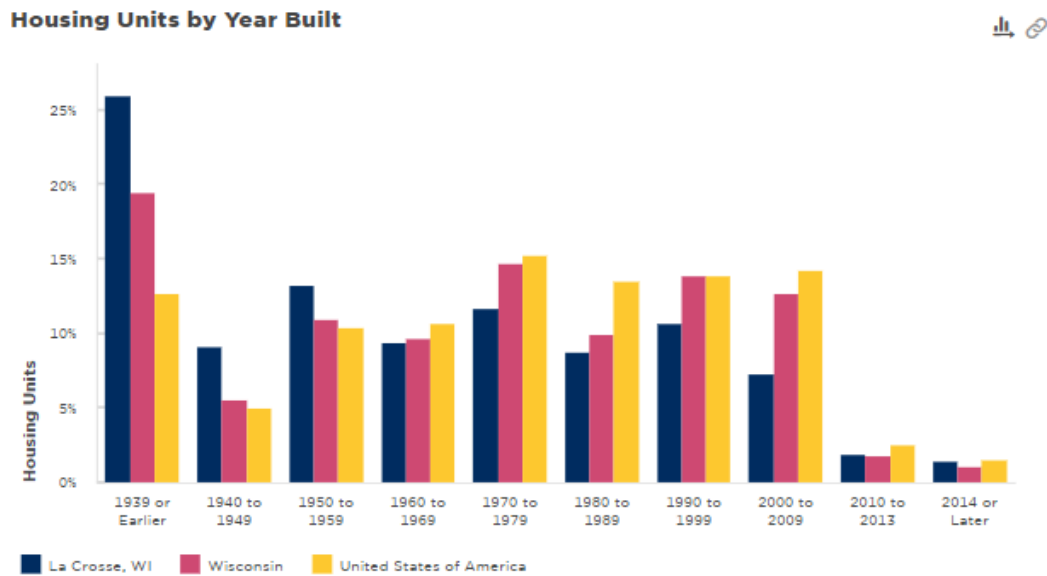


Figure 24

Figure 25 depicts the ages of homes in La Crosse compared to the state and national average.



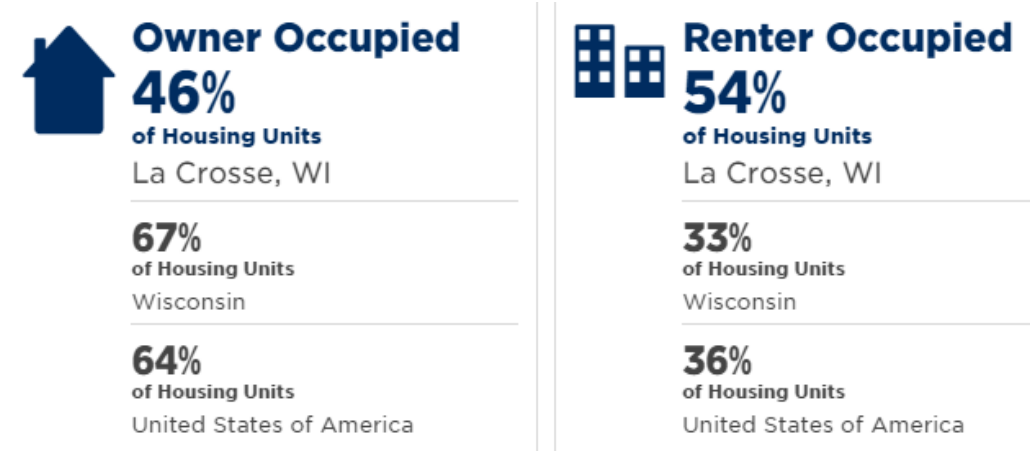
Sources: US Census ACS 5-year

Figure 25

With the consideration of the multiple colleges and universities present in the city, a distinct **segment of La Crosse’s population tends to move in and out of residences based on the time of year**. This is routinely seen in late spring when the **universities’ annual academic schedules** end, and again in September when students return to the school campuses for the start of the fall semester.

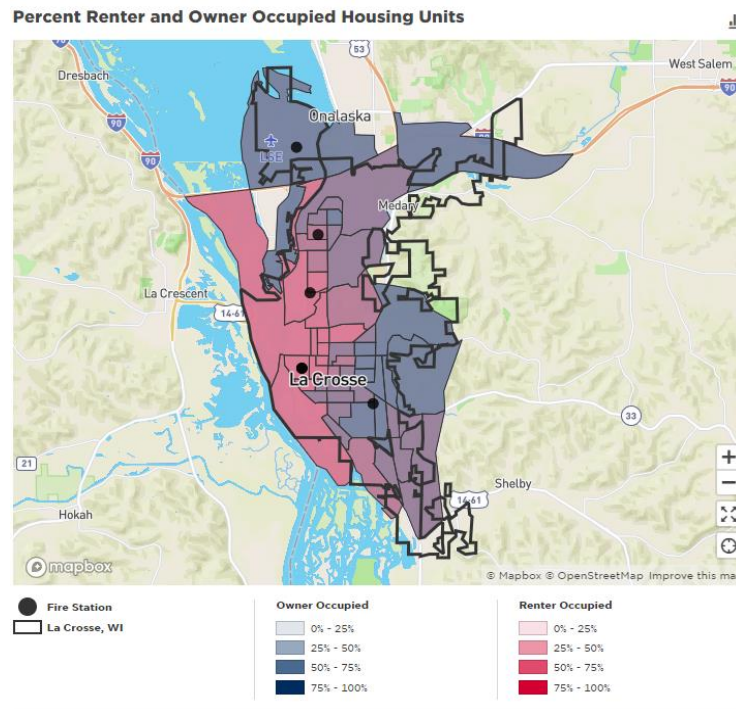
According to the US Census, **71% of La Crosse residents lived in the same house over the past year, in contrast to the Wisconsin average of 86%.**

Contrary to the overall Wisconsin norm, a majority of housing units in La Crosse are renter-occupied and not owner-occupied, which is consistent with the high percentage of residents moving between residences. The ratio of owner-occupied to renter-occupied homes in La Crosse is 46:54, whereas the Wisconsin ratio is 67:33.



Sources: US Census ACS 5-year

According to the US Census and depicted in Figure 27, the western border of the city is about 85% renter-occupied, and the eastern and northern areas are nearly 80% owner-occupied. Towards central La Crosse, these trends clearly blend and the ratio approaches 50:50.



Sources: US Census ACS 5-year. Areas of dark blue have a greater percent of owners while areas of dark red have a greater percentage of renters. Purple areas are more even makeup of owners and renters.

Figure 27

People who live in rental housing units are not responsible for, and often prevented from, making significant updates to wiring or implementing other major safety precautions. **Renters have to rely on the property owner to ensure that proper safety measures are taken and that life safety codes are followed.** At the same time, **property owners have little control over their tenants' potentially risky behaviors despite efforts towards fire and life safety code compliance.**

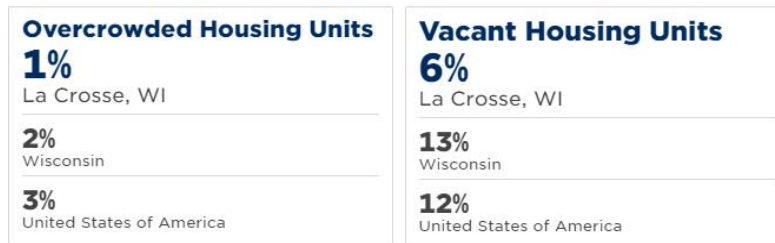
Additionally, there may be more than one housing unit within in a single building originally constructed for single-family use, whether rented or owned, and this adds even more uncontrollable factors to a structure and causes confusion and delays in emergency response efforts.

Another **statistic La Crosse possesses that is unlike the Wisconsin average is the ratio of family households versus nonfamily households.** In La Crosse, these percentages are **44% and 56%, respectively.** Conversely, the overall Wisconsin percentages for these are **63% and 37%, respectively.** Considering the city of La Crosse's younger than average population statistics and statistical effects and impacts of the multiple colleges and universities within the city, this shift in the family to nonfamily ratio comes as no surprise.

Of the 56% of La Crosse residents sharing households with nonfamily members, 68% are living with roommates. The other 32% are accounted for by those living with an unmarried partner (20.8%), a roomer or boarder (5%), or other non-relatives (6.1%).

Overcrowding can happen when households facing poverty attempt to reduce the cost of housing by increasing the number of residents. A housing unit is categorized as “overcrowded” when more than one person per room lives there. The number of residents living in a single housing unit can increase risks and complicate emergency rescue efforts. The density of contents within a structure, and the density of numerous closely located housing structures, also exponentially increases the danger of a fire affecting more than one room within a structure or affecting multiple closely built structures.

On the other side of the spectrum, vacant structures do not have anyone to regularly watch over them so a fire or other incident may go unnoticed for far longer than an occupied building. Vacant structures are often the target of arson. Tracking data to compile information of where each of these factors occur may help develop strategies to minimize loss of life and property. Figure 28 show the percentage of both overcrowded and vacant housing units in the city, as well as the geographic location breakdown of percentages of vacant housing units per sector.



Sources: US Census ACS 5-year

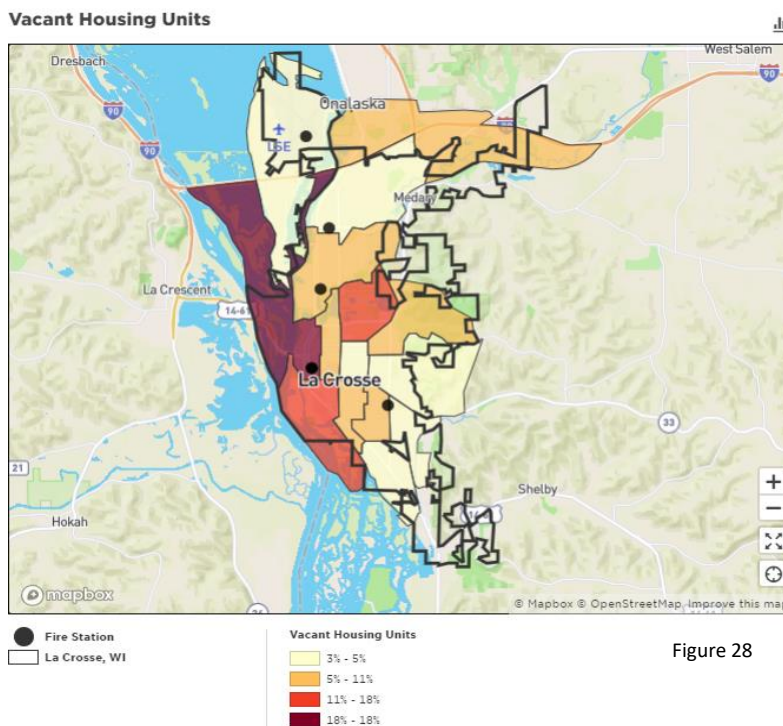


Figure 28

Structures with 50 or more housing units are located at the western edge of the city. There is also a pocket of these types of structures in central La Crosse near the colleges and universities.

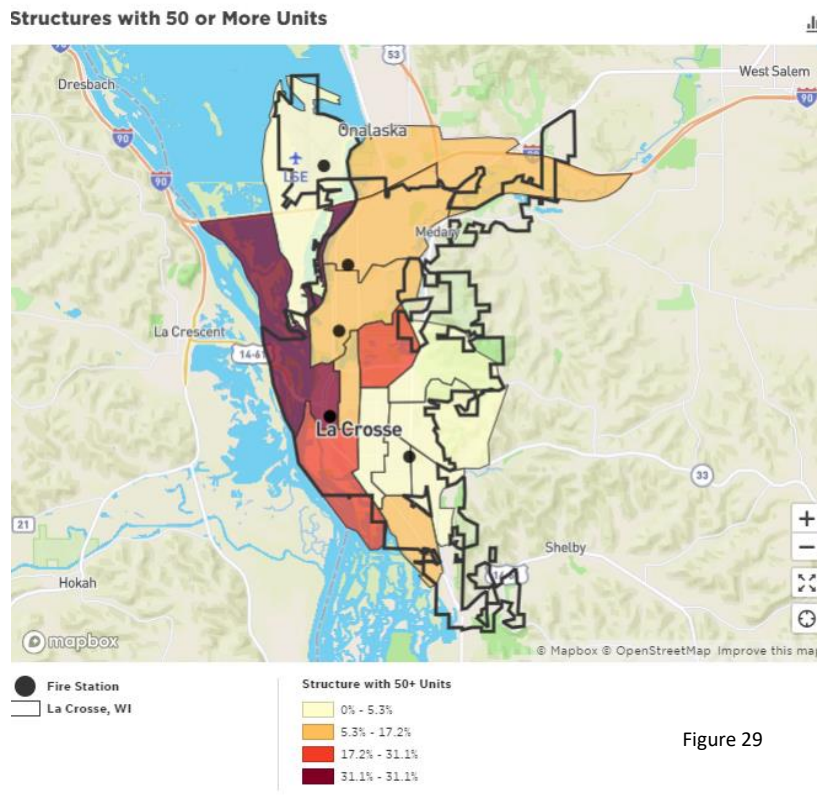


Figure 29

Sources: US Census ACS 5-year. Click the map to view more information on the number of units in structures.

Nuisance Properties

“Nuisance properties” are **properties that chronically exhibit two types of health and safety concerns** – Police Department nuisance activity and city Code Enforcement nuisance activity. See the list of nuisance property activities below.

These chronic nuisance properties **can pose a significant fire and life safety threat to the residents, often times contributing to the blight of a neighborhood, and are often time properties to which both the Police Department and Fire Department routinely respond to calls for service.** All of these compounding elements can contribute to an increased risk of danger for the property’s residents, for the community at large, and for responding agencies and city departments.

Per the City of La Crosse, “nuisance activity” means any of the following activities, behaviors, or conduct occurring on the premises:

(1)

Police nuisance activity:

- a. An act of harassment as defined in Wis. Stats. § 947.013.
- b. Disorderly conduct as defined in Wis. Stats. § 947.01 and section 32-102.
- c. Battery, substantial battery or aggravated battery, as defined in Wis. Stats. § 940.19.
- d. Lewd and lascivious behavior as defined in Wis. Stats. § 944.20.
- e. Prostitution as defined in Wis. Stats. § 944.30.
- f. Theft, as defined in Wis. Stats. § 943.20.
- g. Receiving stolen property as defined in Wis. Stats. § 943.34.
- h. Arson as defined in Wis. Stats. § 943.02.
- i. Gambling as defined in Wis. Stats. § 945.02 or section 32-161.
- j. Trespassing as defined in Wis. Stats. §§ 943.13 and 943.14.
- k. Obstructing or resisting an officer as defined in [section 32-219](#).
- l. Consumption or possession of alcohol in a public way as defined in [section 32-106](#).
- m. Indecent exposure and/or public urination as defined in [section 32-162](#).
- n. Drug houses and criminal gang houses, prostitution houses and gambling houses as defined in sections [30-3](#), [32-160](#) and [32-161](#).
- o. Disturbing the peace and noise violations as defined in sections [32-134](#) and [32-135](#).
- p. Curfew violations as defined in [section 32-182](#).
- q. Truancy, contributing to truancy as defined in sections [32-188](#) and [32-190](#).
- r. Purchase or possession of cigarette or tobacco products by children as defined in sections [32-186](#) and [32-187](#).
- s. Property offenses as defined in [chapter 32](#).
- t. Weapon offenses as defined in [section 32-76](#).
- u. Firearms offense as defined in [section 32-75](#).
- v. Animal violations of any kind as defined in [section 32-164](#) and [chapter 6](#).
- w. Fireworks as defined in [section 18-102](#).
- x. Underage alcohol activities as defined in [chapter 4](#).
- y. Adult contributing, allowing, providing alcohol to underage person's activities as defined in [chapter 4](#).

(2)

Code nuisance activity:

- a. Nuisance animal violations as defined in [chapter 6](#).
- b. Environmental code violations as defined in [chapter 16](#).
- c. Fire code violations as defined in [chapter 18](#).
- d. Storage of personalty violations as defined in [section 30-2](#).
- e. Noxious weed and grass cutting violations as defined in [section 30-4](#).
- f. Boulevard and tree code violations as defined in [chapter 34](#), articles IV-V.
- g. Solid waste violations as defined in [chapter 36](#).
- h. Housing code violations as defined in [chapter 103](#).
- i. Zoning code violations as defined in [chapter 115](#).

The map below tracks the physical location of active nuisance properties in the city. As you can see, many properties are located in the western, central, and northern parts of the city.

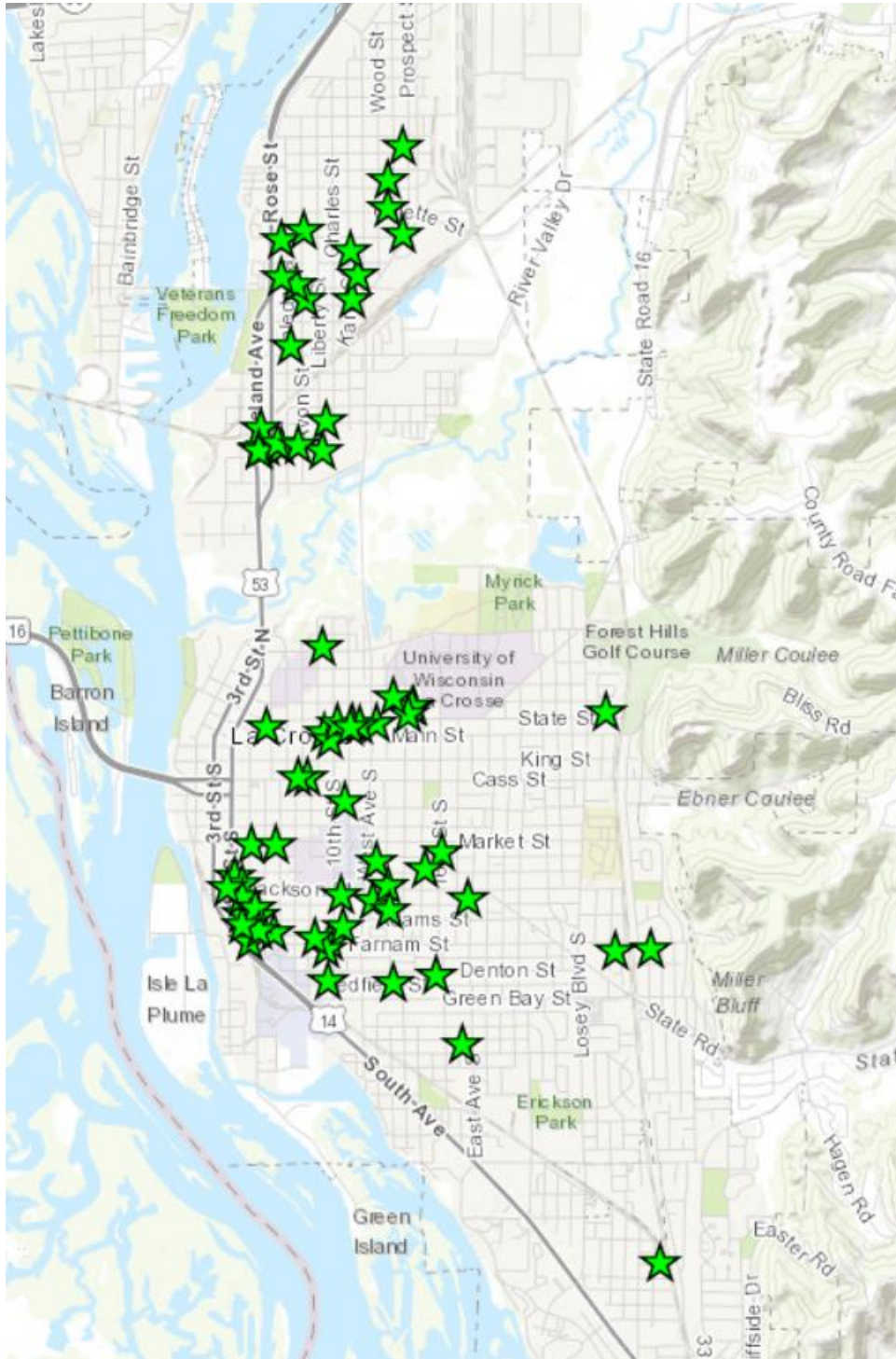


Figure 30

Critical Infrastructure

The following provides a brief overview of the critical infrastructure assets in La Crosse:

Chemical Facilities - Hydrite Chemical, located in La Crosse near the Black River, is one of the nation's largest independent providers of chemicals and services, **shipping and storing more than 400 different chemicals**. Hydrite Chemical has a bulk storage capacity of 2,027,500 gallons. La Crosse has 94 additional facilities that have a reportable amount of hazardous materials.

Gas/Oil – Northern Natural Gas Company **submerged pipeline, 18-inch, 800-1200 psi**, running across the riverbed of the Mississippi River, serving Midwest Natural Gas Co. and WE Energies.

Electricity & Nuclear - Xcel Energy, Dairyland Power Cooperative, Genoa Nuclear Power Plant near Genoa, WI (located only twelve miles to the south of La Crosse) and Prairie Island Nuclear Power Plant near Red Wing, MN are in the LCFD Radiological Field Team's response district.

Transportation Systems – Interstate I-90 and numerous State Highways are critical to transportation in the department's response region. La Crosse railway traffic includes the Canadian Pacific Railway that operates 28 trains per day, including two Amtrak passenger trains and the Burlington Northern-Santa Fe that operates 40 to 50 trains per day. A significant quantity of crude oil and other hazardous materials move through La Crosse every day. There are several major rivers in the agency's response region, to include the Mississippi River, the Black River, and the La Crosse River. **La Crosse has 23-miles of shoreline and 1,350 acres of marshland**. Barge traffic on the Mississippi River brings 4,594 barges through the city annually, transporting 45,575 tons of petroleum and 966,115 tons of chemical fertilizers. The La Crosse Regional Airport transports 189,000 passengers annually.

Public Health – There are two major medical facilities in La Crosse, Gundersen Health System and Mayo Clinic Health System. GHS is a Level II Trauma Center and Mayo is a Level III.

Institutions of Higher Learning - the University of Wisconsin La Crosse, Viterbo University, and Western Technical College have a **combined student population of over 18,000**.

City of La Crosse Water Utility - La Crosse utilizes a five-million-gallon reservoir to maintain water system pressure, and to store water for times of high demand such as fire protection. La Crosse utilizes **15 high pressure wells and maintains 220 miles of water mains**. Hazardous materials are prevalent in most communities, and must be handled, utilized, and disposed of in a certain way in order to minimize their potential to cause harm to people, wildlife, or the environment. Hazardous materials can be derived from large industrial processes, or be as small as certain chemicals in some products used commonly by residents. Ensuring that both residents and responders are aware of these hazards and the risks they pose can help uncover root causes of issues and aid in response pre-planning.

The La Crosse community, like most communities in the United States, depends heavily on Water Utility systems for support and baseline functioning.

In the event of malfunction or disaster, the utility groups can potentially become hazardous to the community. These can come in many forms including downed power lines or pipeline leaks.

Home-based Utility Risks

Carbon monoxide exposure is one of the primary concerns pertaining to utility systems within the household. CO exposure is often referred to as the silent killer because it is **an odorless, colorless gas** containing toxic fumes that are produced any time fuel is burned, such as in vehicles, small engines, fireplaces, gas ranges, or furnaces.

In order to best protect the community from this hazard, installing CO alarms in the homes of residents is crucial. **It is a City of La Crosse ordinance to have CO alarms installed in homes, though this is difficult to inspect or enforce.** This is an example where occupant safety is dependent upon occupants ensuring their own safety by understanding and following the city ordinance.

Figure 31 illustrates that according to the **2017 American Housing Survey, 35.5% of homes in the United States lack adequate CO detection.** Ensuring that each residence in La Crosse has a working CO detector properly installed is a critical goal in reducing the likelihood of a CO-related incident.

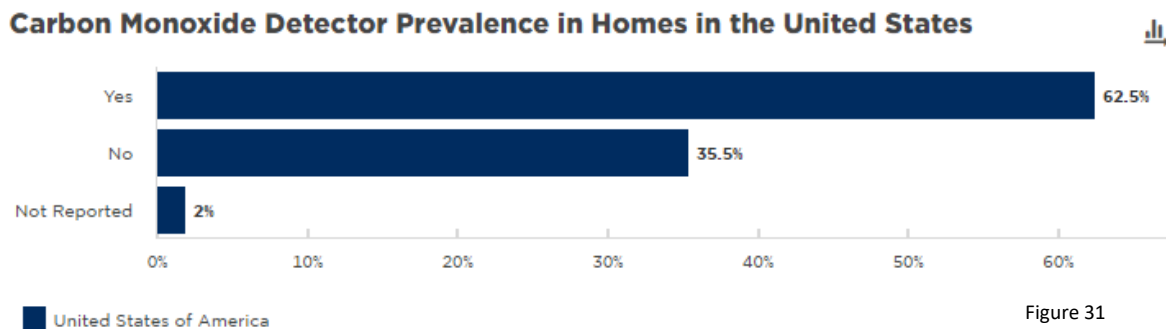


Figure 31

Source: American Housing Survey (AHS) 2017

Figure 32 maps out the primary source of natural gas for La Crosse, which is an interstate pipeline that runs from Minnesota, across the Mississippi River, and through the center of the city and bifurcates east of the city and south of the Hixon Forest.

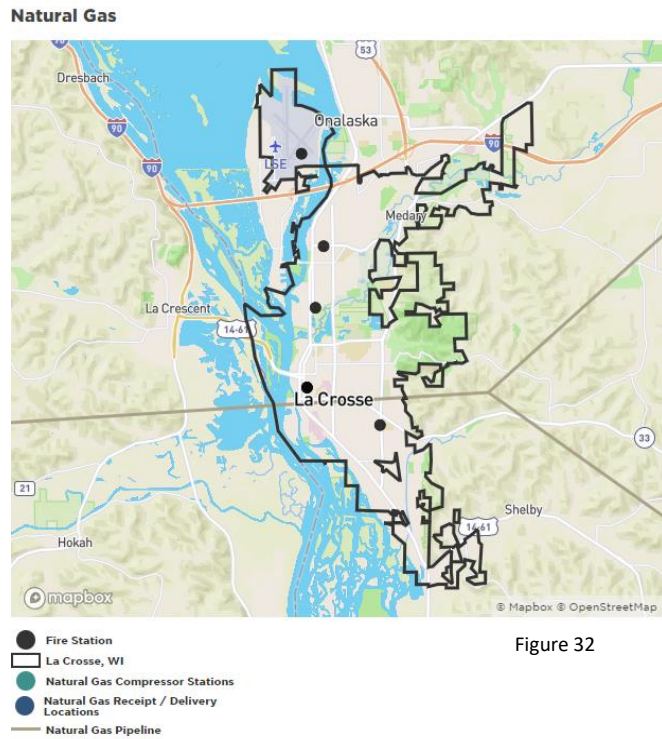


Figure 32

Figure 33 depicts the city’s primary high-voltage electricity transmission lines. These lines run along the eastern area of La Crosse, branching into the central area as it moves from the City of Onalaska to the north and towards the Town of Shelby to the south.

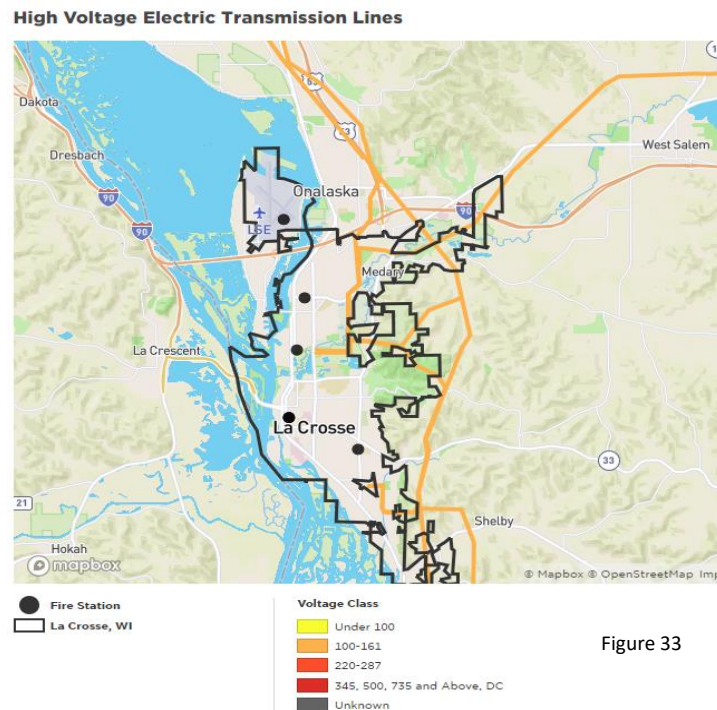


Figure 33

The **primary source of home heating in La Crosse is Utility provided natural gas (59.5%)**, followed by electric as the next most prevalent (34.4%). Figure 34 illustrates this, and also depicts which heating methods make up the remaining 6.1%.

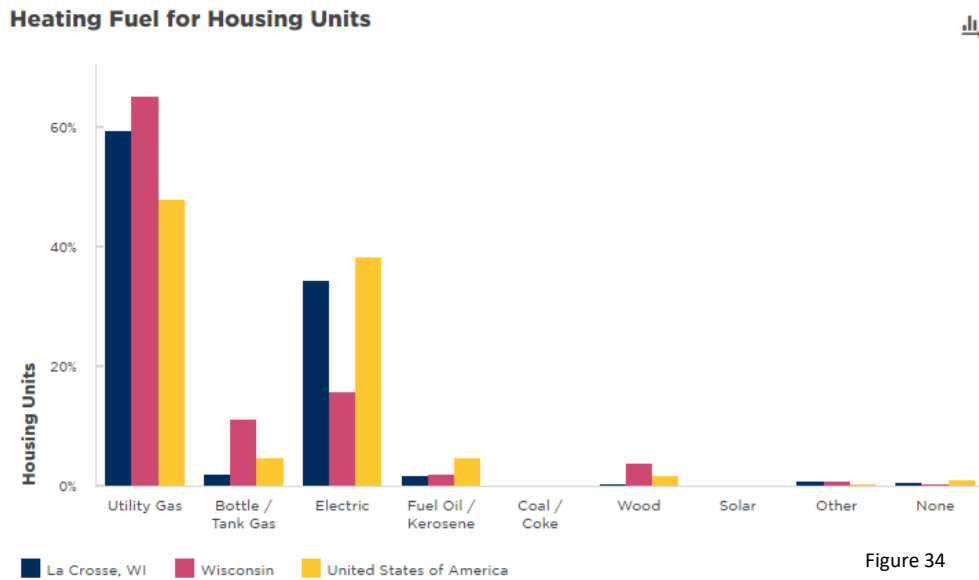


Figure 34

Sources: US Census ACS 5-year

Transportation

Transportation refers to much more than just the vehicles that residents use to get from Point A to Point B. It **also encompasses the manner in which materials are moved throughout the city, as well as the convergence of people, goods, and technology**. Weak bridges, derailed trains, dilapidated roads, risky air travel or any other unsafe means of transportation can pose serious hazards to the wellbeing of a community’s economy and resident safety. Understanding how residents utilize transportation systems within the community, as well as knowing where the most crucial community transportation systems exist and their potential for disaster, is an important factor in reducing the community risks that come with these systems.

Bridges and railroads are crucial to the economy and population of La Crosse. The city is home to numerous bridges, the most famous of them being “Big Blue” which stretches over the Mississippi River and into Minnesota. Fortunately, there are **no bridges in La Crosse rated below “fair condition”** by the Federal Highway Administration’s National Bridge Inventory.

There is one Amtrak station in La Crosse, located just off of St. Andrew Street. Railroads are not only important for the travel needs of people, but even more so for the transportation of goods, materials, and hazardous substances. **Railroad crossings at-grade are exposed to motor vehicle drivers, cyclists, and pedestrians**. These railroad and street intersections are numerous throughout La Crosse and are significant hazards when the proper safety precautions are not taken.

Figure 35 maps out the locations of these at-grade crossings. The St. Andrew Street Amtrak station is located in the center of the large cluster of at-grade crossings in the northeastern area of the city, just north of Fire Station 2.

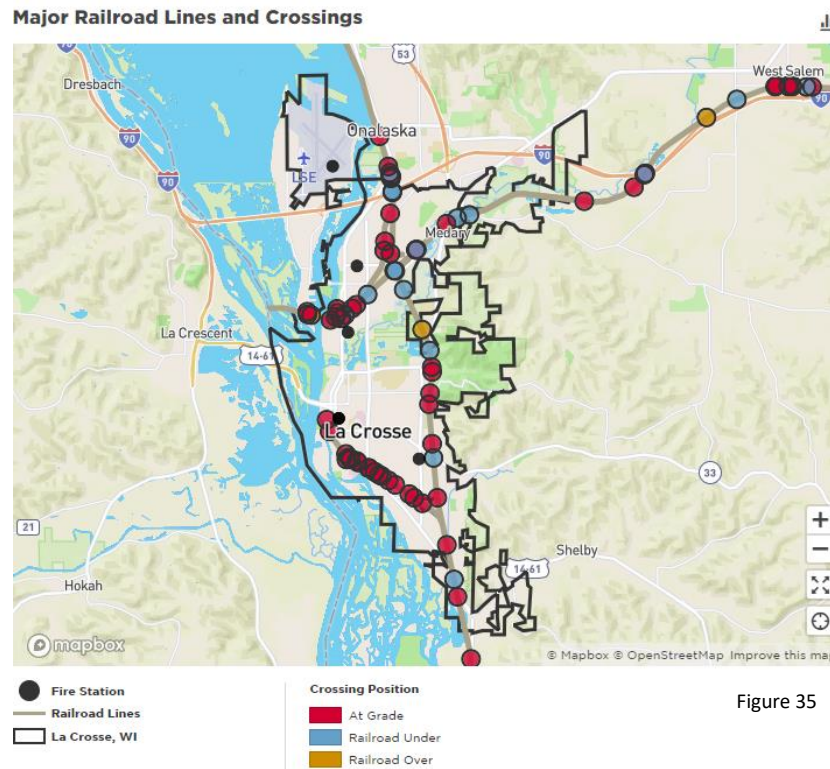


Figure 35

Sources: US DOT BTS National Highway-Rail Crossings Inventory Program; US Census. Crossing position 1 is At Grade, 2 is Railroad Under, and 3 is Railroad Over

Climate and Geography

The climate and geography of a community dictates the risk for natural disasters and the weather-related hazards it faces. **La Crosse sees several severe weather events each year and during all seasons.** The climate in La Crosse has four discernable seasons and each season brings different weather-related risks.

From the 2020-2024 La Crosse County Multi-Hazard Mitigation Plan, the significant climate and geographic risks pertaining to La Crosse County include:

- Thunderstorms
- Tornado/High Winds
- Flooding
- Forest/Wildland Fire
- Heavy Snowstorm/Ice Storm
- Extreme Cold
- Extreme Heat

Using the County’s Mitigation Plan’s risk assessment rubric for the above risks, a score of 22 points or greater equates to a “high” risk assessment designation for a given hazard. A risk assessment rating of 15-21 points equates to a “moderate” risk assessment designation. A rating of 14 points or less results in a “low” risk assessment rating for a given hazard. These points are tabulated using historical occurrence data, vulnerability metrics, probability, and local official survey results and shown below.

La Crosse County Hazard Risk Assessment

Natural Hazards:	Historical Occurrence Rating Criteria: <ul style="list-style-type: none"> • Less than 4 occurrences in the past 25 years =Low rating, 1-3 points • 4 to 7 occurrences in the past 25 years = Moderately Low rating, 3-5 points • 8 to 12 occurrences in the past 25 years = Moderately High rating, 5-7 points • More than 12 occurrences in the past 25 years = High rating, 7-9 points 	Vulnerability Rating Criteria: <ul style="list-style-type: none"> • Less than 10% of population or property adversely affected = Negligible rating, 1-3 points • 10% to less than 25% of population or property adversely affected = Limited rating, 3-5 points • 25% to 50% of the population or property adversely affected = Critical rating, 5-7 points • More than 50% of the population or property adversely affected = Catastrophic rating, 7-9 points 	Probability Rating Criteria: <ul style="list-style-type: none"> • Less than 1% probability in the next 100 years = Unlikely rating, 1-3 points • From 1% and 10% probability in the next year or at least one chance in next 100 years = Possible rating, 3-5 points • Over 10% to nearly 100% probability in the next year or at least one chance in the next 10 years = Likely rating, 5-7 points • Nearly 100% chance in the next year = Highly Likely rating, 7-9 points 	Local Official Hazard Survey Rating Criteria: <ul style="list-style-type: none"> • A majority of local officials were of the opinion that this hazard posed a “low” threat to health and public safety = Low rating, 1-3 points • A majority of local officials were of the opinion that this hazard posed a “medium” threat to health and public safety = Medium rating, 3-6 points • A majority of local officials were of the opinion that this hazard posed a “high” threat to health and public safety = High rating, 6-9 points 	Risk Factor Rating Total:	Risk Assessment Designation: <ul style="list-style-type: none"> • A combined risk factor rating of 14 points or less = Low Threat • A combined risk factor rating of 15 to 21 points = Moderate Threat • A combined risk factor rating of 22 points or greater = High Threat
Hailstorm	9	2	8	2	21	Moderate Threat
Lightning Storm	8	2	7	4	21	Moderate Threat
Thunderstorm	9	2	8	6	25	High Threat
Tornado/High Winds	7	5	6	7	25	High Threat
Riverine/Flash Flooding	9	4	9	8	30	High Threat
Dam Failure Flooding	1	2	3	3	9	Low Threat
Forest/Wildland Fires	1	1	3	2	7	Low Threat
Heavy Snowstorm	9	7	8	5	29	High Threat
Ice Storm	7	7	6	6	26	High Threat
Blizzard	1	7	3	3	14	Low Threat
Extreme Cold	8	7	6	5	26	High Threat
Earthquake	1	7	3	1	12	Low Threat
Extreme Heat	6	7	5	4	22	High Threat
Agricultural	2	3	3	3	11	Low Threat
Drought	2	5	3	3	13	Low Threat
Fog	2	1	7	2	12	Low Threat
Landslide	3	1	3	3	10	Low Threat
Subsidence	1	1	3	2	7	Low Threat
Pandemic Flu	1	9	2	3	15	Moderate Threat

Though wildland fires are considered a relatively low risk for the City of La Crosse, the city is surrounded by large swaths of forest on its eastern and southern edges.

LCFD responded to a total of five vegetation-fire/wildfire incidents in 2019, and a total of 26 of these type of fire incidents since 2015. Of note, is the statistic that over 40% of these vegetation-fire incidents since 2015 occurred on Fridays and Saturdays. Additionally, over 30% of these incidents since 2015 occurred between the hours of 8 pm and 1 am.

Based on these statistics, it **could be suggested that a large portion of these fires were the result of human behavior**. Figures 36 and 37 illustrate these statistics.

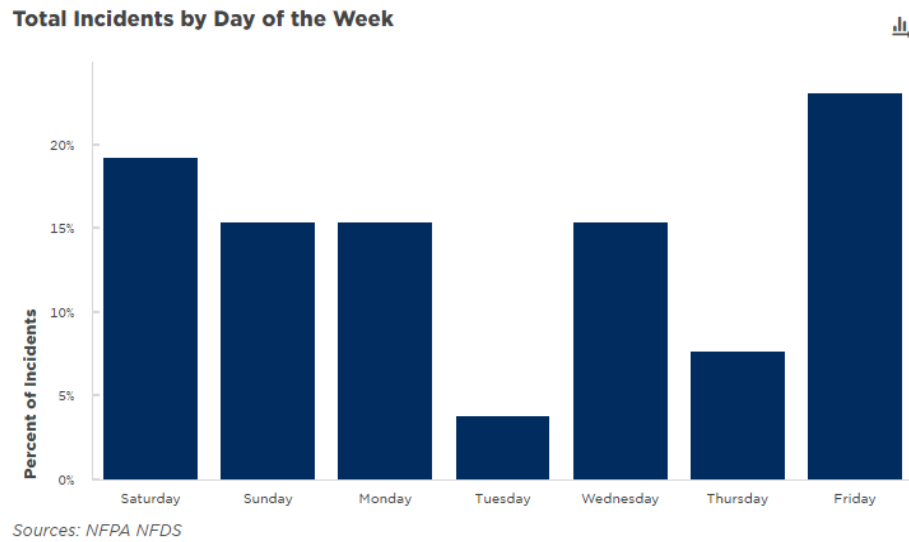


Figure 36

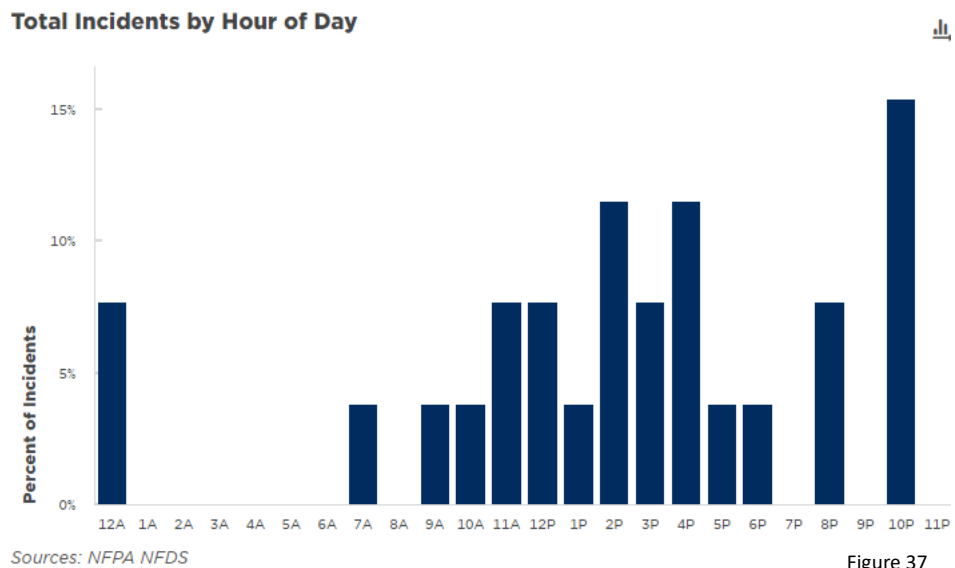
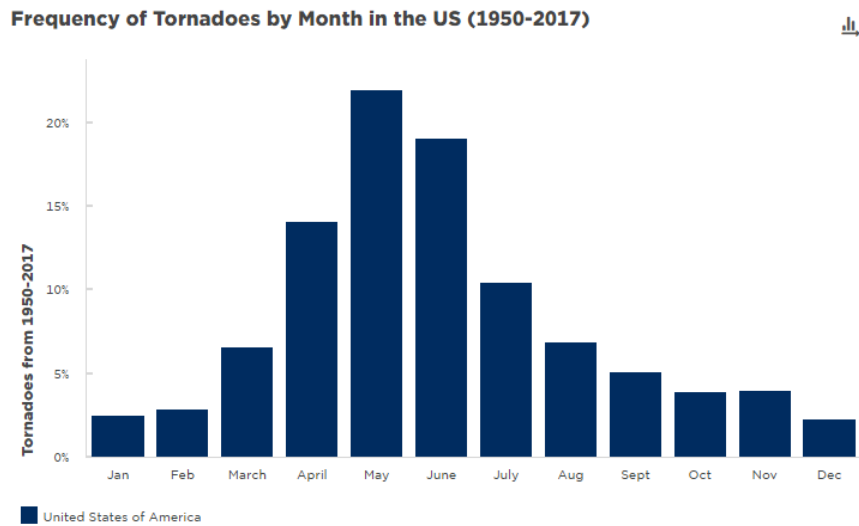


Figure 37

Although there have only been two tornadoes in the City of La Crosse since 1961, with the most recent occurring in 1995, it is still important to consider the risks these significant incidents

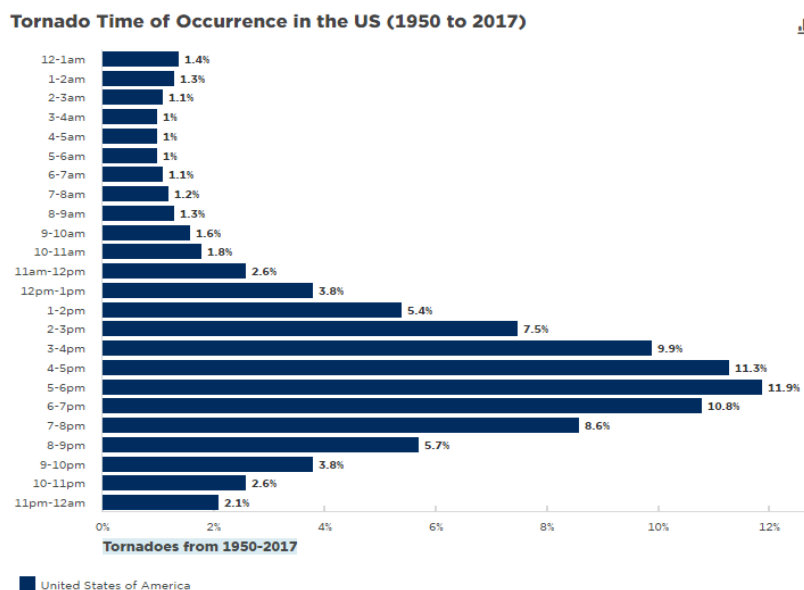
pose to be best prepared in the event of an occurrence. According to the National Oceanic and Atmospheric Administration’s National Climate Data Center, **La Crosse County has experienced five tornadoes between 1990 and 2011.** Using historical data, **La Crosse County can expect to experience a tornado once every 4.4 years, which will cause an estimated \$3 million in property damage.** The NCDL also recorded thirteen hurricane-force wind events (winds >75mph) from 1970-2011 in La Crosse County.

There is a clear relationship between the likelihood of a tornado occurring and both the time of the year and the time of the day, based on statistics derived from the NOAA’s National Weather Service Storm Prediction Center. Figures 38 and 39 show the distinct bell curves based on month and the time of day tornadoes are likely to occur in the US.



Sources: NOAA National Weather Service (NWS) Storm Prediction Center (SPC) SVRGIS

Figure 38



Sources: NOAA National Weather Service (NWS) Storm Prediction Center (SPC) SVRGIS

Figure 39

According to FEMA, flooding is the most common natural disaster in the United States. The city of La Crosse is especially vulnerable to floods, due to the proximity of the Mississippi, Black and La Crosse rivers and the runoff from the nearby bluffs during bouts of heavy precipitation.

Figure 40 shows the City's Floodplain Inventory map and the location of special flood hazard areas.

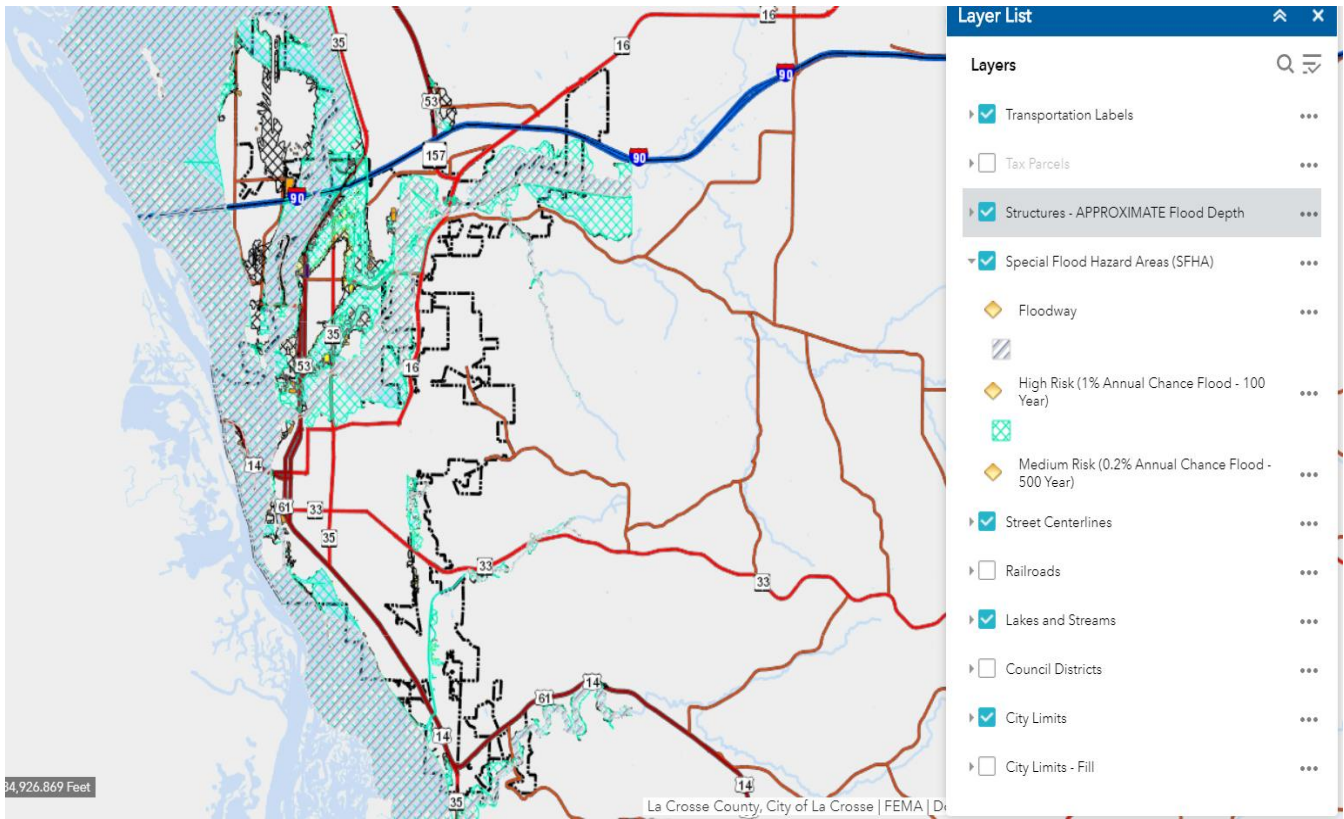
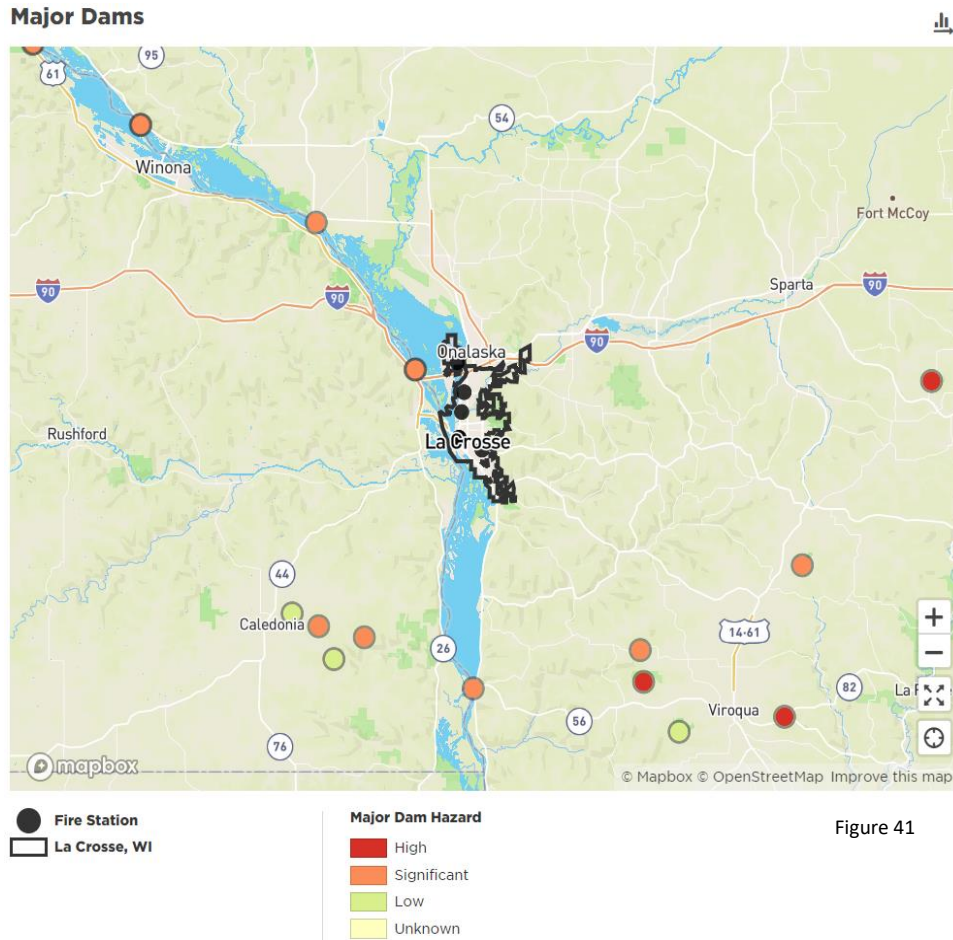


Figure 40

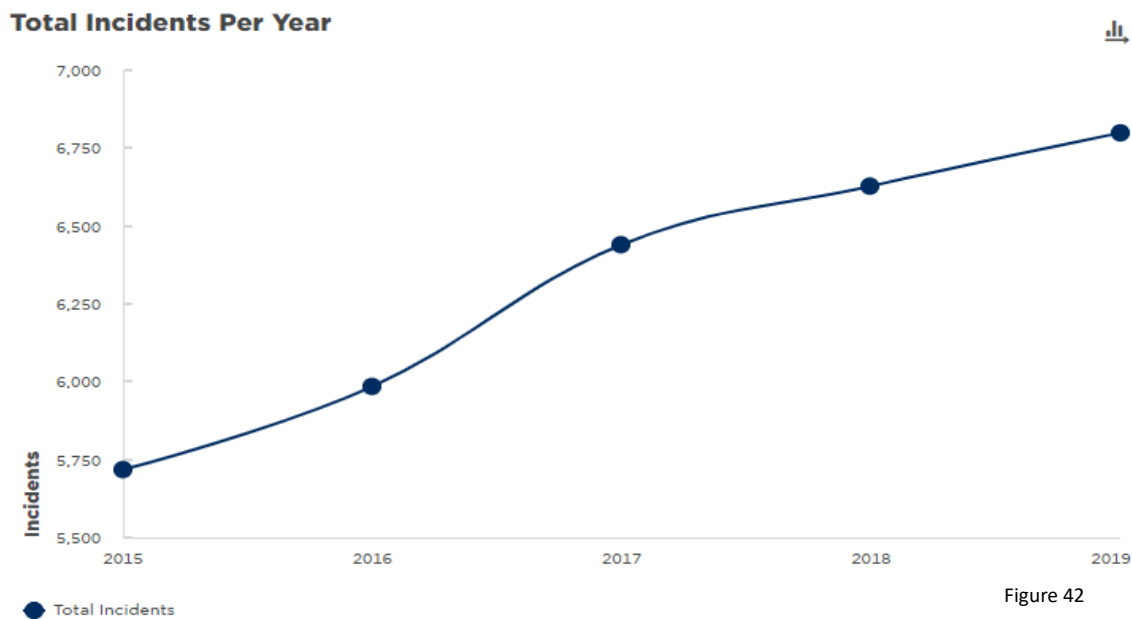
The City of La Crosse does not have a dam within its boundaries, though there are multiple dams in the region and if they malfunctioned, they would pose a significant risk to the community. The nearest dam is the Mississippi River Lock and Dam number 7, just north and west of La Crosse. It is rated as a significant risk should it fail or malfunction based on FEMA's assessment.



Response Profile

As a **measure of risk and predictor of future incidents**, it is important to **review previous incident data**. The following information breaks down the La Crosse Fire Department's calls for service.

The department has seen a **steady increase in calls for service over the last five years**. Figure 42 illustrates this increase in the number of incidents. In the five-year reporting period from 2015 to 2019, the department's incident volume increased by almost 1,000 calls for service annually, with the largest increase occurring between 2016 and 2017. In 2019, the department ran just shy of 7,000 calls for service.



Sources: NFPA NFDS

Figure 43 on the following page shows the breakdown in calls for service over the last five years.

As you can see, **“300 series” (EMS and Rescue) incidents make up the vast majority of the department's calls for service, comprising approximately 72% of the department's incidents.**

Incidents by Category, Yearly

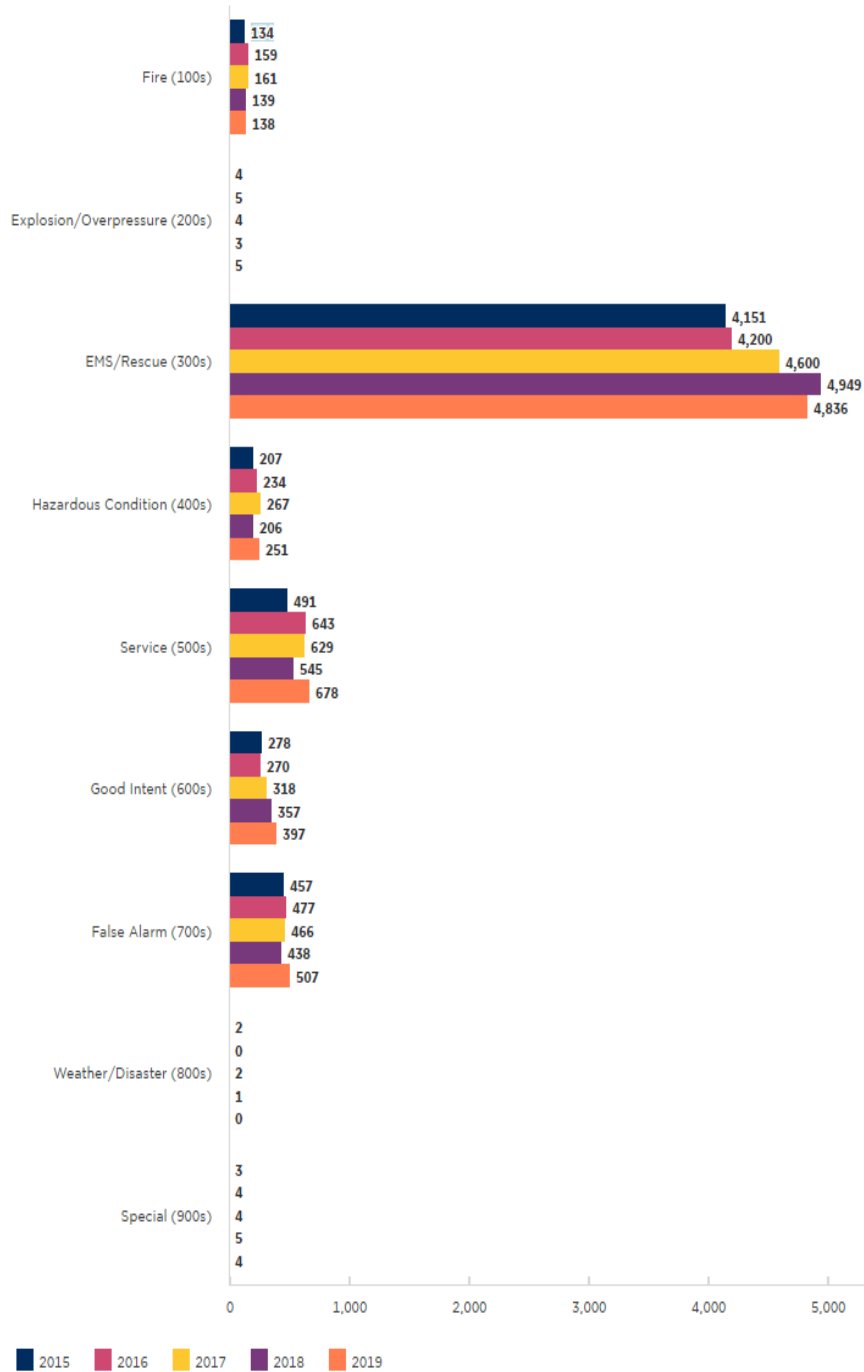


Figure 43

Sources: NFPA NFDS

Figure 44 illustrates the geographic locations of the department’s calls for service. Figure 44 is displaying only 2019’s total incidents.

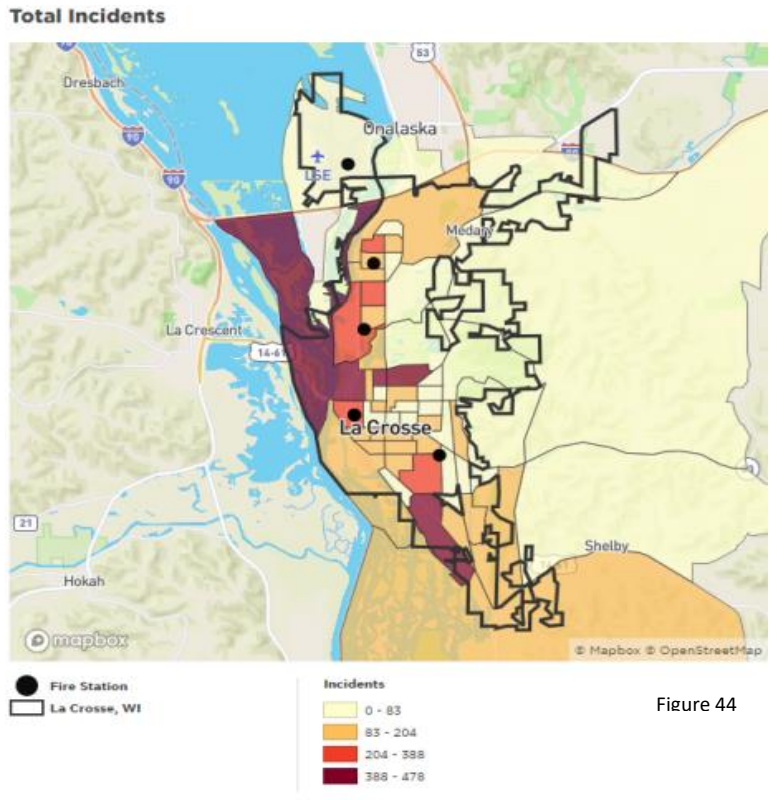


Figure 44

Sources: NFPA NFDS. The data displayed is for the most recent full calendar year available.

As you can see from earlier maps in this report, **there is a correlation to the department’s calls for service locations when compared to data on social vulnerability, median household income, whether homes are renter or owner occupied, median home value, and the locations of people living with a disability.**

From month to month, there are fluctuations in the number of incidents. Looking at the monthly numbers, you can see that **late summer and early fall see a yearly increase in calls for service.**

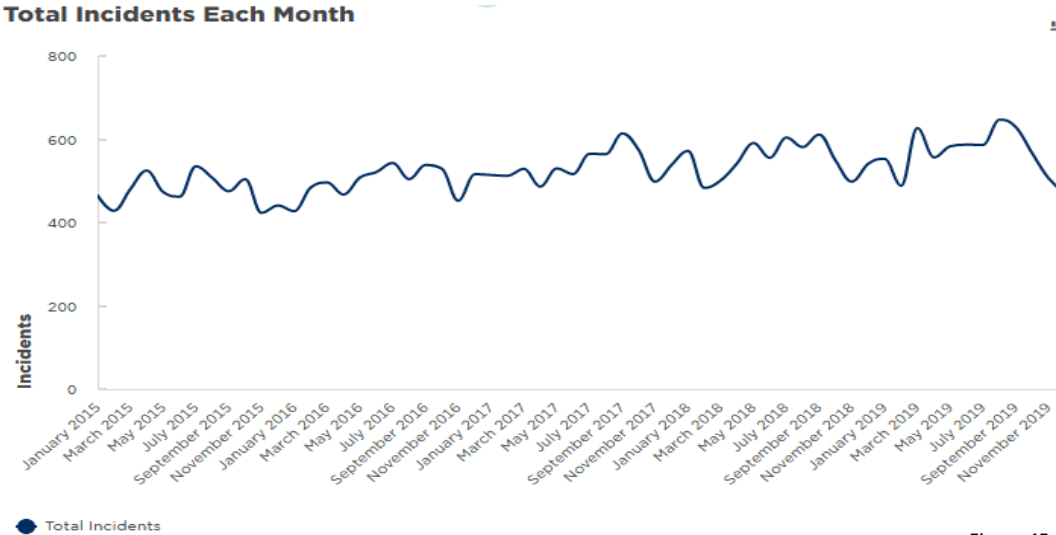


Figure 45

Sources: NFPA NFDS

The increase in calls for service in September could be correlated to the universities going back in session and accountable to the roughly 18,000 students who live in La Crosse during the school year and who have moved back into the city. Incident volume is also affected by OktoberFest, which is usually held in late September.

Incidents occur at all hours of the day, though more incidents occur between 7am and 10pm with the bulk of those incidents occurring in the late morning to early evening (Figure 46).

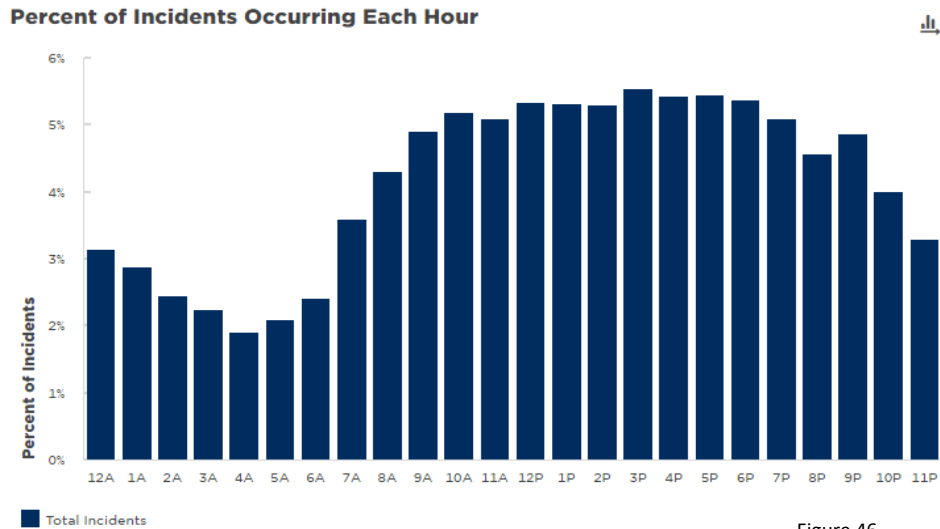


Figure 46

Sources: NFPA NFDS

By far, **the most common action taken by the department is providing basic life support at EMS incidents.** Investigation, standby, and incident command occurred the second, third, and fourth most often, according to the five-year reporting from NFPA National Fire Data System (NFDS) and displayed in Figure 47.

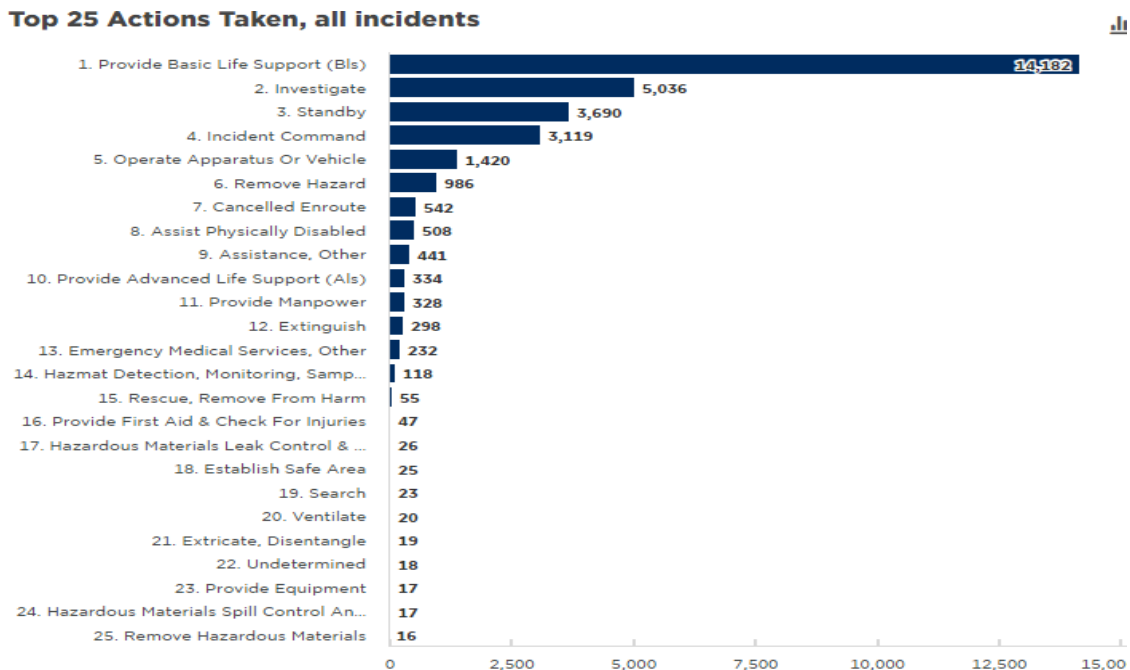


Figure 47

The most common locations for emergency incidents were either located inside the homes of residents or on a street, although a variety of other locations and properties were also documented. This data is depicted in Figure 48.

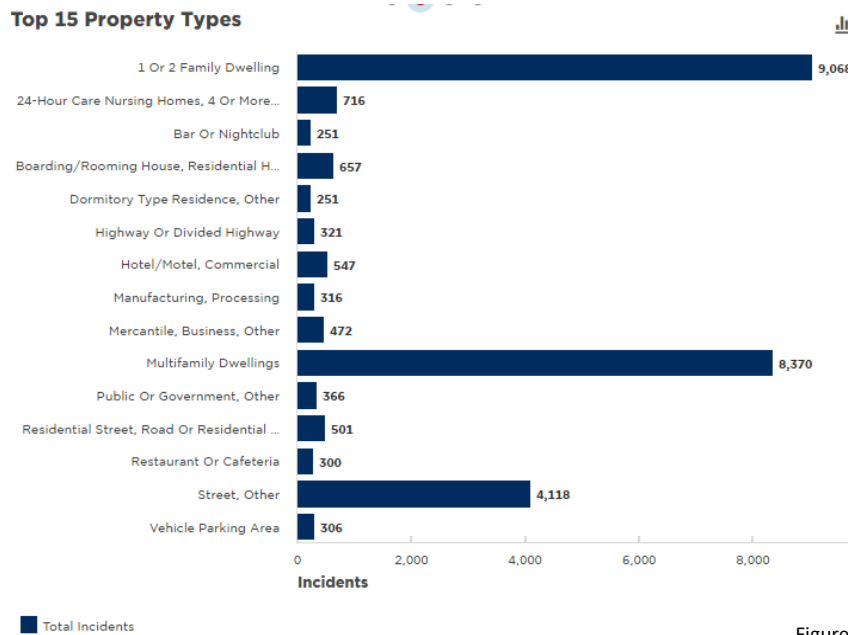
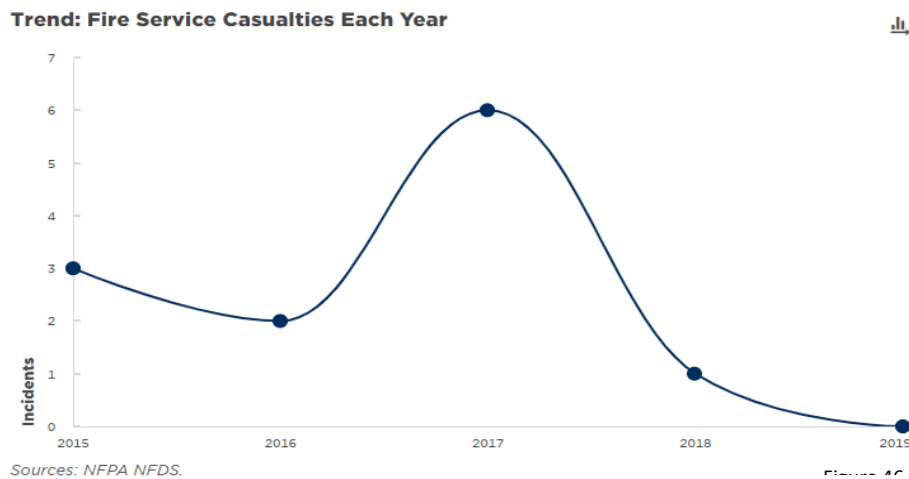


Figure 48

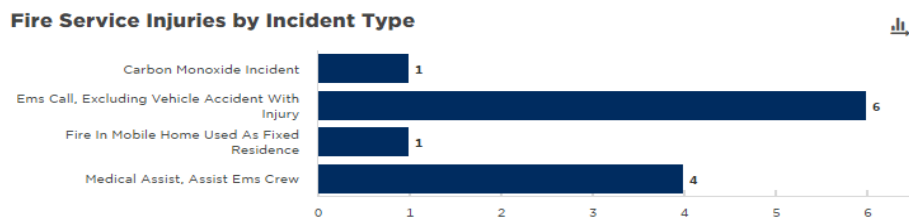
Sources: NFPA NFDS

Figure 49 illustrates that **firefighter injury incidents has been on a downward trend** over the last five years, aside from a data spike in 2017. In 2019, there were fortunately **zero civilian deaths at fire incidents**. Half of the firefighter injuries were a result of EMS calls. An important note is that the department has not had a firefighter line-of-duty death since 1996.



Sources: NFPA NFDS.

Figure 49



Sources: NFPA NFDS. Data is for all years available.

Figure 49

Fire-Related Incidents

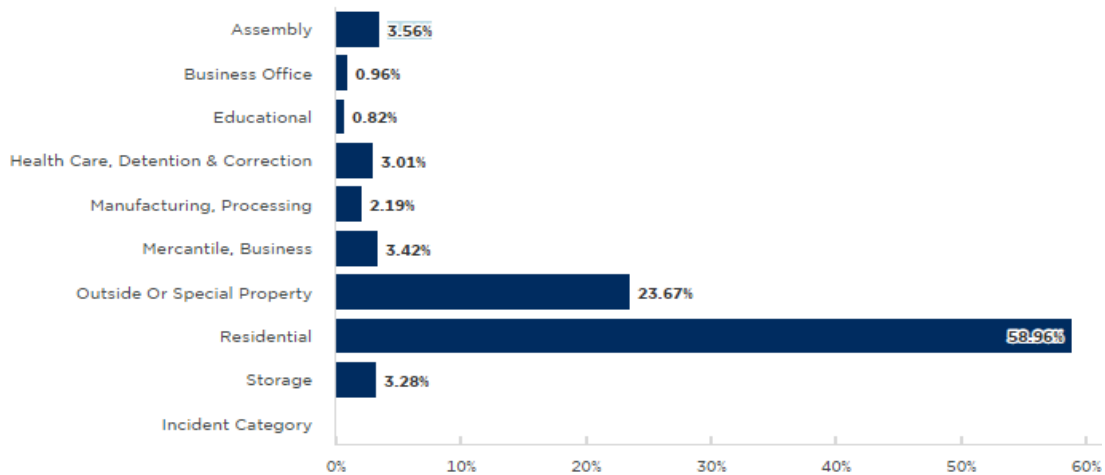
Figure 50 contains a categorical breakdown of fire-related incidents in La Crosse since 2015.

Year	2015	2016	2017	2018	2019	Total
Outside Rubbish Fires	20	26	16	16	11	89
Special Outside Fires	2	3	4	1	2	12
Structure Fires	77	93	108	88	84	450
Vegetation Fires	7	6	3	6	5	27
Vehicle Fires	24	19	19	14	16	92
Other	4	12	11	14	20	61
Total	134	159	161	139	138	731

Figure 50

Since 2015, about **59% of fires have occurred in residential properties**. Approximately, another 24% were classified as “outside/special properties”. About **46% of the total fires** (with causes reported) were the **results of cooking-related incidents**, and about 30% of the fires were due to electrical malfunction. These findings are illustrated in Figures 51 and 52.

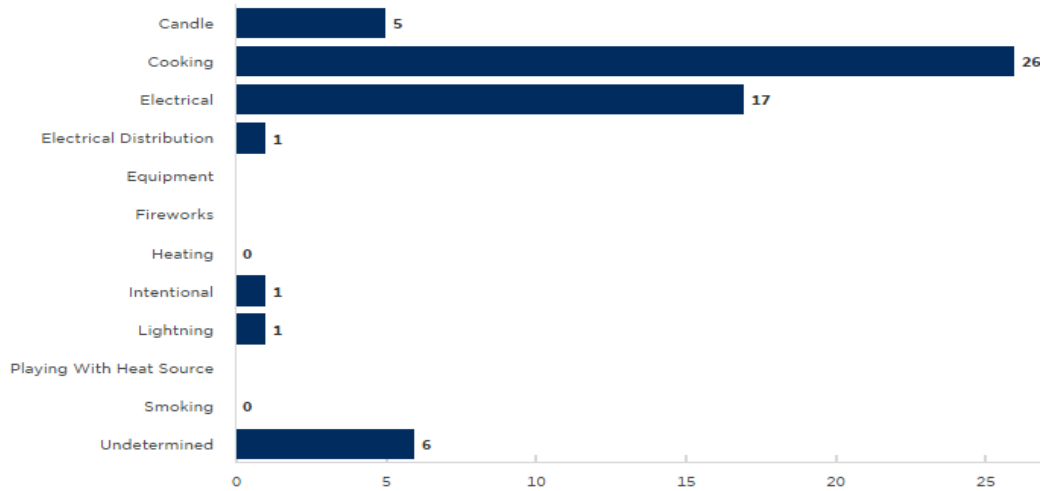
Property Type Involved in Fire-Related Incidents



Sources: NFPA NFDS. The chart displays the aggregation of incident data from all available years.

Figure 51

Reported Cause of Fires

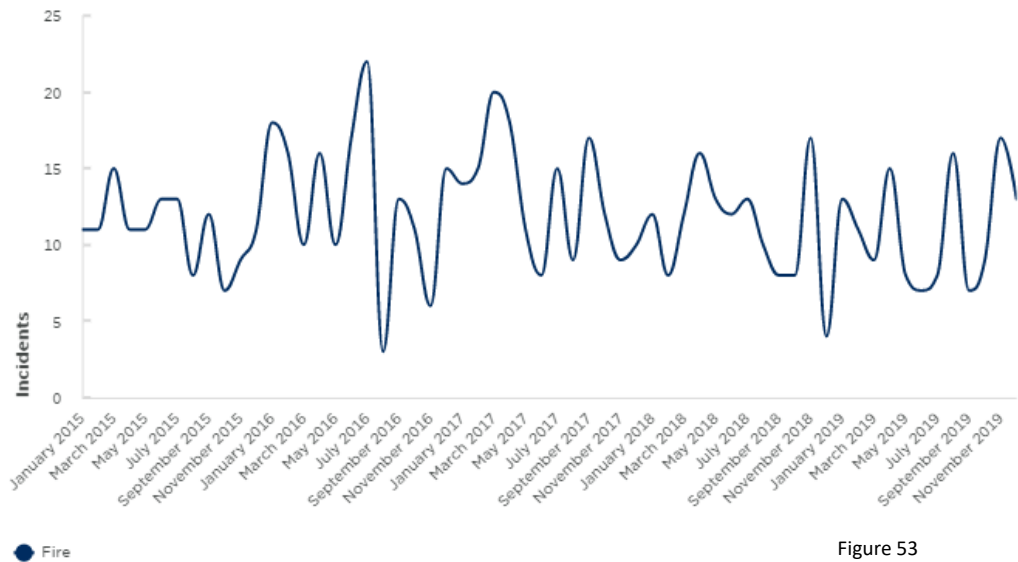


Sources: NFPA NFDS. Includes only known fire causes.

Figure 52

Fortunately, and perceivably related to our community’s fire prevention efforts, residential structure fires in La Crosse have been on a decline since 2016. There is a reoccurring annual increase in residential structure fires during the spring, fall, and winter months as shown in Figure 53 below. This can be attributed to many things, including people spending more time inside and the increased use of heating devices and electrical supply demand.

Fire Incidents Each Month



Sources: NFPA NFDS

Figure 53

There is an **uptick in the number of fires** in the city during the hours of **the late morning to the early afternoon**, and also around the traditional **dinner time hours**. It should also be noted that during **the 3am hour** there is also a noticeable increase in fires. This is shown below in Figure 54.

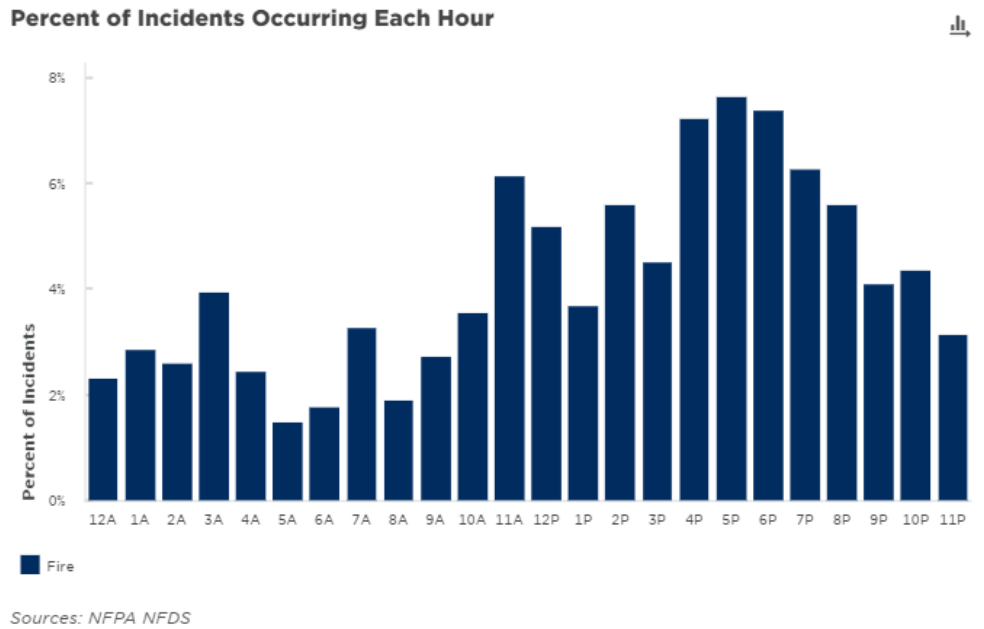


Figure 54

Figures 55 and 56 breakdown the statistics regarding “areas of fire origin” and “property types” for structural fires in La Crosse.

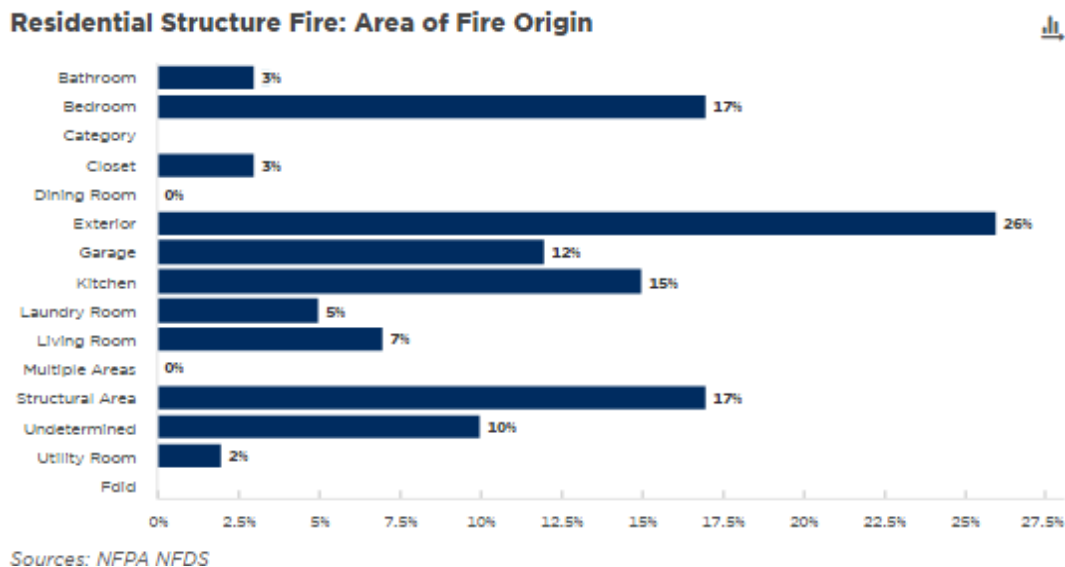


Figure 55

Residential Structure Fires by Incident Type



Incident Type	
Building Fires	155
Chimney Or Flue Fire, Confined To Chimney Or Flue	6
Commercial Compactor Fire, Confined To Rubbish	1
Cooking Fire, Confined To Container	235
Fire In Mobile Home Used As Fixed Residence	3
Fuel Burner/Boiler Malfunction, Fire Confined	3
Trash Or Rubbish Fire, Contained	47

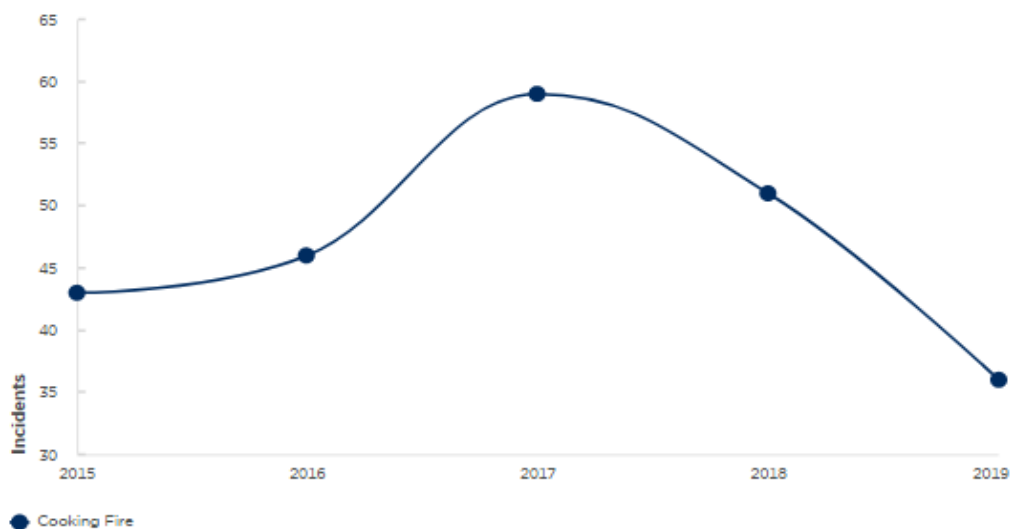
Sources: NFPA NFDS

Figure 56

Nationally and in La Crosse, cooking is the leading cause of home fires. These cooking-related fires have causes ranging from cooking equipment being left unattended, cooking next to other combustible items, cooking equipment used improperly, grease fires, or cooking appliances and equipment being accidentally left on.

La Crosse's kitchen fire numbers in 2019 are currently the lowest they have been in data since 2015, but with a clear rise in numbers from 2015 to 2017 as show in Figure 57. **With cooking-related fires still accounting for 46% of the determined causes of fires annually in the city, this is still a clear risk that we must continue to address.**

Cooking Related Fire Incidents Per Year



Sources: NFPA NFDS

Figure 57

Considering the typical meal schedule of most people, the correlation between past occurrences of cooking fires and the time of day is not surprising. Shown in Figure 58, there is a clear increase in these types of fires starting around 11 am (when many people are preparing lunch) and an even more distinct spike between 4 pm and 7 pm (dinner time). It should also be noted that the 2am hour is another significant data spike, and this could be attributed to students and citizens returning home from the bars and taverns.

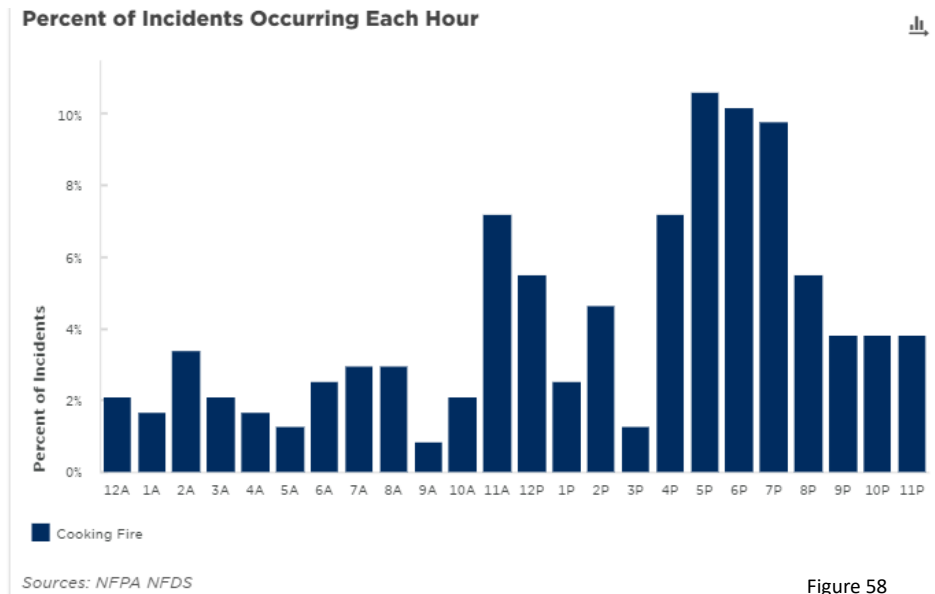
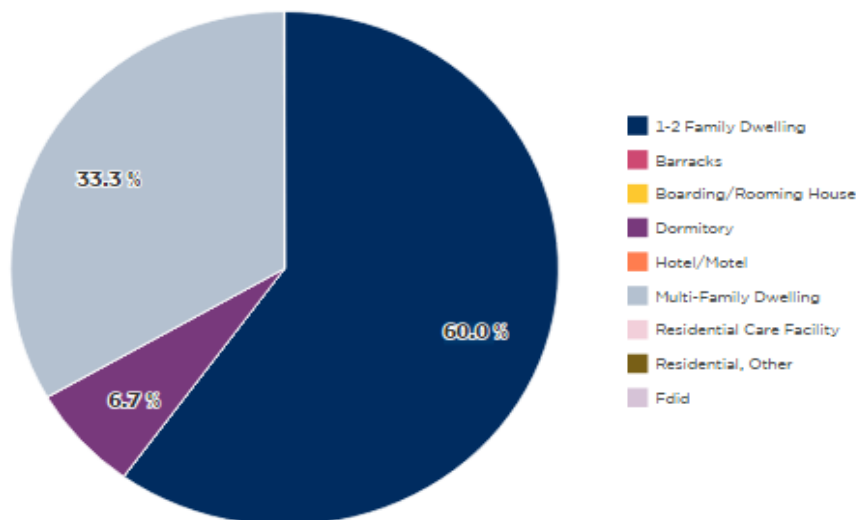


Figure 58

Fortunately, La Crosse has not seen any casualties from cooking fires in the last five years. The figures below depict the statistics regarding property types and ignition factors for kitchen fires in La Crosse since 2015. **60% of cooking fires occur in 1-2 family dwelling and inattentive cooking is the primary ignition factor in cooking fires.**

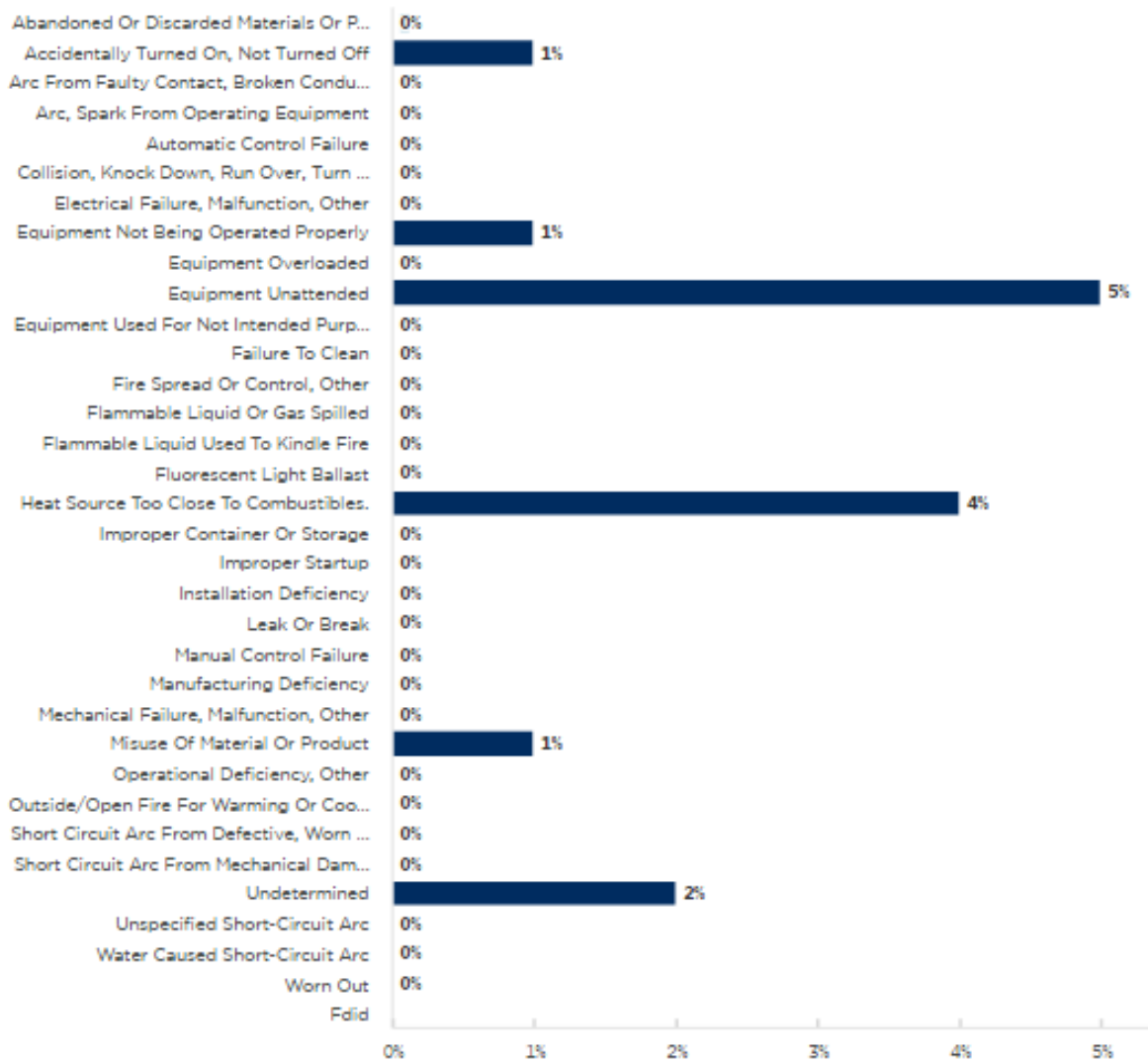
Property Type for Residential Structure Fires



Sources: NFPA NFDS

Figure 59

Ignition Factors in Residential Cooking Fires



Sources: NFPA NFDS

Figure 60

The **northwestern, southern, and central areas of the city have seen the highest proportion of cooking fires**, though much of the city has seen at least one these incidents in the last calendar year (see Figure 61).

This data is correlated to the geographic location of all fire incidents from 2019 and is shown in Figure 62.

Residential Cooking Fires

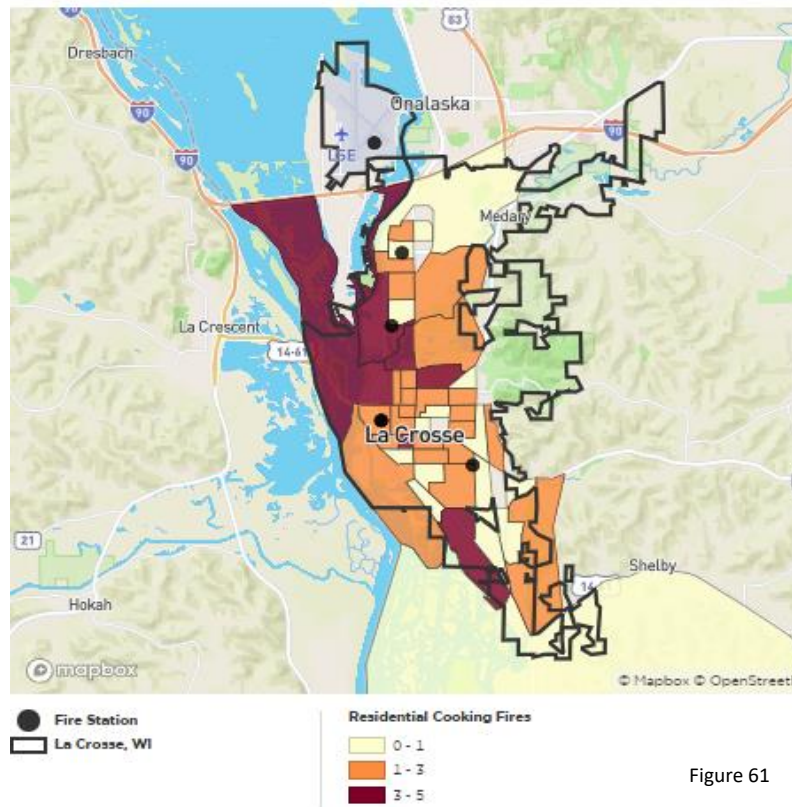


Figure 61

Sources: NFPA NFDS. The data displayed is for the most recent full calendar year available.

Fire Incidents

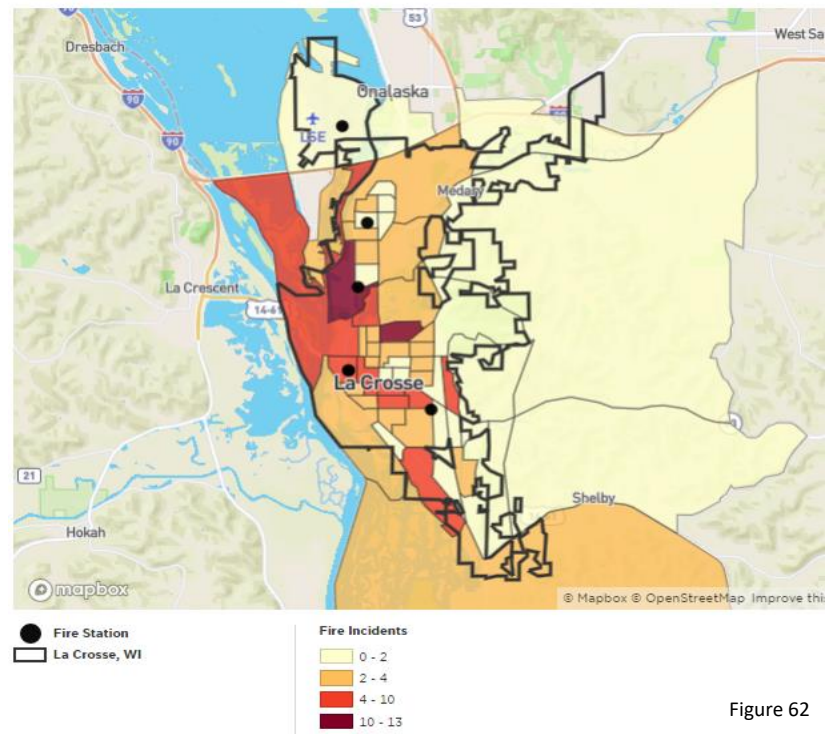


Figure 62

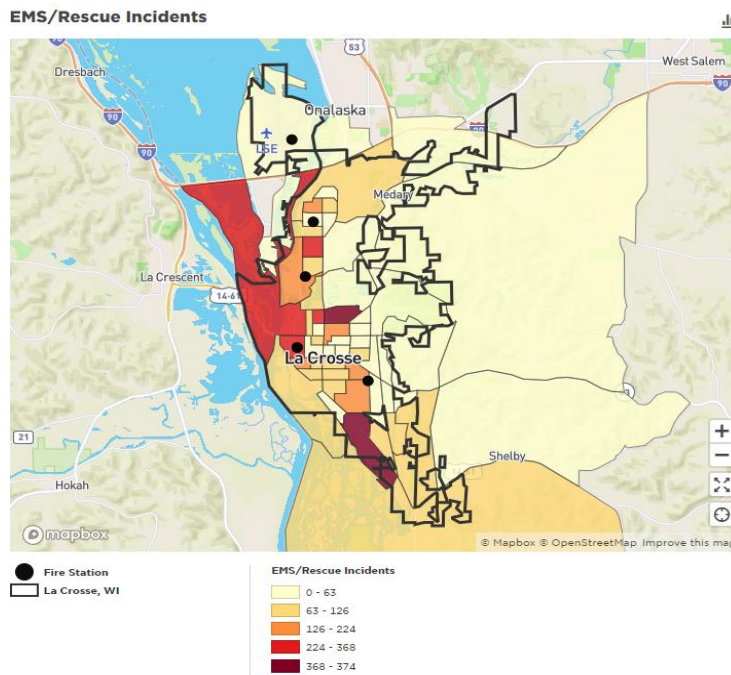
Sources: NFPA NFDS. The data displayed is for the most recent full calendar year available.

EMS-Related Incidents

The following table is a further categorical breakdown of 300-series incidents related to Emergency Medical Services and Rescues in La Crosse since 2015.

Year	2015	2016	2017	2018	2019	Total
Electrical Rescue	No Data	2	No Data	No Data	No Data	2
Emergency Medical Service	3,467	3,358	3,404	3,090	2,638	15,957
Extrication, Rescue	16	18	17	15	24	90
Medical Assist	525	672	973	1,310	1,523	5,003
Rescue/EMS Standby	30	25	75	389	486	1,005
Search for Lost Person	2	5	14	5	4	30
Water/Ice-Related Rescue	7	10	4	9	14	44
Other	104	110	113	131	147	605
Total	4,151	4,200	4,600	4,949	4,836	22,736

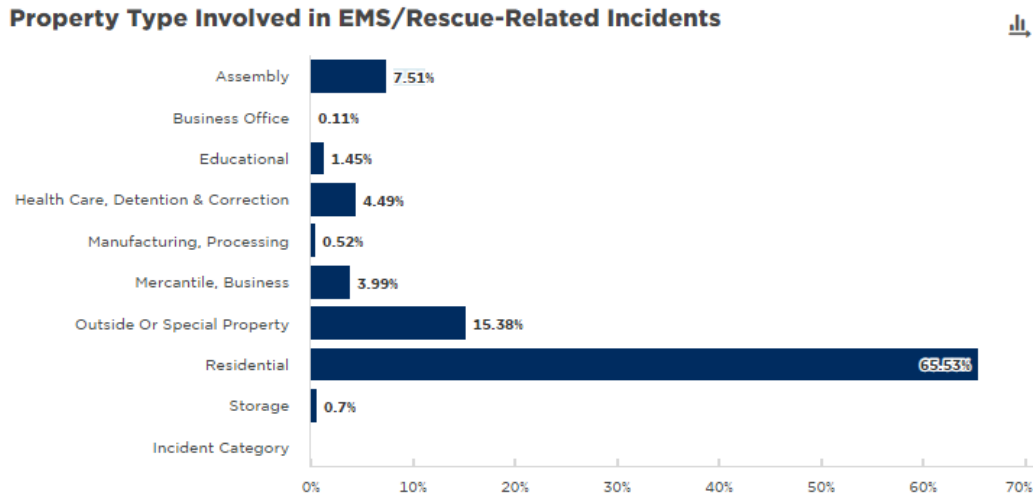
The most common areas of the city regarding calls for EMS assistance are, interestingly, very similar to the distribution of fire incidents depicted in Figure 61. These areas near the UWL campus in central La Crosse, as well as near the river and towards southern La Crosse are the areas of highest EMS call concentration, as shown in Figure 63.



Sources: NFPA NFDS. The data displayed is for the most recent full calendar year available. Click on a geography to see the values for additional years.

Figure 63

Almost 66% of all EMS incidents occur in a residential location, as illustrated in Figure 64.



Sources: NFPA NFDS. The chart displays the aggregation of incident data from all available years.

Figure 64

Within 300-series (EMS and Rescue) incidents, department officers write patient care reports for all 321-coded calls. These 321-coded incidents are listed by the National Fire Incident Reporting System (NFIRS) as “EMS call, excluding vehicle accident with injury”.

Patient care reports are not written on incidents where the department only assists the transporting ambulance company, Tri State Ambulance. These are 311-coded calls categorized as “Medical Assist, assist EMS crew”. In these instances, LCFD crews are assisting in patient care but not creating a patient care report. All calls for service generate a specific incident run number and the NFIRS reports are created for these calls, however, very little information pertaining to the patient or patient treatment is included in these NFIRS reports.

For 311-coded incidents, no provider primary impression is listed, because the intent of the call is to only assist the Tri State Ambulance crew. For the 321-coded incidents, where direct patient care is delivered by the department, a provider impression is listed in the patient care report. Below is a list of the top primary impressions from the last five years pulled from LCFD 321-coded NFIRS reports.

Provider Primary Impression	Number of Incidents
Pain	611
Weakness	484
Altered Mental Status	458
Alcohol use	315
Chest Pain	208
Respiratory	178
Adult examination without abnormal findings	153
Head Injury	135
Non-traumatic back pain	135
Seizure	132

It should be noted that the above list is not entirely inclusive. Due to many different ways the types of EMS calls can be coded, the department may not be effectively capturing all the pertinent call volume information for data tracking, risk reduction and continuous quality improvement purposes.

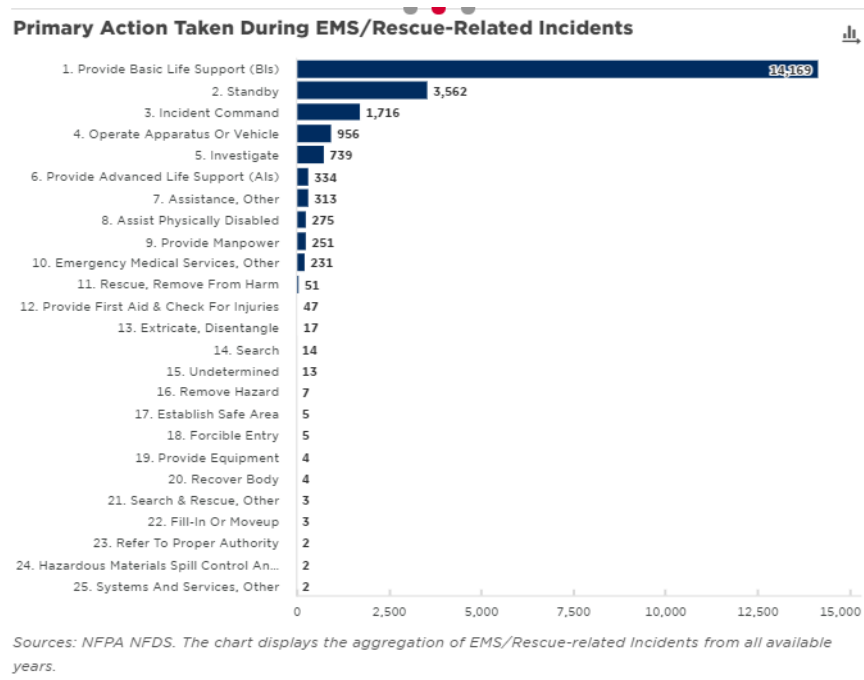
An example of this is in regards to patients who sustain a fall. “Falls” are calls for service to which the department frequently responds. Currently, there are a total of six different codes that “falls” can be entered as into the records management system;

- 311 (*Medical assist, assist EMS crew*),
- 321 (*EMS call, excluding vehicle accident with injury*),
- 3001 (*Rescue, Lifeline Activation – No EMS Needed*),
- 3217 (*EMS call, TSA requested lift assist*),
- 3218 (*EMS call, Reported Fall*), and
- 554 (*Resident Assist*).

Though each of these codes are necessary, and while each denotes a different role or responsibility of the responding crew, there appears to be a lack of consistency or a standard in the reporting of these incidents. This is a risk for the department.

Over the second half of 2020, the **department switched over to a new records management system and database** called ImageTrend, and the agency believes that this transition will significantly **help to effectively track and manage trends** relating to falls and other more specifics regarding calls for service.

The primary action taken by LCFD personnel on EMS calls for service over the last five years is “Provide Basic Life Support (BLS)” followed by “Standby and Incident Command” as shown below in Figure 65.



Incident volume for **EMS incidents has increased over the last five years**, though they **tapered off slightly for 2019**. This tapering-off **could be attributed to Covid-19** and an apprehension many residents felt about using emergency and health services. Hospital emergency departments across the country and locally have reported a decrease in patient visits as well.

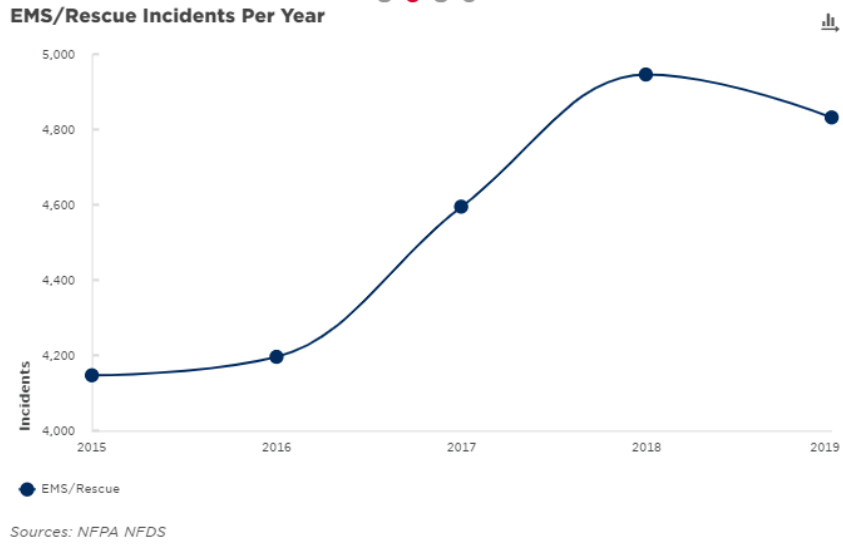


Figure 66

There is a notable difference in the “consistency of occurrence” and the “time of day” in EMS incidents and fire incidents. Unlike fire incidents where there is variability in the time of day when fires occur, **EMS incidents are rather consistent in the time of day in which they are occurring**. The only time of the day where there is a noteworthy decrease in EMS calls for service is between the hours of 1 am and 6 am, as shown in Figure 67.

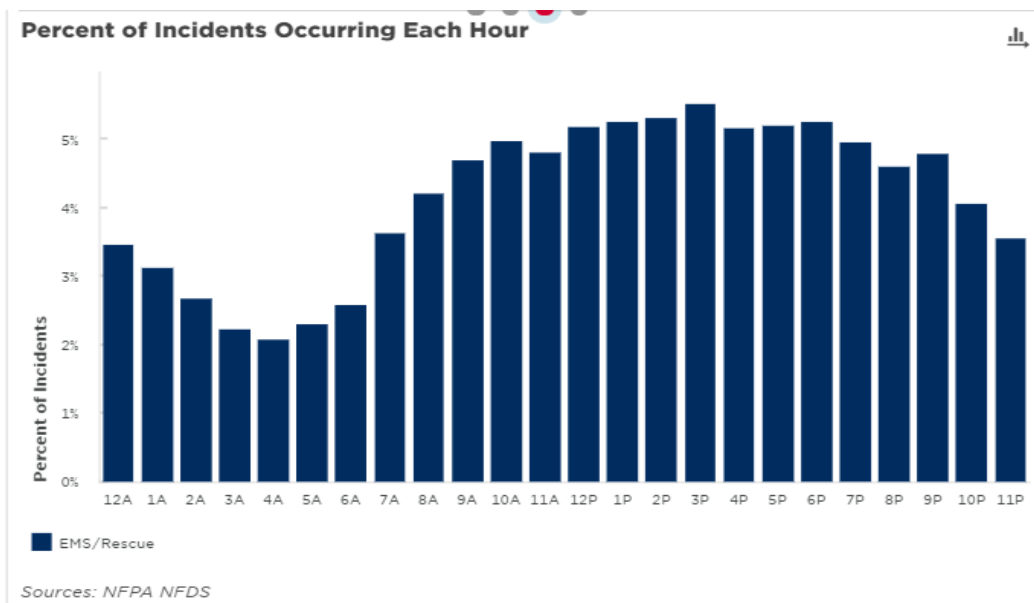


Figure 67

This comparison is also similar regarding the month of the year that EMS incidents are occurring, as shown in Figure 68.

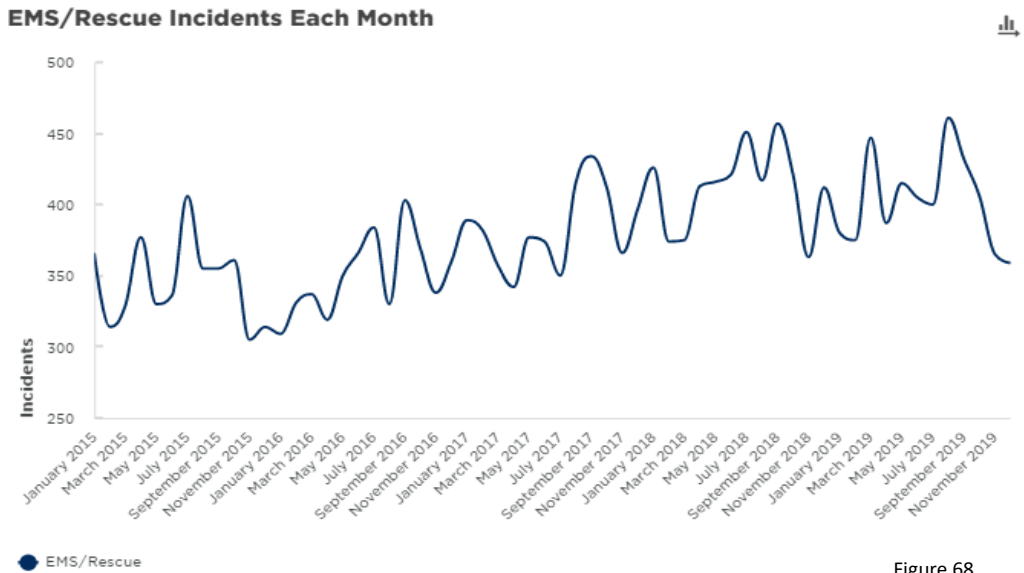


Figure 68

Sources: NFPA NFDS

La Crosse saw **three vehicle driver fatalities and one pedestrian fatality in 2019**. There are **no significant time-related trends** when it comes to the likelihood of motor vehicle accidents in La Crosse, but there are **clear areas of La Crosse that account for most of these incidents**, as shown in Figure 69.

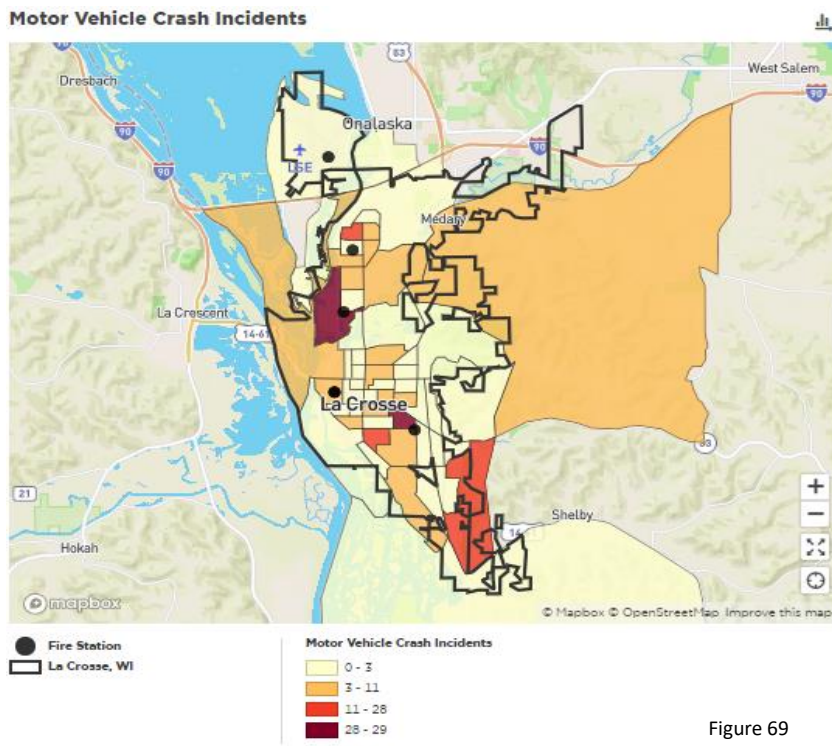


Figure 69

Source: NFPA NFDS. Incidents with incident type 322, 323, 324, and 463. Excludes incidents reporting Automatic Aid Given, Mutual Aid Given, and Other Aid Given. The data displayed is for the most recent full calendar year available. Click on a geography to see the values for additional years.

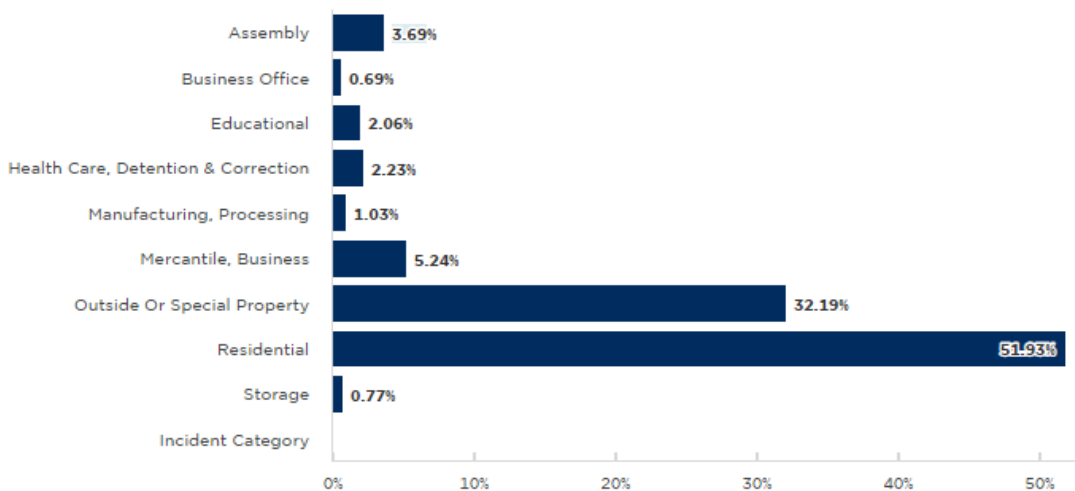
Hazardous Conditions Incidents

The chart below contains a categorized breakdown of the “hazardous conditions” related incidents in La Crosse from 2015 to 2019. **Hazardous conditions incidents include spills or releases of at least 55 gallons of hazardous materials, or incidents that require special hazardous materials resources to assess, mitigate, or manage the situation. “Hazardous materials” include, but are not limited to, explosives, oxidizers, compressed gases, flammable or combustible material, radioactive materials, and corrosive materials.** These incidents also include situations posing an immediate hazard to the community, such as downed power lines.

Year	2015	2016	2017	2018	2019	Total
Accident/Potential Accident	6	5	5	7	8	31
Attempted Burning, Illegal Action	No Data	No Data	No Data	No Data	1	1
Biological Hazard	1	1	No Data	1	No Data	3
Chemical Release, Reaction, or Toxic Condition	44	42	47	32	48	213
Combustible/Flammable Spills/Leaks	88	78	112	90	97	465
Electrical Wiring/Equipment Problem	63	100	93	70	87	413
Explosive/Bomb Removal	No Data	No Data	1	No Data	No Data	1
Other	5	8	9	6	13	41
Total	207	234	267	206	254	1,168

Figure 70 shows that nearly 52% of all hazardous condition-related incidents over the last five years took place in the residential setting.

Property Type Involved in Hazardous Condition-Related Incidents



Sources: NFPA NFDS. The chart displays the aggregation of incident data from all available years.

Figure 70

The majority of Hazardous Condition and Hazardous Materials Release incidents took place in northern La Crosse near Copeland Avenue, as well as in central La Crosse as seen in Figures 71 and 72. There have also been notable amounts of Hazardous Conditions incidents along the Mississippi River and in other sections of central La Crosse, as depicted in Figure 71.

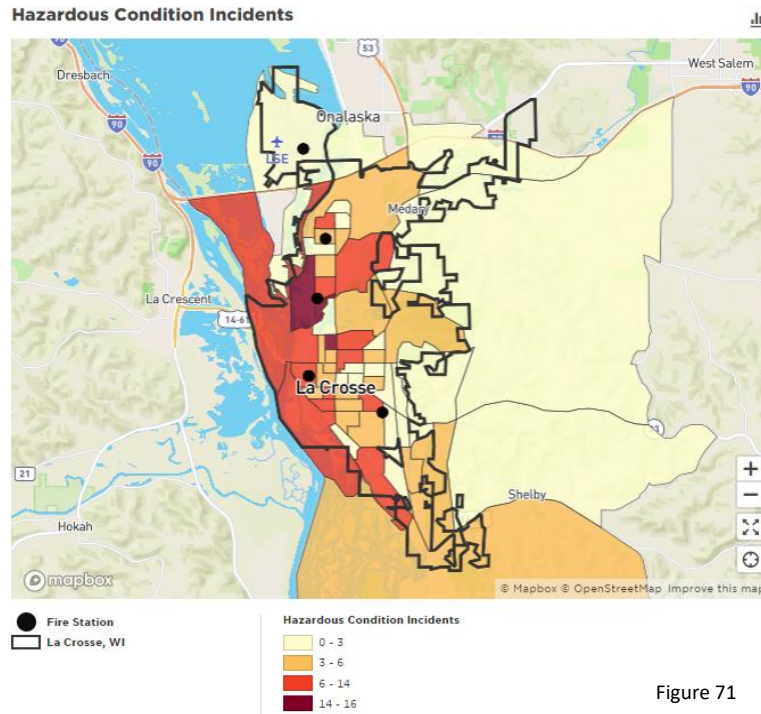


Figure 71

Sources: NFPA NFDS. The data displayed is for the most recent full calendar year available. Click on a geography to see the values for additional years.

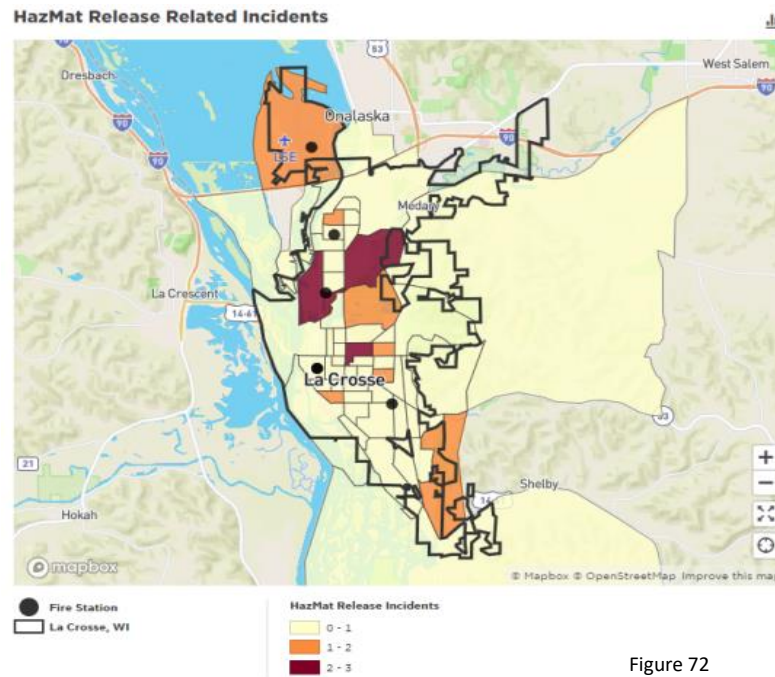


Figure 72

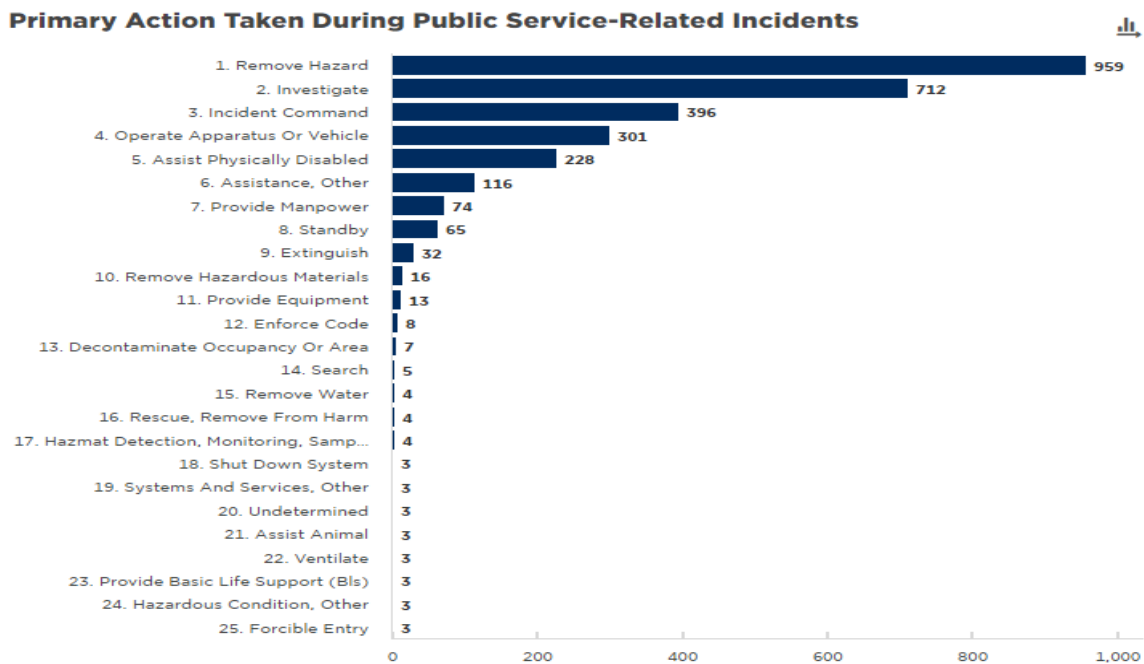
Sources: NFPA NFDS incidents with incident types 411, 413, 420, 421, 422, 423, 424, 431, and 451. The data displayed is for the most recent full calendar year available. Click on a geography to see the values for additional years.

Public Service Incidents

The graph below is a categorized breakdown of the 500-series “public service” related incidents in La Crosse from 2015 to 2019.

Year	2015	2016	2017	2018	2019	Total
Animal Problem/Rescue	3	No Data	3	1	1	8
Person in Distress	13	8	16	7	11	55
Public Service Assistance	328	524	504	428	549	2,333
Smoke, Odor Problem	10	10	11	11	9	51
Standby, Move-Up	1	No Data	No Data	No Data	1	2
Unauthorized Burning	52	46	47	43	49	237
Water Problem	27	22	24	19	22	114
Other	57	33	24	36	36	186
Total	491	643	629	545	678	2,986

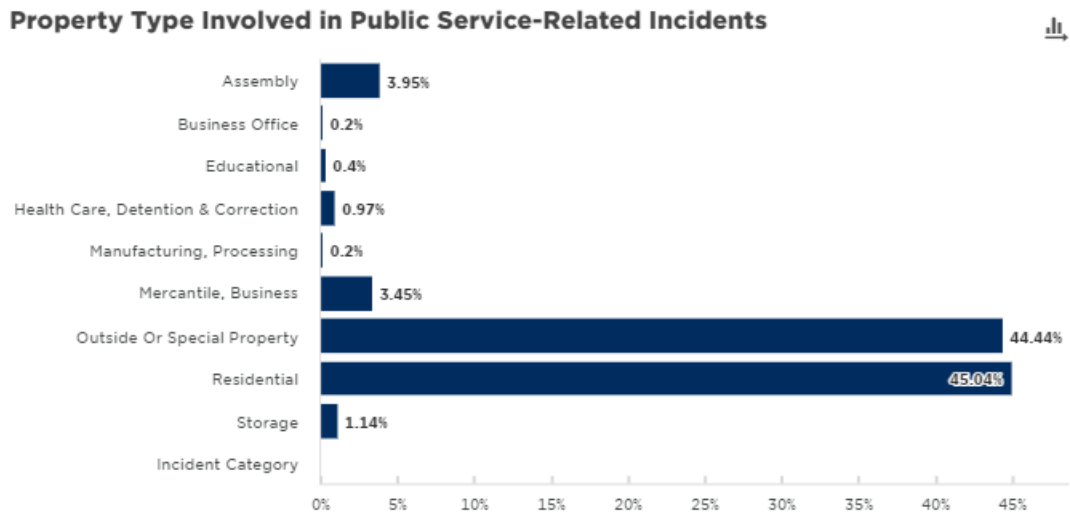
The primary action taken by the LCFD during Public Assistance incidents was to “remove a hazard”. The **most often “hazard removed” type of incident was recovery and disposal of discarded hypodermic needles**. The next two most frequent actions taken were “investigation” and “incident command”. These statistics are illustrated in Figures 73.



Sources: NFPA NFDS. The chart displays the aggregation of Public Service-related Incidents from all available years.

Figure 73

The two most frequent location types for public service-related calls were residential properties, followed closely by outside or special properties as shown in Figure 74.



Sources: NFPA NFDS. The chart displays the aggregation of incident data from all available years. Figure 74

A large quantity of Public Service incidents took place in northwestern and central La Crosse.

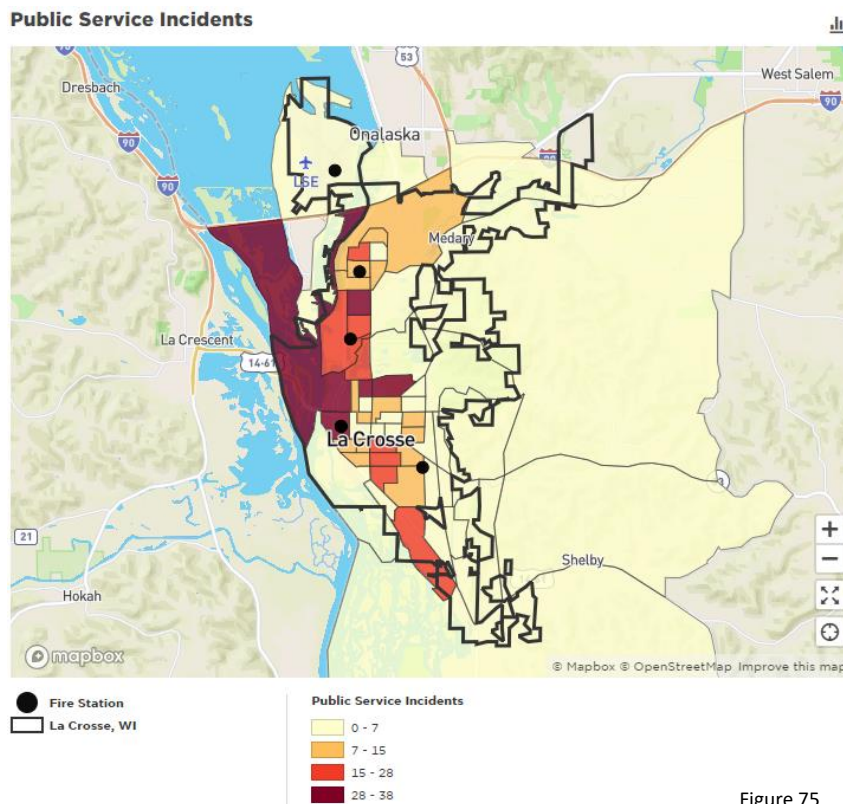


Figure 75

Sources: NFPA NFDS. The data displayed is for the most recent full calendar year available. Click on a geography to see the values for additional years.

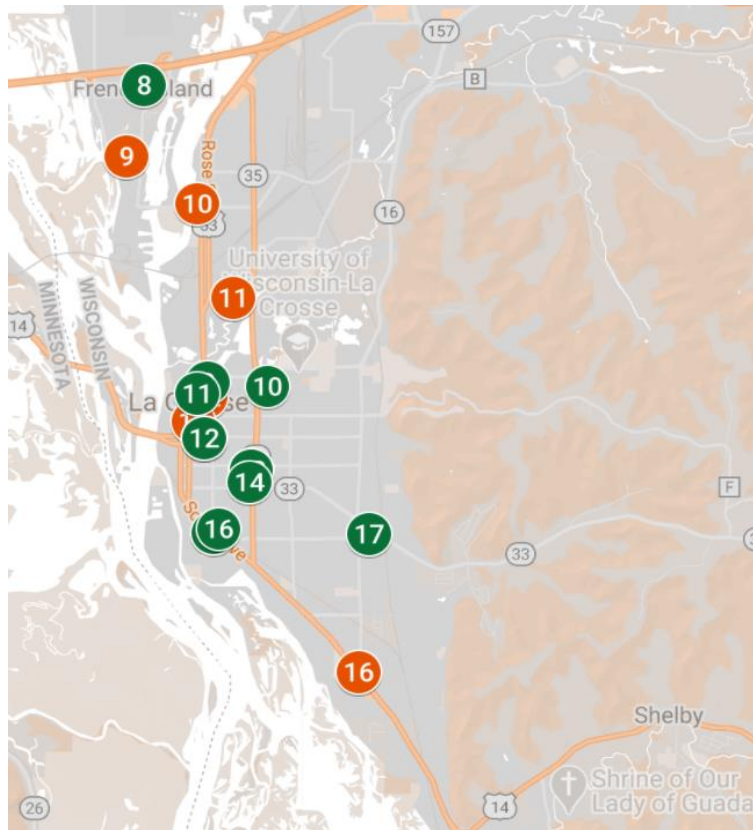
It should be noted that the **department changed its reporting** for Public Service incidents in the **spring of 2017**. Prior to the spring of 2017, hypodermic needle recovery and disposal was recorded as NFIRS code 550 “*Public Service Assistance, Other*”.

The 550 code is also used for several other public assistance related matters, so the department’s tracking of the **exact number of hypodermic needle recovery and disposal incidents was not accurately tracked**.

Since the **incident coding change in the spring of 2017**, the department has responded to a **total of 809 incidents for hypodermic needle recovery and disposal**. This is a significant number of requests, considering that the department has recorded a **total of 1,481 Public Service Assistance incidents since 2017**.

In the spring of 2017, in effort to reduce the risks of inappropriately discarded hypodermic needles, the City of La Crosse and multiple partnering agencies worked to **install several Needle Drop Box locations throughout the city and county**. Similar strategy was developed for **safe medication disposal options**. The Needle Drop Box Program and the medication disposal options are a county-wide collaborative effort.

The needle drop boxes and medication drop boxes are **strategically located throughout the city** and can be seen on the map below (Figure 76). The orange dots are outdoor needle drop box locations and the green dots are the locations for the appropriate disposal of unused medications.



False Alarm Incidents

The following table contains a categorical breakdown of the false alarms in La Crosse since 2015.

Year	2015	2016	2017	2018	2019	Total
Bomb Scare	3	3	2	1	5	14
Malicious/Mischievous False Alarm	36	27	31	40	22	156
System/Detector Malfunction	97	97	98	90	130	512
Unintentional System/Detector Operation	284	326	308	270	320	1,508
Other	37	24	27	37	30	155
Total	457	477	466	438	507	2,345

As Figure 77 shows, **most of the reported false alarms have occurred in the central, and northwest** part of the city that borders the river, which is consistent with most of the other types of incident calls.

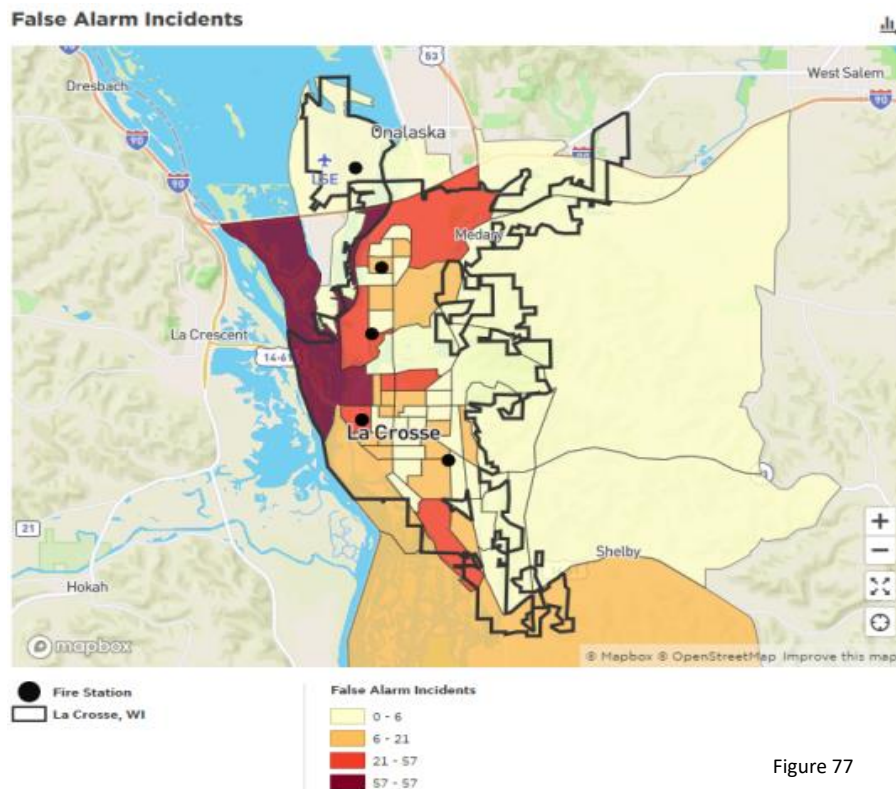


Figure 77

Sources: NFPA NFDS. The data displayed is for the most recent full calendar year available. Click on a geography to see the values for additional years.

There are **many causes of a false alarms that dispatch first responders** to an incident. Sometimes **fire protection equipment malfunctions or activates** in response to non-threatening environmental conditions. **Sometimes false alarms are malicious**, in which people pull a fire alarm or call in a fire, bomb threat, or biological hazard when there is actually no threat. **Regardless of the cause, LCFD fire companies respond when dispatched**, and these false alarms **can tie up valuable response resources and even put responders and residents in danger**.

The department has **adjusted emergency response policy to mitigate risk**, while balancing the need for an effective response force in the event of a true emergency. **On fire alarms sounding with no other report of smoke or fire, typically the closest fire company is responding “emergent” while other responding fire companies respond routine with no lights and siren in effort to reduce risks associated with emergent responses**. We have also **instituted fines** for repeated false alarms to ensure that building owners are maintaining their fire alarm systems.

Figure 78 illustrates the **increase in false alarm incidents** over the last 5-year reporting period.

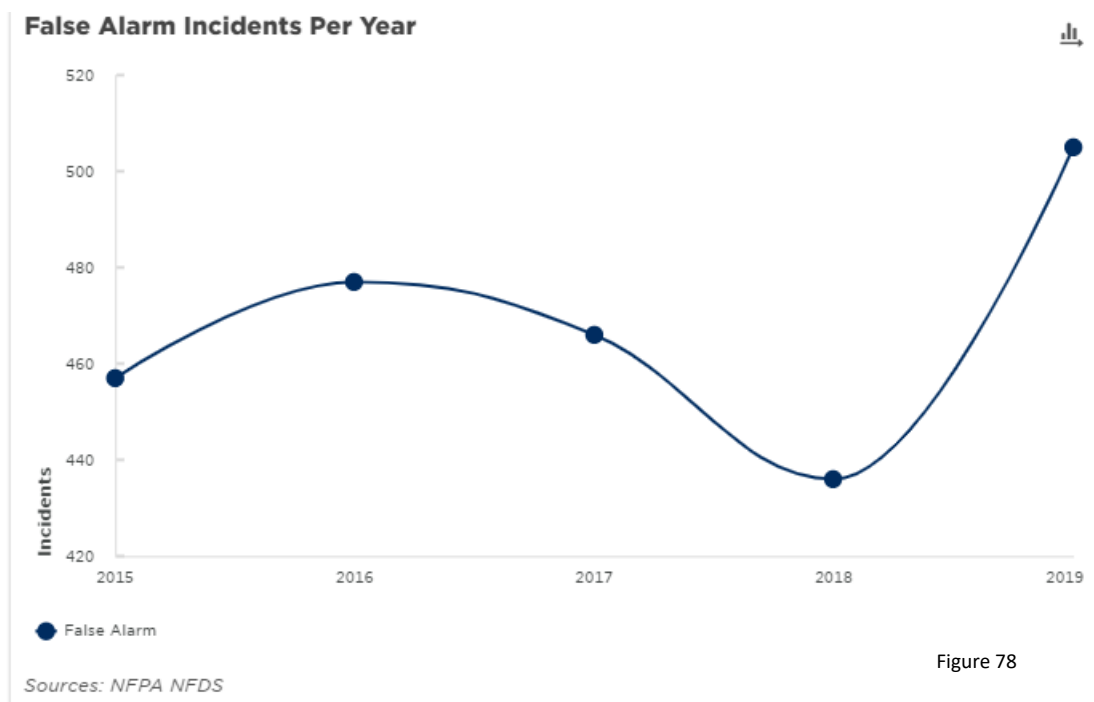


Figure 78

From 2015 to 2019, the department’s highest volume for calls for service came in the 300-series (EMS), 500-series (Public Service) and 700-series (False Alarms). Over the 5-year reporting period, the department responded to a total of 28,067 incidents in these three categories.

Top Ten Calls For Service (CFS) Property Addresses

Figure 79 is a list and map of the top ten most frequent addresses (or locations) in the City of La Crosse for LCFD calls for service, or incidents. This list pertains to all calls for service, though most of the calls pertain to 300-level, or EMS-related incidents.

Top Ten CFS Locations

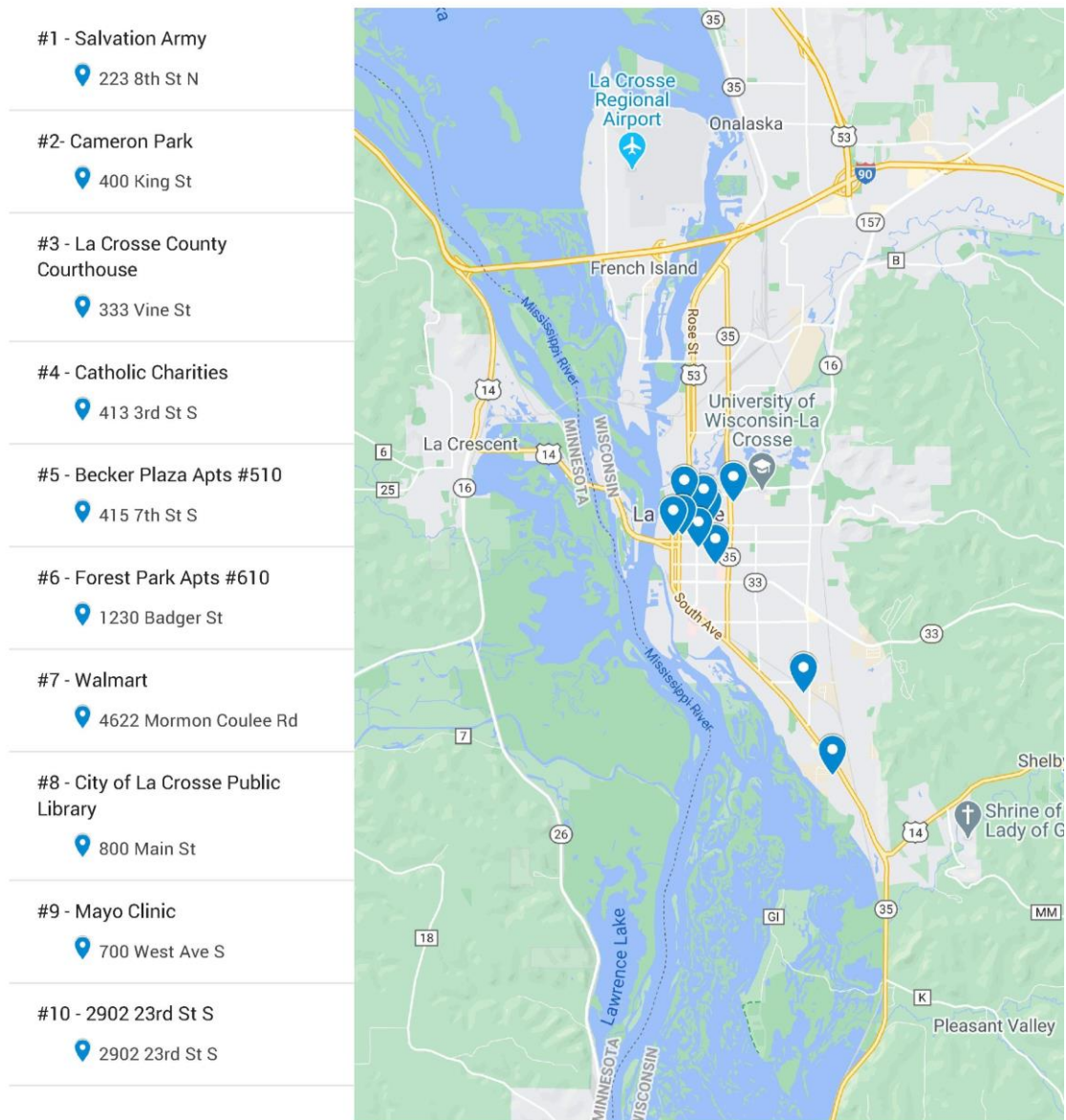


Figure 79

Unintentional Injury and Death

Even though this risk assessment is looking at specific data and incidents pertaining to the City of La Crosse, it is **important to look at national statistics** to get the clearest picture of risk within the city.

The following charts depict the most recently available Centers for Disease Control and Prevention **data on the top 10 leading causes by age group of unintentional injury deaths**, and also the **ten leading causes by age group of nonfatal emergency rooms visits** in the United States.

10 Leading Causes of Injury Deaths by Age Group Highlighting Unintentional Injury Deaths, United States - 2018

Rank	Age Groups										Total
	<1	1-4	5-9	10-14	15-24	25-34	35-44	45-54	55-64	65+	
1	Unintentional Suffocation 977	Unintentional Drowning 443	Unintentional MV Traffic 341	Suicide Suffocation 361	Unintentional MV Traffic 6,308	Unintentional Poisoning 15,353	Unintentional Poisoning 14,978	Unintentional Poisoning 13,620	Unintentional Poisoning 10,854	Unintentional Fall 32,522	Unintentional Poisoning 62,399
2	Homicide Unspecified 125	Unintentional MV Traffic 292	Unintentional Drowning 130	Unintentional MV Traffic 360	Unintentional Poisoning 4,245	Unintentional MV Traffic 6,886	Unintentional MV Traffic 5,068	Unintentional MV Traffic 5,328	Unintentional MV Traffic 5,629	Unintentional MV Traffic 7,697	Unintentional MV Traffic 37,991
3	Unintentional MV Traffic 80	Homicide Unspecified 152	Unintentional Fire/Burn 99	Suicide Firearm 202	Homicide Firearm 4,107	Homicide Firearm 4,348	Suicide Firearm 3,222	Suicide Firearm 3,787	Suicide Firearm 4,421	Suicide Firearm 6,375	Unintentional Fall 37,455
4	Homicide Other Spec., Classifiable 68	Unintentional Fire/Burn 123	Homicide Firearm 57	Homicide Firearm 134	Suicide Firearm 2,995	Suicide Firearm 3,429	Suicide Suffocation 2,688	Suicide Suffocation 2,481	Unintentional Fall 2,766	Unintentional Unspecified 4,607	Suicide Firearm 24,432
5	Undetermined Suffocation 45	Unintentional Suffocation 112	Unintentional Suffocation 30	Unintentional Drowning 86	Suicide Suffocation 2,237	Suicide Suffocation 3,117	Homicide Firearm 2,569	Suicide Poisoning 1,396	Suicide Suffocation 1,934	Unintentional Suffocation 3,793	Homicide Firearm 13,958
6	Unintentional Drowning 39	Unintentional Pedestrian, Other 70	Unintentional Other Land Transport 20	Unintentional Fire/Burn 52	Suicide Poisoning 454	Undetermined Poisoning 824	Suicide Poisoning 990	Homicide Firearm 1,382	Suicide Poisoning 1,491	Unintentional Poisoning 3,269	Suicide Suffocation 13,840
7	Homicide Suffocation 30	Homicide Other Spec., Classifiable 66	Homicide Unspecified 17	Unintentional Suffocation 43	Unintentional Drowning 431	Suicide Poisoning 753	Undetermined Poisoning 780	Unintentional Fall 1,131	Unintentional Suffocation 858	Adverse Effects 3,100	Unintentional Suffocation 6,701
8	Undetermined Unspecified 30	Homicide Firearm 54	Adverse Effects 16	Unintentional Other Land Transport 37	Homicide Cut/pierce 256	Unintentional Drowning 482	Unintentional Fall 502	Undetermined Poisoning 876	Homicide Firearm 802	Unintentional Fire/Burn 1,404	Suicide Poisoning 6,237
9	Unintentional Natural/Environment 22	Unintentional Natural/Environment 38	Unintentional Pedestrian, Other 15	Unintentional Poisoning 23	Undetermined Poisoning 224	Homicide Cut/Pierce 455	Unintentional Drowning 414	Unintentional Drowning 456	Adverse Effects 766	Suicide Poisoning 1,133	Unintentional Unspecified 6,082
10	Two Tied 18	Unintentional Firearm 30	Homicide Other Spec., NEC ^N 14	Suicide Poisoning 20	Suicide Fall 205	Unintentional Fall 345	Homicide Cut/Pierce 340	Unintentional Suffocation 401	Undetermined Poisoning 704	Suicide Suffocation 1,014	Adverse Effects 4,604

Data Source: National Center for Health Statistics (NCHS), National Vital Statistics System.
Produced by: National Center for Injury Prevention and Control, CDC using WISQARS™.



Figure 80

10 Leading Causes of Nonfatal Emergency Department Visits, United States
2018, All Races, Both Sexes, Disposition: All Cases

To obtain the percentage of all injuries by cause, select the age group category at the top of each column.

Rank	Age Groups										All Ages
	<1	1-4	5-9	10-14	15-24	25-34	35-44	45-54	55-64	65+	
1	Unintentional Fall 109,136	Unintentional Fall 605,883	Unintentional Fall 455,300	Unintentional Fall 387,501	Unintentional Struck by/ Against 652,724	Unintentional Fall 605,233	Unintentional Fall 587,015	Unintentional Fall 766,766	Unintentional Fall 1,051,917	Unintentional Fall 2,996,697	Unintentional Fall 8,173,139
2	Unintentional Struck by/ Against 21,701	Unintentional Struck by/ Against 237,143	Unintentional Struck by/ Against 271,657	Unintentional Struck by/ Against 379,425	Unintentional Fall 607,368	Unintentional MV-Occupant 522,738	Unintentional Other Specified 399,711	Unintentional Other Specified 385,430	Unintentional Other Specified 325,901	Unintentional Struck by/ Against 304,624	Unintentional Struck by/ Against 3,320,349
3	Unintentional Other Bite/ Sting 10,372	Unintentional Other Bite/ Sting 120,688	Unintentional Other Bite/ Sting 87,520	Unintentional Overexertion 195,539	Unintentional MV-Occupant 527,745	Unintentional Struck by/ Against 496,806	Unintentional Struck by/ Against 368,560	Unintentional Struck by/ Against 316,433	Unintentional Struck by/ Against 271,246	Unintentional Overexertion 228,315	Unintentional Overexertion 2,319,499
4	Unintentional Other Specified 8,646	Unintentional Foreign Body 104,770	Unintentional Cut/Pierce 75,365	Unintentional Cut/Pierce 81,857	Unintentional Overexertion 437,167	Unintentional Other Specified 495,009	Unintentional Overexertion 362,175	Unintentional Poisoning 315,887	Unintentional Poisoning 254,145	Unintentional MV-Occupant 212,217	Unintentional MV-Occupant 2,275,835
5	Unintentional Foreign Body 7,602	Unintentional Cut/Pierce 52,985	Unintentional Overexertion 54,105	Unintentional Unknown/ Unspecified 54,363	Unintentional Cut/Pierce 327,451	Unintentional Overexertion 423,585	Unintentional MV-Occupant 352,517	Unintentional Overexertion 313,974	Unintentional Overexertion 248,563	Unintentional Cut/Pierce 152,365	Unintentional Other Specified 2,119,783
6	Unintentional Fire/Burn 7,483	Unintentional Overexertion 52,781	Unintentional Foreign Body 50,678	Unintentional MV-Occupant 51,884	Unintentional Other Specified 294,441	Unintentional Poisoning 394,432	Unintentional Poisoning 322,321	Unintentional MV-Occupant 295,618	Unintentional MV-Occupant 240,051	Unintentional Poisoning 132,510	Unintentional Poisoning 1,703,618
7	Unintentional Inhalation/ Suffocation 5,791	Unintentional Other Specified 40,531	Unintentional MV-Occupant 47,705	Unintentional Other Bite/ Sting 46,516	Other Assault ^A Struck by/ Again 264,956	Unintentional Cut/Pierce 355,837	Unintentional Cut/Pierce 261,488	Unintentional Cut/Pierce 213,611	Unintentional Cut/Pierce 177,632	Unintentional Other Specified 129,251	Unintentional Cut/Pierce 1,702,787
8	Unintentional Unknown/ Unspecified 4,699	Unintentional Fire/Burn 38,173	Unintentional Pedal Cyclist 34,851	Other Assault ^A Struck by/ Again 44,450	Unintentional Poisoning 219,942	Other Assault ^A Struck by/ Again 317,612	Other Assault ^A Struck by/ Again 200,349	Other Assault ^A Struck by/ Again 145,038	Unintentional Other Bite/ Sting 109,579	Unintentional Other Bite/ Sting 114,222	Other Assault ^A Struck by/ Again 1,122,686
9	Unintentional Cut/Pierce 4,196	Unintentional Poisoning 37,258	Unintentional Dog Bite 31,552	Unintentional Pedal Cyclist 42,621	Unintentional Other Bite/ Sting 120,623	Unintentional Other Bite/ Sting 148,156	Unintentional Other Bite/ Sting 126,576	Unintentional Other Bite/ Sting 121,334	Other Assault ^A Struck by/ Again 93,573	Unintentional Unknown/ Unspecified 88,105	Unintentional Other Bite/ Sting 1,005,587
10	Unintentional Poisoning 4,106	Unintentional Unknown/ Unspecified 33,345	Unintentional Other Transport 26,047	Unintentional Other Transport 34,560	Unintentional Unknown/ Unspecified 105,123	Unintentional Unknown/ Unspecified 99,564	Unintentional Unknown/ Unspecified 81,594	Unintentional Unknown/ Unspecified 75,968	Unintentional Unknown/ Unspecified 71,283	Unintentional Other Transport 87,728	Unintentional Unknown/ Unspecified 638,895

Figure 81

Smoke Alarms

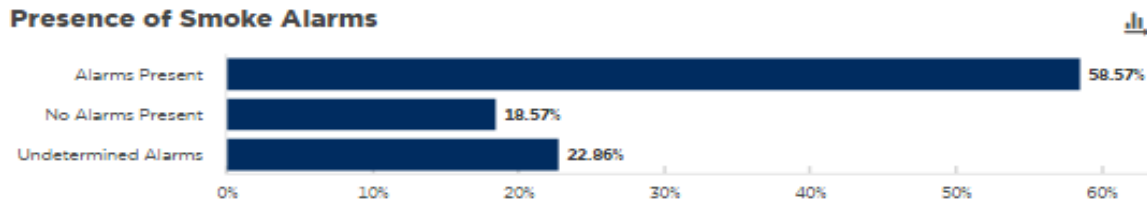
There is no denying smoke alarms save lives. According to the NFPA:

- **Three out of five home fire deaths** result from fires in properties **without working smoke alarms.**
- More than one-third (**38%**) of home fire deaths result from fires in which no smoke alarms are present.
- **The risk of dying in a home fire is cut in half** in homes with working smoke alarms.

Along with the importance of having working smoke alarms in every residence in the city, residents need to understand the **importance of knowing how to properly exit their residence** in the event of a fire-related emergency.

Properly **installed and functioning smoke alarms are necessities in every home** to provide the inhabitants with the earliest warnings possible.

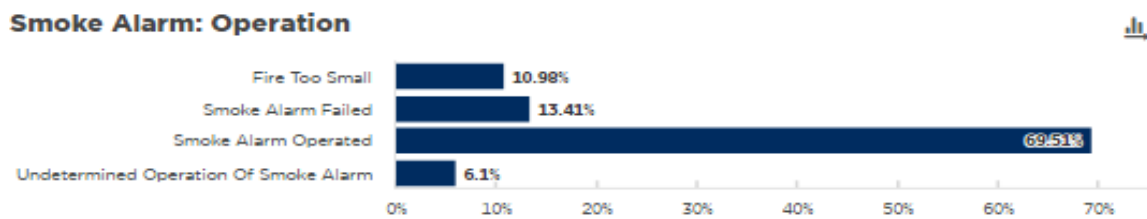
Figure 82 illustrates the prevalence of functional smoke alarms in La Crosse homes, according to the NFPA's NFDS. This same data set also looks at when a fire occurred, if the home had smoke alarms whether they operated correctly, as shown in Figure 83.



Sources: NFPA NFDS

Figure 82

If yes, did the smoke alarms work?

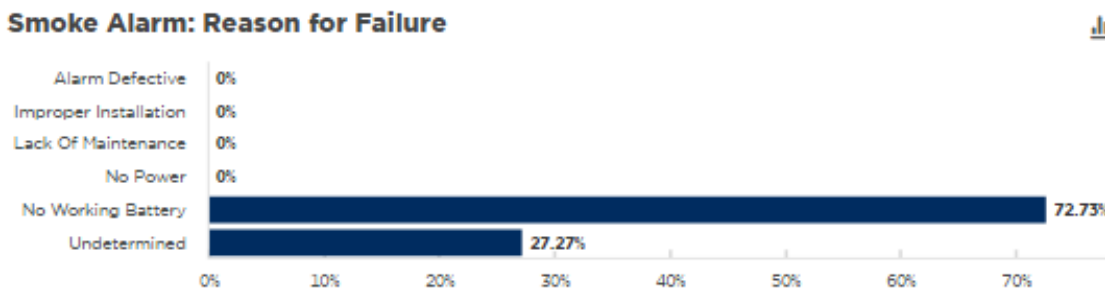


Sources: NFPA NFDS

Figure 83

The overwhelming reason smoke alarms did not work properly was because of “no working battery” as shown in Figure 84.

If the smoke alarms didn't work, why not?



Sources: NFPA NFDS

Figure 84

The above graphs succulently and accurately portray the **need for a public education and outreach** pertaining to the **importance of having working smoke alarms in the home.**

LCFD Personnel Feedback

It was determined that feedback from LCFD personnel was an integral and necessary component of the department's community risk assessment. The LCFD personnel, also referenced sometimes as crews or fire companies throughout this report, are the personnel responding to calls for service and engaging with the community on a regular basis. Front-line personnel have as good an understanding as anyone does as to what the risks, concerns, and areas of improvement are within the community and within the department itself.

Prior to the Covid-19 pandemic in early 2020, the department's Division of Community Risk Management conducted in-person interviews and feedback sessions with the multiple crews. A total of 64 of the line firefighters were able to participate in this process, for a capture rate of 75% of sworn personnel. The survey and feedback questions were also sent to Fire Department Administration for their management-level feedback.

These information gathering sessions were designed to gather input on what personnel believed were the biggest risks within their service area and the department. Feedback was recorded and organized based on what platoon shift and what fire station the crew responds from. Individual names were not included in the responses and an effort was made to acknowledge respondent anonymity, while still getting thoughtful and honest crew feedback.

Below is the list of the questions that were asked:

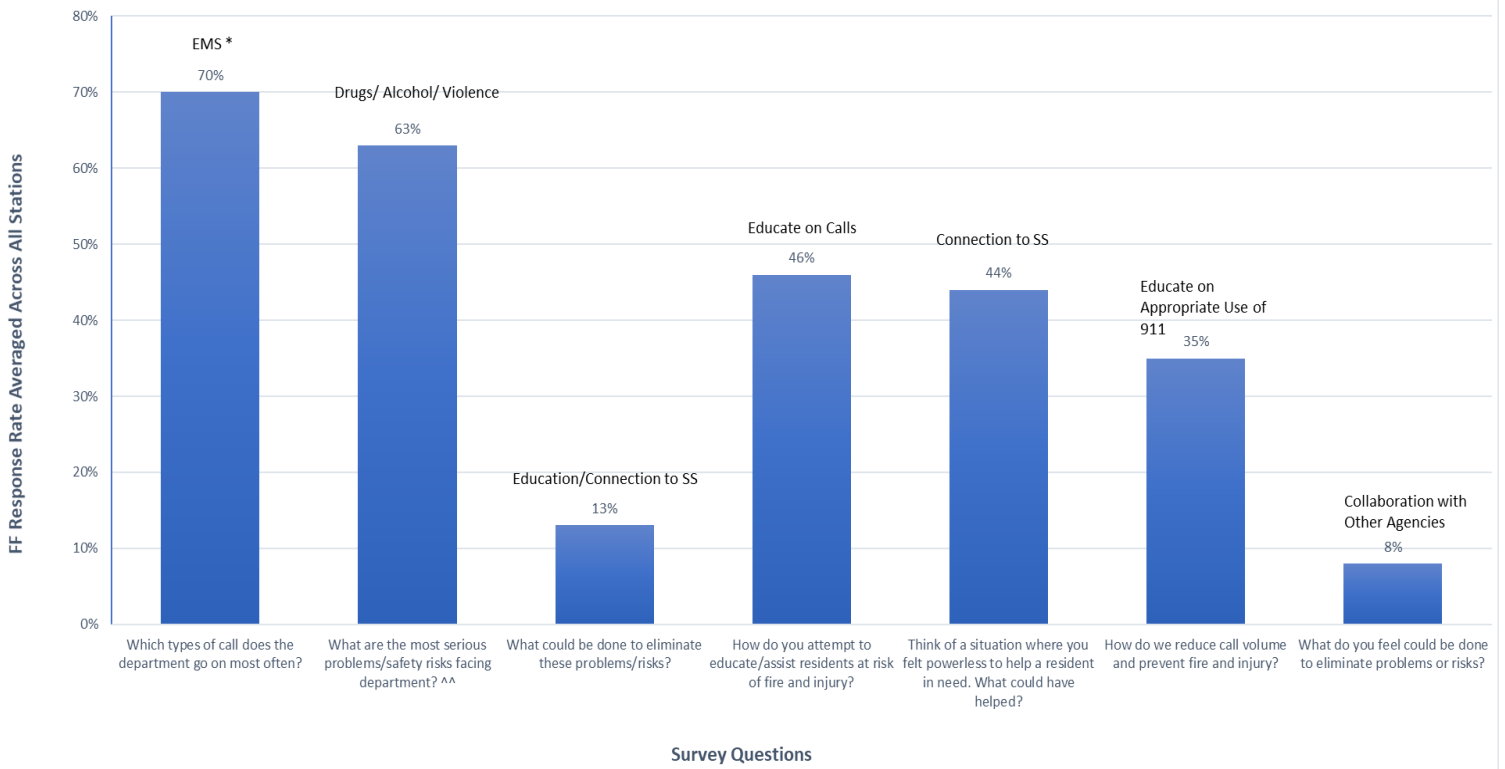
1. Which types of calls does this station respond to most often?
2. In your opinion, what are the most serious problems or safety risks in your response area?
3. What do you feel could be done to eliminate those problems or risks?
4. How do you attempt to educate or assist residents at risk of fire and injury? What CRR efforts currently exist?
5. What resources or support would you need to prevent fire or injury in your response area?
6. Think back to a situation where you felt powerless to help a resident in need. What could have helped you in that situation?
7. What do you feel our department could do better to reduce call volume and prevent fire and injury?
8. In your opinion, what are the most serious problems or safety risks that our people face within our agency?
9. What do you feel could be done to eliminate those problems or risks?
10. What are our biggest challenges regarding communication?
11. What do you feel could be done to improve communication?
12. How do you think we institute a productive smoke alarm program?
13. Is there any other feedback you think would be valuable to know as we institute our Community Risk Reduction program?

Because of the open-ended nature of the questions and with the intent of trying to capture the most specific crew feedback possible, responses varied dramatically. The graphs below illustrate the answers to questions where there was a baseline of at least 8% consensus amongst respondents.

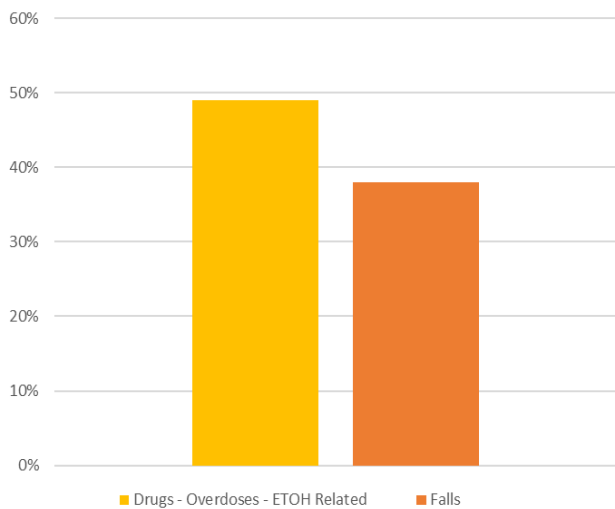
Six of the questions (#s 5, 8, 10, 11, 12 and 13) had no consistency or consensus amongst respondents, so those questions were not included in the graphs below. This decision to exclude certain questions was made because many, if not most of the responses to these questions, were singular in nature. And though there were themes throughout the responses, they were different enough that truly quantifying them was difficult and not useful for this assessment report.

Below the graphs are the individual station-level responses. Questions 2, 3 and 7 have been included in this report to limit its length and because these are the questions, that as the graphs depict, have the most consensus at the fire station and front-line personnel level.

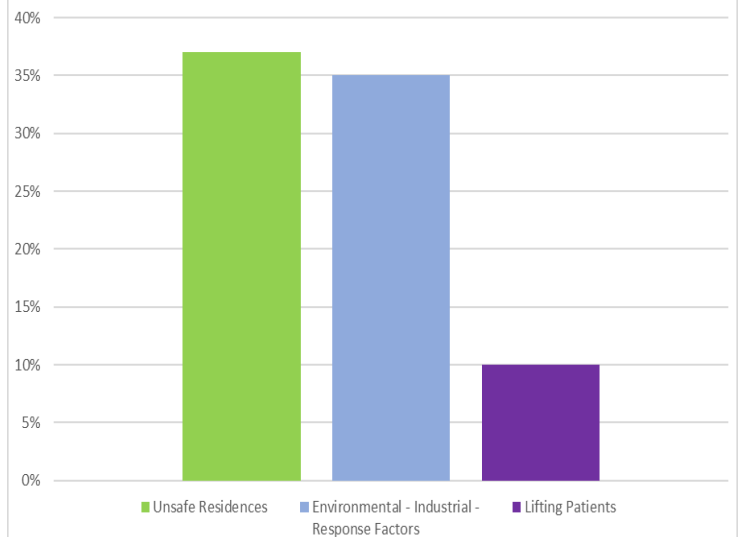
LCFD Crews' Community Risk Feedback



* EMS Call Breakdown



^^ Other Most Serious Risks Facing Department



Station 1 feedback (27 total respondents. Some respondents listed multiple answers):

2. In your opinion, what are the most serious problems or safety risks in your response area?

13/27 = 48% Poverty/crime/violence/homelessness
12/27 = 44% Unsafe homes/multiplexes
6/27 = 22% Drugs and ETOH related
4/27 = 15% Hoarding

3. What do you feel could be done to eliminate those problems or risks?

5/27 = 19% City involvement in unsafe homes
6/27 = 22% Educate and support on Social Services (SS) and resources
5/27 = 19% More police presence

7. What do you feel our department could do better to reduce call volume and prevent fire and injury?

10/27 = 37% Educate public on appropriate use of 911
3/27 = 11% Patient resource referral programs

Station 2 feedback (14 total respondents. Some respondents listed multiple answers):

2. In your opinion, what are the most serious problems or safety risks in your response area?

7/14 = 50% Hazmat/Hydrite Chem. Co.
4/14 = 29% River. Needles
2/14 = 14% Habitual 911 users. Opioids/violence. Unsafe homes. Intersections

3. What do you feel could be done to eliminate those problems or risks?

2/14 = 14% Water safety public education
2/14 = 14% Eliminate the Needle Exchange Program

7. What do you feel our department could do better to reduce call volume and prevent fire and injury?

5/14 = 36% Educate on appropriate use of 911
3/14 = 21% More SS involvement
3/14 = 21% Community paramedic

Station 3 feedback (10 total respondents. Some respondents listed multiple answers):

2. In your opinion, what are the most serious problems or safety risks in your response area?

4/10 = 40% Back Injuries. The bluff
3/10 = 30% Long response times
2/10 = 20% Running emergent in traffic

3. *What do you feel could be done to eliminate those problems or risks?*

2/10 = 20% 5th station further south. Deter people from hiking in certain areas or at night

7. *What do you feel our department could do better to reduce call volume and prevent fire and injury?*

4/10 = 40% Appropriate use of 911

Station 4 (12 total respondents. Some respondents listed multiple answers):

2. *In your opinion, what are the most serious problems or safety risks in your response area?*

3/12 = 25% Drugs. Needles. Dilapidated properties

2/12 = 17% Hoarding. Lifting patients

3. *What do you feel could be done to eliminate those problems or risks?*

2/12 = 17% Education

7. *What do you feel our department could do better to reduce call volume and prevent fire and injury?*

2/12 = 17% Appropriate use of 911 education. More collaboration with SS and County Health

As you can see, there are several correlations across the four fire stations and there are several unique responses. One of the more consistent responses, pertaining to risk and crew safety, was inappropriate use or habitual use of 911. Educating these patients on the proper use of 911 and connecting these habitual users with more appropriate social services connections and applicable resources in the community are ways the crews feel these risks may be reduced.

Neighborhood Feedback

Similar to feedback that was requested from LCFD crews, feedback was sought from the 11 neighborhood associations in La Crosse. The city's neighborhood associations are very politically active and acutely aware of the risks in each of their respective neighborhoods. Feedback was requested in an effort to get an idea of what residents believed were the risks in their neighborhoods, and also to ensure that the neighborhoods understood and hopefully appreciated that they were involved in the collaboration process of creating this Community Risk Assessment.

No limitation was put on risk feedback, and any feedback pertaining to health and safety was recommended. No exclusion was made pertaining to things that have historically been law enforcement or other city department matters. The goal of the neighborhood association feedback solicitation was to determine what neighborhood residents feel are the biggest risks within their community, whether they be related to the police department, the fire department, or another agency altogether.

Multiple attempts were made to solicit feedback from the 11 neighborhood associations, with surprisingly low feedback results. By the time this document was set to be published, responses were received from only three of the 11 neighborhood associations:

- Bluffside
- Hintgen
- Weigent-Hogan

The following questions were asked of the neighborhood associations:

1. In your opinion, what are the most serious health and life safety risks in your neighborhood?
2. What do you feel could be done to prevent or mitigate these risks?
3. How do you attempt to educate or assist neighbors at risk of fire and injury?
4. What resources or support would you need to prevent fire or injury in your neighborhood?
5. Think back to a situation where you felt powerless to help a neighbor in need. What could have helped you in that situation?
6. What do you feel the fire department could do better to reduce and prevent fire and injury?
7. Do you feel the fire department could do more to educate you on fire and life safety? If so, how?
8. What are your expectations of the fire department?
9. Is there any other feedback you think would be valuable to know as we institute our Community Risk Reduction program?

Feedback varied by neighborhood, though there were some themes throughout. A complete response to the above questions can be linked to from the appendix (See Appendix B). Below is a brief synopsis of each neighborhood's responses:

Bluffside

- Street/sidewalks and at-grade railroad crossing are primary risk
- Would like to see outreach via Nextdoor app
- Would like to see more outreach at monthly meetings
- More resources on fire and life safety to neighborhood
- More smoke alarm awareness messaging

Hingten

- Traffic speeding and unsigned streets are risk concern
- More infrastructure related to safe bike and walking
- More messaging on non-emergent number to call
- More messaging and information on general home fire and life safety

Weigent-Hogan

- Traffic concerns and unsigned or “implied” cross walk safety
- Losey Blvd and West Ave traffic is a safety concern
- Would like more health and life safety information to pass on to members

Similar to the LCFD station-level personnel feedback, there are similarities in some of the responses we see from the three neighborhood associations who completed the questionnaire. There are also unique differences regarding the risks in each individual neighborhood.

Pedestrian and traffic safety concerns are a commonality we see from all neighborhood respondents. As is overall general **life and fire safety information** dissemination. Currently, the department is actively involved with many of the neighborhood associations but after reviewing the feedback data, it is **apparent more messaging and a closer relationship** with other associations is warranted.

In the winter of 2019, the **department began utilizing the Ring Neighbors app**. This public safety and outreach app allows for **hyperlocal and targeted public education messaging based on individual neighborhoods** in the city. This app is designed exclusively for neighbors to interact with one another and is focused solely on neighborhood safety.

The department’s involvement with this platform will also help with fire investigation purposes.

It is still too early to truly assess the effectiveness of joining this service, though the department is excited about the localized public education and messaging capabilities it offers and feel that the engagement possibilities offered by the app are very promising.

Prioritizing the CRA Identified Risks

A clear and present risk during 2020 has been the Covid-19 **Pandemic**. As of December, there have been over 9,500 confirmed positive cases and 61 confirmed deaths in La Crosse County as a result of Covid-19. This pandemic shows no signs of abating and since the pandemic's beginning in early March, over 20 million Americans have been infected and over 340,000 have died from the virus.

The US Census's Community Resilience Estimates is a resiliency measure that identifies a community's ability to endure, respond to and recover from the impact of disasters. These estimates emphasize certain sociodemographic factors that can influence a community's risk level during disasters, including public health emergencies like the current Covid-19 pandemic.

These risk factors include: aged 65 and above; low-income household; single or no caregiver household; household communication barrier; employment status; disability status; physical crowding; lack of health insurance; respiratory disease; heart disease; and diabetes.

La Crosse has a sizeable low-income population, as well as a sizeable minority population. Furthermore, the population ages 65 and older in La Crosse is large and growing. La Crosse also has a sizeable population of people with a disability.

The below Figures 83 and 84 illustrate the location of residents with 3+ risk factors and the tract average for the county.

La Crosse County, WI
Map of Percentage of Residents in Tract with 3+ Risk Factors

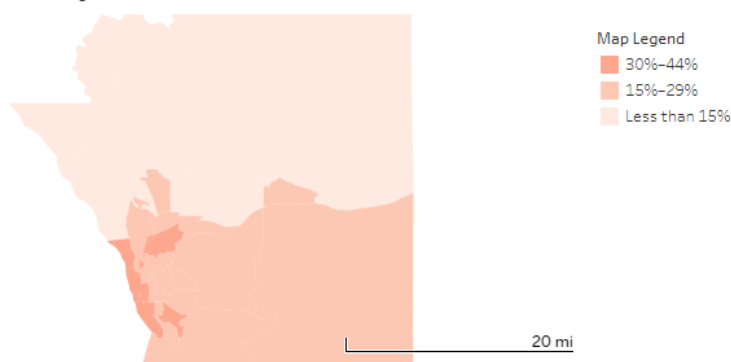


Figure 83

Tract Average
La Crosse County, WI

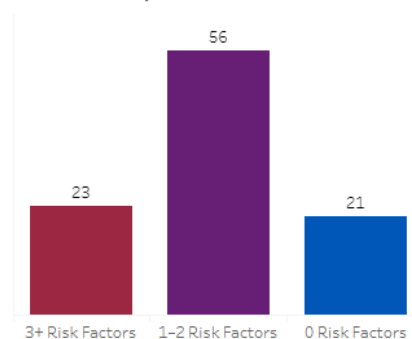


Figure 84

In regards to the current pandemic and lessons learned during it thus far, it is apparent that La Crosse, like much, if not all, of the country, has much to improve upon and prepare for prior to a future similar event. It has become abundantly clear that many government bodies and the authorities having jurisdiction were not fully prepared for a pandemic. Having an effective, implementable and thorough Emergency Operations Plan that explicitly covers infectious disease mitigation will undoubtedly become a part of the overall mitigation strategy for future pandemic outbreaks in our region and state.

Specific, further information pertaining to the City’s and the County’s response to the Covid-19 pandemic will be included in Appendix A attached to this document.

La Crosse is home to **three college campuses** which are all centrally located in the city – The University of Wisconsin La Crosse, Viterbo University, and Western Technical College. As a result, central La Crosse has a considerably population-dense and young-adult population in this region of the city. In addition to the risks that this college student population poses towards the spread of infectious diseases, this population also exponentially increases the community’s risks for cooking fires, kitchen and structure fires, exterior fires, alcohol-induced incidents, and many preventable emergency medical incidents.

Of the nearly 460,000 Covid-19 cases in the State of Wisconsin, 19% of these cases are found in the college-aged, 20-29-year-old demographic, as illustrated in Figure 85 below.

Summary of Wisconsin Covid-19 positive cases by age group

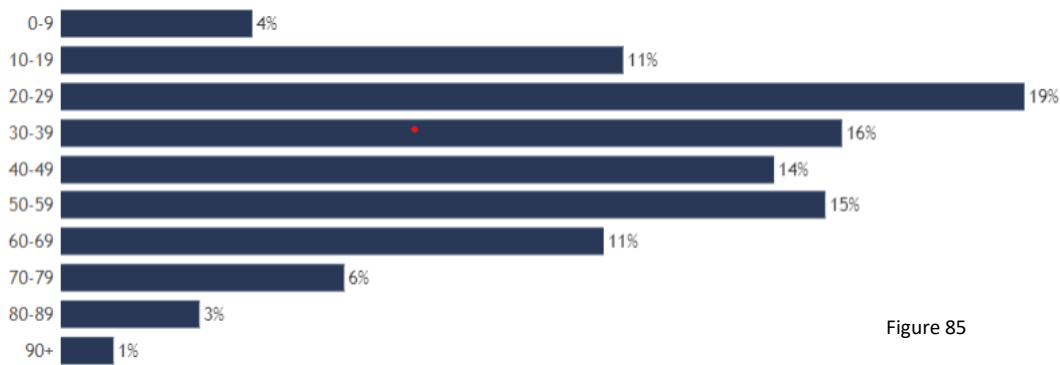


Figure 85

Another noteworthy priority risk affecting La Crosse, is the prevalence of **older adults sustaining injuries due to slips, trips, and falls**. Between 2015 and 2019, the NFIRS 554-coded “Resident Assistance” incidents, one of the codes used to document a fall, have risen by over 132% in the city. Incidents increased from 55 in 2015 to 128 in 2019, as illustrated in figure 86 below.

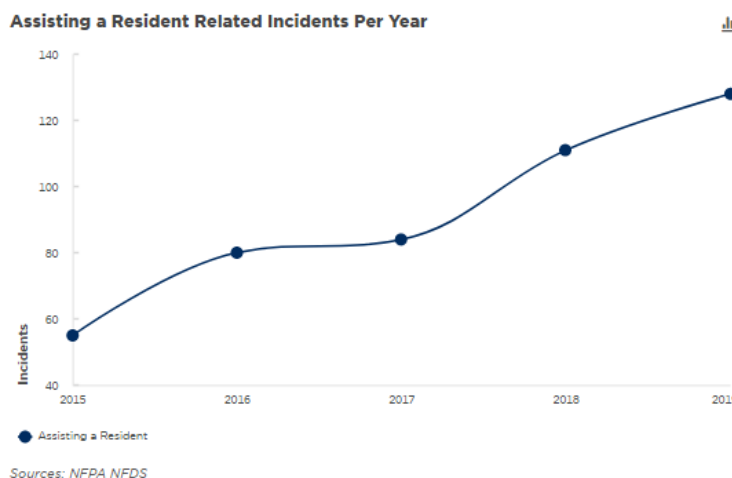


Figure 86

More than one-out-of-four people ages 65 and over call for emergency medical assistance due to slips, trips and falls each year, according to the CDC. These falls can result in broken bones, head injuries, and an activity-limiting fear of falling again. “Lift assist” calls for service also account for a high percentage of emergency calls, consume local resources, and can put our first responders at risk of injury.

According to the CDC, more than one-in-four households with an adult age 65 or older reported having trouble using a feature of the home. These features include things such as steps, bathroom and shower access, and getting in and out of bed. This figure rises to nearly half for households with someone over the age of 85.

Steps and bathrooms, specifically showers and bathtubs, are the culprits of most at-home elderly falls. Installing handrails along steps, as well as grab bars and seats in the bathtubs and showers, could help improve the safety in these homes and reduce risks for the community.

In La Crosse, 14% of the overall population is over age 65, and 98% of them are covered by Medicare.

The following figure depicts the geographic distribution of La Crosse residents aged 65 or older. The south and north ends of the city are home to the largest portions of this population.

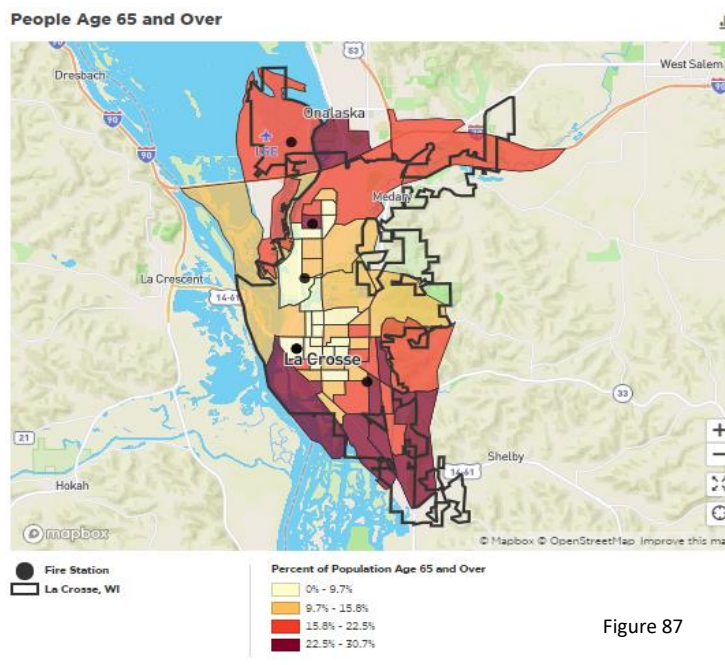


Figure 87

The typical **age of residential buildings** in the city should also be taken into consideration when assessing overall home safety. As mentioned on pages 23 and 24, the median year that homes were built in La Crosse is 1962, which is 11 years older than the Wisconsin median and 15 years

older than the national median. Similarly, over 25% of homes in La Crosse were built before 1939. This aging housing profile data correlates well to the number of renter-occupied dwellings in La Crosse. Compared to State of Wisconsin and the national statistics, La Crosse has a far higher renter-occupied to owner-occupied percentage. Renter-occupied properties can pose higher health and safety risks compared to owner-occupied dwellings and with many of these dwellings being occupied by the high-risk group of college students, efforts should be made to prevent incidents in these dwellings.

Not only can older buildings lead to issues with structural integrity, they can also pose the risks of exposure to asbestos, lead paint, mold, and other harmful substances. Older homes are also less likely to be equipped with the same safety features of newer homes, such as adequate lighting, sturdy handrails, easier bathtub walls to step over, thorough ventilation, and proper fire safety precautions, to include smoke alarms and carbon monoxide alarms. Failure to address these needs may result in elderly falls, house fires, and other preventable injuries and fatalities.

Another key risk factor that must be addressed is the **absence of smoke alarms** in numerous homes in the city. As previously addressed on page 54, only 59% of homes in La Crosse have confirmed that smoke alarms are present. Of the smoke alarms present, only 70% were confirmed to be functional. This means that only 41% of homes in La Crosse have confirmed that functional smoke alarms are present in the home.

Compared to the national average, from 2012-2016, the NFPA states that:

- Smoke alarms were present in three-quarters (74%) and sounded in more than half (53%) of the home fires reported to U.S. fire departments.
- Almost three of every five home fire deaths resulted from fires in homes with no smoke alarms (40%) or no smoke alarms that were working (17%).
- The death rate per 1,000 reported home fires was more than twice as high in homes that did not have any working smoke alarms (12.3 deaths per 1,000 fires), either because no smoke alarm was present or an alarm was present but did not operate), as it was in homes with working smoke alarms (5.7 per 1,000 fires).
- In fires in which the smoke alarms were present but did not operate, more than two of every five (43%) of the smoke alarms had missing or disconnected batteries.
- Dead batteries caused one-quarter (25%) of the smoke alarm failures

As referenced earlier on page 47, nationally, **“Cooking Fires”** are the number one cause of home fires. In a city such as La Crosse, with a specifically population-dense and young-aged population, these statistics are even more of a risk concern. “Leaving cooking equipment unattended” is the leading ignition factor in cooking fires, followed by the “heating source being too close to combustibles”. Strategically addressing these unsafe national cooking practices around the City of La Crosse could lead to a reduction of cooking fire incidents.

La Crosse sits on a broad alluvial plain on the eastern bank of the Mississippi River. The Black River empties into the Mississippi just north of the city and the La Crosse River empties into the

Mississippi just north of downtown. As a result of the confluence of rivers, an average annual rainfall of 32-inches, and an average annual snowfall of 45-inches, the **city is especially vulnerable to flooding**. Understanding the risks of living within the flood plain, purchasing flood insurance, and taking the necessary steps to educate residents who live in areas prone to flooding is a vital step in mitigating the effects flooding has on the entire community.

Another challenge facing La Crosse, like many cities across the country, is the **opioid addiction epidemic**. This is a growing and evolving concern for many cities and it will demand a multifaceted community-based approach to reduce drug overdose mortality and morbidity. Education certainly plays a role here, as does Enforcement and Engineering, and this is admittedly a “work in progress” that will require collaboration and commitment from multiple stakeholders to reduce the alarming statistics.

CRA Conclusions and Next Steps

In developing the department’s first-ever Community Risk Assessment, areas of improvement were noted in data collection and organization. Significant steps have already been taken to improve this deficiency, to include the transition to a new records management system and data charting software. This transition will further enable the department to better understand our community and the calls for service, and optimally enable the department to better manage and prevent risks.

The department’s next step in this process is the development of a **Community Risk Reduction Plan (CRRP)**. This 3-year CRRP will set measurable goals will outline the strategies and tactics that the department and our partners will set in place to support prevention and mitigation of the community’s identified risks. The CRRP will support the department’s five-year **Strategic Plan** and our commitment to continuous quality improvement efforts structured within our organization’s annual accreditation goals.

Through this CRA process, the department has identified the following **risk areas of concern** that represent the highest intersection of the most risk factors. Programs will be developed to better address these fire and life safety issues, based on plans that effectively incorporate demographics and statistical data. These risk areas of concern will be the focus of the department’s CRRP involving every department division, through the year 2024 when an updated CRA will be conducted with the newest U.S. Census data and more detailed incident data available. This new CRA timeline will advantageously intersect with our next five-year Strategic Plan, which will be built for years 2024 through 2028.

While the department will continue to provide valuable programming, services and education regarding other fire and life safety issues not specifically listed here, the following topics represent the **highest priority for new or enhanced risk reduction efforts:**

- Infectious disease mitigation
- Falls referrals and mitigation
- False fire alarm activation risk reduction
- Fire, health, and safety initiatives for renter-occupied dwellings
- Cooking fire/Exterior fire education and risk reduction
- Smoke alarm/carbon monoxide alarm education and risk reduction
- Opioid/IV drug abuse, and hypodermic needle/drug disposal mitigation
- Inappropriate use/High use of 911 for non-emergent services education and mitigation

Appendices

Appendix A – City of La Crosse Covid-19 Risk Assessment. This is a non-public document only accessible via a City of La Crosse computer with city login credentials. City employees and Common Council members may access this document here:

<https://bridges.cityoflacrosse.org/projects/2020-covid-19/Public%20Documents/3rd%20Update%20City%20of%20La%20Crosse%20COVID-19%20Risk%20Assessment.pdf>

Appendix B – Neighborhood Association Community Risk Feedback. Use the below QR code to link to the City of La Crosse Fire Department’s website to view this feedback:

