Sycamore Fire Department Strategic Plan 2015

The Sycamore Fire Department Mission Statement:
The mission of the Sycamore Fire Department is to selflessly serve our community with the highest quality professional fire and emergency medical services.

Our Value Statements:
Preparedness
Our members strive to be best prepared through physical fitness, continued training, and equipment readiness in order to operate in the safest way possible.
Dedication
Our members take great pride and honor proving a loyal service to the community, while respecting the traditions of our profession.
Honesty/Integrity
Our members perform their duties honestly and ethically striving to maintain the trust given to us by the community.
Teamwork
Our members work together to achieve a common goal through mutual trust, respect, and loyalty.
Selflessness
Our members are bravely willing to sacrifice our needs to serve the needs of the community in the course of performing our duties.

May 12, 2015

Sycamore Fire Department Strategic Planning Committee

The Strategic Planning Committee consisted of 10 members which included three members of Fire Administration, a Local #3046 Executive Board member, and two members elected from each shift.

Strategic Planning Committee members
Fire Chief Peter S. Polarek
Assistant Fire Chief Marc Doty
Assistant Fire Chief Art Zern
Executive Board Member - Firefighter/Paramedic Andy Powers
Gold Shift representative - Lt. Kurt Mathey
Gold Shift representative - Firefighter/Paramedic Ryan Gustafson
Red Shift representative - Lt. Todd Turner
Red Shift representative - Firefighter/Paramedic Bill Reynolds
Black Shift representative - Lt. Dan Marcinkowski
Black Shift representative - Firefighter/Paramedic Brad Belanger

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Executive Summary

In order to prepare the Sycamore Fire Department for the future, a periodic evaluation of the capabilities of the Fire Department must be performed along with analysis of the potential growth of the community, a review of any additional services that may be required by the public, and an assessment of the organization's ability to meet future demand for emergency and non-emergency services. Generally, this process is known as strategic planning and includes some of the following elements:

1. define the scope of the planning team;
2. acquiring local information and analyzing the data to determine the risks and their relative importance now and in the future;
3. determining the goals and objectives of the desired fire protection service delivery and the quality of the service the community is willing to accept;
4. preparing the strategic plan;
5. implementing the plan; and
6. constantly reevaluating the plan.

In May 2012, one of the city's top priorities for the newly appointed Fire Chief was to facilitate an update of the Fire Department Strategic Plan. In December 2012, the Fire Chief met with the City Manager to determine the scope and makeup of the strategic planning team. It was determined that the strategic plan should encompass 5-7 years and the strategic planning team would consist of a cross section of Fire Department members.

In January 2013, the Fire Chief solicited various Fire Department members for the Strategic Planning Committee. On March 7, 2013, selected members of the Sycamore Fire Department Strategic Planning Committee met for the first time. The Committee's task was to develop a 5-7 year strategic plan ultimately to be presented to the Mayor and City Council. The Strategic Planning Committee met monthly from March 7, 2013 until November 13, 2013, and then met as needed in April and May 2014. After an internal review, changes to the draft document were proposed to the committee which met in February 2015. The final document is planned to be presented to the City Council in May, 2015.

At the beginning of the planning process, newly appointed committee members were presented an overview of the proposed strategic planning process and timeline. The Committee reviewed the 2001 plan and the accomplishments relative to the plan. The Fire Chief presented a suggested structure of the 2015 Plan. Over the course of nine months, Committee members reviewed the Fire Department mission as well as how the Fire Department provided the variety of emergency and non-emergency services. Before the Committee could delve into a number of substantive issues, the members felt that they must review and update the Fire Department Mission Statement and Value Statements. The formal statements would then help to guide the committee's response to the issues as well as help to formulate the recommendations.

The Committee identified many of the potential concerns that could affect the Fire Department service delivery and consolidated those concerns into four areas: future challenges; fire department facilities; personnel; and fire apparatus/equipment.

The Committee looked globally at the City of Sycamore and the Sycamore Fire Service. This review included identifying existing challenges as well as identifying potential

challenges. At the beginning of the planning process, the group as a whole conducted brainstorming sessions to identify many of the potential challenges to the Fire Department service delivery. Once those challenges were identified, the Committee was broken down into three sub-committees with each sub-committee assigned a number of identified areas to research. Once this initial effort was completed, the sub-committees were assigned to target three primary areas to research: facilities, personnel, and emergency vehicles.

Existing challenges identified include the following:

- Maintaining current service levels with increasing call volume.
- Limited capital resources for scheduled replacement of emergency vehicles and equipment.
- Facilitate the completion of basic training for fire fighters and fire officers within fiscal limitations.
- Facilitate special team development within fiscal limitations.

Potential challenges identified include:

- Increasing call volume due to "baby boomer" generation demand for emergency medical services.
- Continue to provide high quality public services within operating budget constraints.
- Continue to monitor very closely the potential impacts of the Affordable Care Act (ACA) on the provision of health care services.

After over twenty-five months of work, the Strategic Planning Committee completed a review of the current state of the Fire Department and its main components, the history of the emergency call volume, the costs to provide services, the potential growth of the service area, and many other factors relevant to making recommendations. The sub-committee delegation of the work seemed to be the most effective use the time and resources available. As a result of all of the efforts involved, the Strategic Planning Committee made a number of recommendations for three major areas: facilities, personnel, and emergency apparatus.

The Strategic Planning Committee specific recommendations

Throughout the planning process, the Strategic Planning Committee took a short and long view of each of the three major areas. This strategy allowed for the facilitation of short term actions while facilitating long term financial planning of those large cost needs.

1. Facilities

The City of Sycamore currently maintains two fire station locations. Fire Station #1 is located at 535 DeKalb Avenue and was built in 1957. Fire Station #2 is located at 2100 Frantum Road and was built in 2008.

Fire Station #1 is a 58+ year old facility that needs attention regardless of any positive or negative impacts of community growth or emergency call volume changes. When discussing potential improvements to this building, one would ask if it is feasible and prudent to make significant investments into a structure that is almost 60 years old and has significant limitations due to its design and construction. Until this question is resolved, Fire Department employees will still inhabit the building. Therefore, we should make some short term investments to this facility to improve the existing living

conditions. Fire Station #1 has a number of quality of work environment issues. These issues include but are not limited to:

- Inefficient leaky windows
- Low apparatus bay ceiling and narrow overhead door widths
- Inefficient heating and air conditioning systems
- No monitored fire alarm system
- Poor drinking water quality
- Building fronts a busy city street where egress and ingress to the apparatus bay is difficult at peak traffic periods

The consensus of the Committee regarding facilities is to complete the following within the 5-7 year window:

- Make a modest investment into existing Fire Station #1 to make it serve more effectively until a decision is made regarding its long term future. Fire Station #1 is well over 50 years old and has some immediate needs that should be addressed in order for the facility to continue to effectively serve the community as well as be employee friendly. This short term investment should include: making the windows more energy efficient, replace the existing heating and ventilation system, install a fire alarm system, and update the emergency notification system.
- Conduct a formal evaluation of Fire Station #1 for its long term effectiveness. This effort is intended to take a long term view of the existing facility and determine if it is worthwhile to substantially invest in the existing facility or consider other options. Research conducted by the sub-committee recommended a space need analysis ($2,500) and a facility analysis ($15,000 - $20,000) be conducted to determine the long term use of the existing space.
- Continue to maintain a schedule of annual/semi-annual maintenance to existing fire stations.
- Conduct a study of the response times from the existing fire stations to the Sycamore - DeKalb corridor.

The Committee also maintained a long term view of facilities and suggested consideration of the following:

- Conduct a study to determine the effectiveness of the current location of Fire Station #1 or consider an alternate or an additional fire station site.
- As the land on the west side of Sycamore develops, take advantage of possible land donation for future fire station or fire department training site.
- Monitor all growth throughout the emergency response area and take advantage of opportunities to acquire land for future needs.
- Expand the city e-mail addresses to all Fire Department employees in order to enhance internal communication methods.
- Upgrade the City's computer network to allow for better intranet use among all city departments including the Fire Department.

2. Fire Department personnel - staffing

The Sycamore Fire Department is considered a combination fire department consisting of career (full time) and paid-on-call (part time) personnel. The career staffing of the Fire Department is designed to cover the ordinary requests for service while the paid-on-call staffing is designed to supplement the career staffing during peak periods of emergency activity. The Fire Department currently maintains three, 24 hour shifts of 8 personnel, a

swing shift of two personnel, three administrative personnel serving on a forty hour week, and 10 paid-on-call personnel. The current minimum shift staffing is six career personnel per day. When the daily staffing falls below the minimum (due to sickness, training, or a firefighter on extended injury leave) then off duty career firefighters are hired back on overtime to bring the daily staffing to 6. The current allotment of career personnel (24 regular shift personnel and 2 swing shift personnel) is not enough career personnel to cover all of the shift days that may be low staffed due to scheduled vacation days, personal days, sick days, and workers compensation time loss days in order to maintain the daily staffing to six person minimums. Overtime costs are incurred any time that the shift daily staffing falls below six.

The Committee recommends consideration of additional personnel (2 per shift is recommended) over the course of the next 5 to 7 years to help reduce overtime fill-in coverage costs to maintain minimum daily staffing needs as well as to begin to beef up the on duty available staffing. This is especially true as the community continues to grow and calls for service increase. While the cost of one career firefighter is estimated at $75,000 per year (salary and benefits), it is believed that hiring one additional personnel per shift (3 personnel) will potentially reduce the cover time for daily staffing by about 30 to 40%. While this is not a dollar for dollar savings, the short term goal would be to reduce the reliance on the recalling off duty and paid-on-call personnel for the initial response to emergency calls.

The Committee also maintained a long term view of personnel staffing and suggested consideration of the following if emergency call volume continues to grow significantly:

- Our long term goal should be that the Fire Department should be able to handle day to day calls for service without routinely relying on off duty personnel for the initial response.
- As the local economy continues to recover and the community resumes the growth both on the residential and commercial side, one would assume that the emergency call volume would grow as well. As demand for emergency services increases, the Committee feels additional personnel will be required to meet the demand. Ultimately, the Committee's vision would be to maintain a level of personnel to meet the increasing demand for emergency service, help reduce overtime fill-in coverage costs to maintain minimum daily staffing needs, and allow the Fire Department to be able to handle simultaneous calls for service and muster a larger number of personnel for the initial response to structure fire responses. This vision could take the shape of hiring personnel in groups of three (one per each shift) as needed, based on demand. Long term, the ultimate goal would be to eventually facilitate a second duty crew at Fire Station #1 to align with the ultimate build out of the community as discussed in the City of Sycamore 2014 Comprehensive Plan.
- The Committee felt that when the Fire Department organization grows to three in-service companies, that this would be the time to seriously consider adding additional supervision and emergency command and control for the on duty crews. It was felt that the increase in the size of the on duty staffing (due to increase in call volume) would out grow the current on call chief command system.

Fire Department personnel - training

The initial basic training and the maintenance of basic training should be considered a high priority for career (full time) and paid-on-call (part time) personnel.

- The Committee recommends that the Fire Department complete and maintain the current "basic training" goal previously set for firefighters and fire officers. The basic training for career firefighters includes: Firefighter II (Basic Operations Firefighter), Paramedic licensure, Hazardous Materials Operations, Fire Apparatus Engineer, Vehicle and Machinery Operations, Fire Service Vehicle Operator, and Technical Rescue Awareness. The basic training for career fire officers includes all of the Firefighter basic training and Fire Officer I certification (five - 40 hour courses).
- The Committee recommends that the Fire Department continue to support Specialty Teams (Hazardous Materials Team, Technical Rescue Team, Fire Investigation Team) and other designated Department programs (Public Education, Vehicle maintenance). This support includes authorizing personnel to attend required continuing education training as well as facilitate new personnel to attend the required coursework.

The Committee also maintained a long term view of personnel training and suggested consideration of the following:

- Our long term goal should be that the Fire Department career personnel should receive the necessary training to allow them to do their jobs effectively. The Committee recommends that the Fire Department broaden the "basic training" goal for firefighters and fire officers. For career firefighters the following courses are recommended to be included in the established basic training coursework: Firefighter III (Advanced Technician Firefighter), Vehicle and Machinery Technician, Water Operations, and Farm Rescue. These courses for incumbent firefighters could be phased in over a one to two year time period. For a new career firefighter, the completion of all of the recommended course work could take three years assuming two courses per year. For career fire officers the following courses are recommended to be included in the established fire officer basic training coursework: Fire ground Company Officer and Fire Officer II certification (five - 40 hour courses).

3. Emergency apparatus/equipment

The Sycamore Fire Department currently maintains the following emergency vehicles: 4 Advanced Life Support (ALS) ambulances, 3 in-service fire engines (2 ALS, 1 engine/tender), 1 out of emergency service fire engine, 2 brush units, 1 rescue squad, and 4 Command vehicles (1 reserve). The Committee's discussions regarding emergency fire apparatus (response vehicles) centered around the size of the Fire Department fleet, the amount of reserve equipment, and emergency vehicle maintenance. One of the biggest concerns is that the current reserve fire engine is not considered emergency response capable due to it's age, physical condition, and lack of required tools and equipment. For the past ten years, most of the tools and equipment on the reserve fire engine has been taken off the reserve fire engine and reassigned to other front line vehicles when a tool or specific equipment was removed from front line service due to wear or damage from use. A significant operational deficiency has been the Fire Department's inability to take advantage of available technology. Specifically, the Fire Department has not been able to participate in field patient care reporting (tablets or Toughbooks) or pursue any adjuncts

to the County-wide computer aided dispatch system (mobile data terminals/automatic vehicle locators).

The consensus of the Committee regarding emergency apparatus/equipment:

- Overall, the Committee felt that the current allocation of the various vehicle types was appropriate. However, the deferring of the replacement of front line vehicles has affected the quality and maintenance of those vehicles.
- The Committee identified that we need to purchase a new fire engine with tools and equipment in order to replace the out of service fire engine (Engine #4 - 1979). This initiative would then provide a reliable, fully equipped, emergency response capable, reserve fire engine. This effort would help to provide a reliable reserve fire engine for the next 5 years and help bring us closer to a realistic vehicle replacement schedule. As a result of a grant award, a replacement fire engine was ordered in late January, 2015. A capital purchase plan is in place to purchase the loose equipment ($75,000) for the new fire engine. This effort will then allow current Engine #2 to be placed in reserve status with its full complement of hose and equipment.
- The Committee recommends pursuing the resources necessary to facilitate the computer hardware/software/internet connection in order to connect tablets or Toughbooks to the hospital based patient care reporting system.

Long term view:

- Consider the addition of a ladder truck to the fleet to meet operational needs as well as potentially reduce the city's Insurance Services office (ISO) rating.
- Any substantial residential or commercial/industrial growth in the community would require the re-evaluation of the vehicle replacement schedule as well as the potential need for additional frontline and reserve equipment.
- We need to replace aging vehicles on a more scheduled basis.
- The current vehicle replacement schedule should be used as a general guideline and factors such as the use of the vehicle and the vehicle maintenance history should be taken into consideration. The replacement schedule should be continually maintained/updated and available.
- We need to replace front line vehicles on a scheduled basis in order to have an effective useful reserve use time frame. In order to accommodate this need, Fire Department should follow a replacement schedule of 25 years on fire engines. Engines would serve 15 years of front line service and serve 10 years in a reserve role. For ambulances, the replacement schedule of 13 years, would allow the ambulance to serve 10 years of front line service and 3 years in a reserve role. For staff vehicles, 10 years of service. For Brush/Grass vehicles - chassis: 10 years service, and for Rescue Squad - 25 years service.
- We recommend pursuing the resources in order to connect all Fire Department emergency vehicles electronically to the County-wide computer aided dispatch system (mobile data terminals/tablets/automatic vehicle locators).

The Strategic Planning process

In order to prepare the Fire Department for the future, an evaluation of the Fire Department, potential growth of the community, additional services required by the public, and the ability to provide services must be periodically performed. This process is known as strategic planning. The strategic planning process can involve many aspects of local government and the community. Regardless of the configuration of the process, it is imperative that the planning process involve a cross section of the Fire Department membership.

Generally, the strategic planning process should include:

1. define the scope of the planning team.
2. acquiring local information and analyzing the data to determine the risks and their relative importance now and in the future.
3. determining the goals and objectives of the desired fire protection service delivery and the quality of the service the community is willing to accept.
4. preparing the strategic plan.
5. implementing the plan.
6. constantly reevaluating the plan.

The purpose of this document is to give the reader a brief background of the essential elements examined in the development of this plan.

Fire Department - background information

The Sycamore Fire Department was organized as a volunteer force in 1859. In the early days of the Fire Department, most of the emergency responses were structure fires and field fires. In the 1950's, the Fire Department and a local funeral home service cooperatively responded to emergency medical calls. In 1976, the Fire Department assumed complete responsibility for emergency medical service responses. Firefighters received training as State of Illinois Emergency Medical Technicians (EMT's) and provided Basic Life Support (BLS) emergency medical services to the community. In 1990, the Sycamore Fire Department completed a training program to upgrade the level of emergency medical care providers to the EMT- Intermediate level. In 2001, the Sycamore Fire Department began a training program to train firefighters as paramedics. Since 2002, Sycamore Firefighter/Paramedics have provided Advanced Life Support (ALS) care as well as Basic Life Support emergency medical services to the community.

The community has almost doubled in population in the last 20 years. In 1950, the City of Sycamore had a population of 5, 912. In 1980, the population was 9,219. In 1990, the population was 9,708. In 2000, the population was 12,020. In 2010, the population of the city was 17, 261.

The Sycamore Fire Department provides a full range of emergency services through two fire stations with 29 career and 11 paid-on-call uniformed personnel, and one civilian personnel. The Fire Department provides Fire Suppression, Rescue, Emergency Medical Services, Hazardous Materials First Response, Fire Prevention, and Public Education services to approximately 20,000 people. This service area includes the City of Sycamore and the Sycamore Fire Protection District. The Sycamore Fire Department services an area of approximately 62.5 square miles. The Insurance Services Office (ISO) rating for the City of Sycamore is a Class 4 and the ISO rating for the Sycamore Fire Protection District is a Class 8B.

In 2013, during the Strategic Planning process, the Planning Committee revised and updated the Department's mission and value statements to accurately describe the organizational mission.

The Sycamore Fire Department Mission Statement:
The mission of the Sycamore Fire Department is to selflessly serve our community with the highest quality professional fire and emergency medical services.

Our Value Statements:
Preparedness
Our members strive to be best prepared through physical fitness, continued training, and equipment readiness in order to operate in the safest way possible.
Dedication
Our members take great pride and honor proving a loyal service to the community, while respecting the traditions of our profession.
Honesty/Integrity
Our members perform their duties honestly and ethically striving to maintain the trust given to us by the community.
Teamwork
Our members work together to achieve a common goal through mutual trust, respect, and loyalty.
Selflessness
Our members are bravely willing to sacrifice our needs to serve the needs of the community in the course of performing our duties.

Fire Department operations - all personnel
The Sycamore Fire Department is considered a combination fire department consisting of career (full time) and paid-on-call (part time) personnel. The career staffing of the Fire Department is designed to cover the ordinary requests for service while the paid-on-call staffing is designed to supplement the career staffing during peak periods of emergency activity.

The Sycamore Fire Department is divided into two divisions: administration and operations. The Administration Division consists of a Fire Chief, two Assistant Fire Chiefs, and one civilian secretary. Administrative personnel work a forty hour workweek. The Operations Division provides emergency services through a three platoon system (24 hours on and 48 hours off) for an average work week of 49.77 hours. Each shift is assigned 8 fire personnel, with two Lieutenants (Company Officers) responsible for the City's two fire stations. The minimum staffing standard is 6 personnel per shift, with a minimum of one officer and five firefighters. Two additional personnel (one Lieutenant and one firefighter) are assigned to a "swing shift". These two personnel are used to help maintain minimum staffing to cover for shift firefighters that are off duty due to personnel time off reasons (vacation, Kelly day, sick day, personnel assign to outside training, or a firefighter on extended injury leave).

Fire Department operations - operations division personnel

The Fire Department currently maintains three, 24 hour shifts of 8 personnel, a swing shift of two personnel, three administrative personnel serving on a forty hour week, and 10 paid-on-call personnel. The current minimum shift staffing is six personnel per day. When the daily staffing falls below the minimum (due to sickness, training, or a firefighter on extended injury leave) then off duty career firefighters are hired back on overtime to bring the daily staffing to 6. The current allotment of career personnel (24 regular shift personnel and 2 swing shift personnel) is not enough career personnel to cover all of the shift days that may be low staffed due to scheduled vacation days, personal days, sick days, and workers compensation time loss days in order to maintain the daily staffing to six person minimums. Overtime costs are incurred any time that the shift staffing falls below six. In FY14, the Fire Department had an overtime expenditure of $411,000. Just over $200,000 was attributed to emergency call back (both career and paid on call personnel) costs. The cost to maintain the daily minimum staffing was slightly under $200,000.

Fire Department operations - line and staff personnel history

- In 1970's, the Fire Department line personnel consisted of three shifts with a two person minimum (one officer, one engineer) augmented by paid on call personnel.
- In the 1970's, Fire Department staff personnel consisted of a full time (career) Fire Chief assigned to a forty-hour workweek. (M-F, 8a-5p.) (an Assistant Chief was assigned to one of the 3 - 24/48 shifts)
- From 1976 - 2000, the Fire Department line personnel consisted of three, 4 person shifts with a 4 person minimum. A swing shift was later added with 2 personnel.
- From 2005 - 2008, Fire Department line personnel consisted of three, 4 -person shifts with a five person minimum. The swing shift had 8 personnel.
- In 1996, a part time secretary was added.
- In 2001, the part time secretary was reclassified to full time. The Fire Department staff personnel consisted of a Fire Chief and one secretary assigned to a forty-hour workweek. (M-F, 8a-5p.)
- In 2006, a full time (career) Assistant Fire Chief was appointed. The Fire Department staff personnel consisted of a Fire Chief, Assistant Fire Chief, and one secretary assigned to a forty-hour workweek. (M-F, 8a-5p.)
- In 2008, with the opening of Fire Station #2, Fire Department line personnel consisted of three - 8 person shifts with a 6 person minimum. The swing shift had 2 personnel
- In 2010, a second full time (career) Assistant Fire Chief was appointed.
- From 2010 to present, The Fire Department staff personnel consisted of a Fire Chief, two Assistant Fire Chiefs, and one secretary assigned to a forty-hour workweek. (M-F, 8a-5p.). Fire Department line personnel consisted of three - 8 person shifts with a 6 person minimum. The swing shift is assigned 2 personnel.

Fire Department operations - fire station staffing

Since 2008, with the opening of Fire Station #2, the career staffing from a single fire station operation was divided into two facilities. Personnel previously dedicated to specific fire companies were now assigned to "jump companies" at both fire stations. This practice involves the cross manning of the ambulance or engine depending on the nature of the emergency response. Routinely, when the ambulance at Fire Station #1 is responding to an emergency medical response, there are no remaining firefighters at Fire Station #1 until the ambulance returns to the fire station. In the event a fire or emergency

medical response occurs during this time, the ambulance or engine from Fire Station #2 will be dispatched to the call and a recall of off duty personnel is made (shift recall). The Committee discussed concerns over the difficulty the department was having in providing the proper number of response personnel to emergency responses in a timely manner given multiple emergency service requests. The solution has been to augment with additional personnel. This has been accomplished by hiring additional staff and recalling off duty personnel to supplement on duty staff.

One option to increase staff is to hire additional full time personnel. It is estimated that the cost of one career firefighter is estimated at $75,000 per year (salary and benefits). Therefore, if we hired one additional personnel per shift (3 personnel) we may not see dollar for dollar savings in overtime due to one or more shifts being short one or more assigned shift personnel for long periods of time (long term injury, long term military leave). It is estimated that the cost of hiring one additional personnel per shift (3 personnel) is approximately $225,000 per year. This may result in a reduction of cover time for daily staffing by approximately 30 to 40% ($60,000 - $80,000 per year) of the current overtime budget for cover time ($200,000).

The recall of off duty personnel is accomplished through a two tiered system (shift or department recall). If a smaller incident warrants additional personnel, then a shift (up to ten person) recall may be employed. If a large incident or multiple incidents require considerable staff resources, then a department recall may be used. This could summon up from ten to twenty employees (career and paid on call).

The Committee also reviewed the current and past practice of recalling off duty firefighters to supplement on duty personnel for additional staffing during multiple emergencies or very large incidents. In addition, the Committee also reviewed response time data, risk management, liability factors, and personnel safety.

As a result of the review, the Committee recommends consideration of additional personnel (2 per shift is recommended) over the course of the next 5 to 7 years to help reduce overtime fill-in coverage costs to maintain minimum daily staffing needs as well as to begin to reinforce the on duty available staffing. This is especially true as the community continues to grow and calls for service increase. While the cost of one career firefighter is estimated at $75,000 per year (salary and benefits), it is believed that hiring one additional personnel per shift (3 personnel) will potentially reduce the cover time for daily staffing by about 30 to 40%. While this is not a dollar for dollar savings, the short term goal would be to reduce the reliance on the recalling off duty and paid-on-call personnel for the <u>initial response</u> to emergency calls.

The Committee also maintained a long term view of personnel staffing and suggested consideration of the following if emergency call volume continues to grow consistent with the City's comprehensive plan.

- Based on an ultimate population projection of 25,000 - 30,000 residents, our long term goal should be that the Fire Department should be able to handle day to day calls for service without <u>routinely</u> relying on off duty personnel for the initial response.
- As the local economy continues to recover and the community resumes the growth both on the residential and commercial side, one would assume that the emergency call volume would grow as well. As demand for emergency services

increases, the Committee feels additional personnel will be required to meet the demand. Ultimately, the Committee's vision would be to maintain a level of personnel to meet the increasing demand for emergency service, help reduce overtime fill-in coverage costs to maintain minimum daily staffing needs, and allow the Fire Department to be able to handle simultaneous calls for service and muster a larger number of personnel for the initial response to structure fire responses. This vision could take the shape of hiring personnel in groups of three (one per each shift) as needed based on demand. Long term, the ultimate goal would be to eventually facilitate a second duty crew at Fire Station #1 to align with the ultimate build out of the community as discussed in the City of Sycamore 2014 Comprehensive Plan.

- The Committee felt that when the Fire Department organization grows to three in service companies, that this would be the time to seriously consider adding additional supervision and emergency command and control for the on duty crews. It was felt that the increase in the size of the on duty staffing (due to increase in call volume) would out grow the current on call chief command system.

Fire Department operations - needs, goals, and response times

Operational capability is typically based on the history of emergency needs from the community and the community resources allotted to the response organization. One significant measure of determining the quality of the provision of emergency services is the amount of time it takes to get emergency personnel on scene of an emergency. Generally, the Sycamore Fire Department approach is to respond to emergency responses (from receipt of an emergency request to the arrival of emergency apparatus) as soon as possible with the goal of six minutes or less. This is for emergency responses under normal call volume periods. Response times may increase under periods of high emergency call volume. The Illinois Department of Public Health (IDPH) requires that emergency medical service providers be able to respond in their designated primary coverage area in less than six minutes. In order to make a significant difference in cardiac arrest responses, Advanced Life Support (ALS) measures must be initiated in a cardiac arrest victim within four to six minutes in order to prevent brain death.

A discussion regarding the number of operations personnel must be made within the confines of the ability to provide emergency services within a reasonable manner. In the past, no specific benchmark had been established to determine the quality of the emergency service delivery. Then, the most common methods to describe the response time window was to refer to the number of minutes in which brain death can occur due to lack of oxygen and the number of minutes that an unchecked fire can double in size. While those criteria still have validity within the discussion, a better criteria was developed to more adequately describe the quality of the ability to respond within the emergency services industry. The more modern criteria is the reliability of an organization to put emergency personnel on scene of an emergency within a designated number of minutes.

Two nationally accepted performance standards - National Fire Protection Association (NFPA) Standard 1710 - Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire and NFPA Standard 1221 - Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems address both the communications and response components of the Fire Department response. Ultimately, the nationally accepted standard is to provide emergency response personnel on scene of an emergency within 6 minutes, 90% of the time. Essentially, the two standards separate the emergency response into three distinct elements.

- **Alarm answering time** - The Fire Department shall establish a performance objective of having an alarm processing time of not more than 60 seconds for at least 90 percent of the alarms and not more than 90 seconds for at least 99 percent of the alarms.
- **Turn out time** - The Fire Department shall establish a performance objective of 80 seconds for turnout time for fire and special operations response and 60 seconds turnout time for EMS response.
- **Travel time** - The Fire Department's fire suppression resources shall be deployed to provide for the arrival of an engine company within a 240-second travel time to 90 percent of the incidents. The Fire Department's EMS resources shall be deployed to provide for the arrival of a first responder (with AED) within a 240-second travel time to 90 percent of the incidents. When provided, the Fire Department's EMS (ALS) resources shall be deployed to provide for the arrival of an ALS company within a 480-second travel time to 90 percent of the incidents.

The Committee believes that the Fire Department should focus our efforts to meet this nationally accepted standard. While we cannot change or control the time to travel from the fire station to the location of the emergency, internally we can take measures to minimize the turn out time, and we should require that the dispatch agency meet the NFPA requirements regarding alarm answering and alarm transmission to the Fire Department.

One significant factor negatively affecting emergency response times is the ability of the Fire Department to provide emergency service on the occasions of multiple requests for emergency service. Because of the lean minimum daily staffing (two jump companies), the Fire Department has to rely upon recalled off duty members or mutual aid to provide emergency service on those occasions when the Fire Department experiences multiple emergency responses. The emergency reserve capability or redundant capacity is limited. As we continue to see an increasing number of occasions of two and three multiple call events, we need to plan and develop a certain amount of redundant response capacity to meet this challange. Redundant response capacity could take on a number of forms including, and not limited to, the addition of on duty staffing to the creation of a power shift.

Fire Department operations - OSHA/IDOL impacts on fire ground staffing

In 1998, Federal OSHA in conjunction with the Illinois Department of Labor set two in/two out regulations which requires that during an interior fire fighting operation the Fire Department must have two firefighters outside prepared to rescue firefighters located in the interior of a structure in the event that they are injured or trapped in the structure. In this case, the Fire Department has had to adjust the initial emergency response unit's actions in order to accommodate this regulation. In addition, additional fire personnel must be recalled to duty in order to operate within the law.

This provision along with other National Fire Protection Association (NFPA) consensus safety standards have a direct impact Fire Department operations. Generally, these provisions require additional resources (personnel and emergency equipment) to be dispatched to the emergency scene which translate into additional funding for personnel, personnel training and specialized response equipment.

The concerns regarding the necessary overtime to maintain shift minimum staffing (fill in), the commitment to work toward the needed minimum number of fire personnel for an effective structure fire response (NFPA 1710 Standard), and the unit failure rate (the number of times when the designated emergency crew is already committed to a previous emergency call, and that fire station is unmanned) are some of the primary factors that need to be considered when discussing emergency response capability.

Fire Department operations - emergency activity history

Looking over the past twenty-five years, the City of Sycamore has typically experienced a significant number of requests for emergency medical care along with requests for structure fires and other non-fire emergencies. The Sycamore Fire Department also experiences a significant number of motor vehicle accidents with injuries. Routinely, the city experiences extreme hot and cold temperatures, and summer storms. Occasionally, the city will experience blizzard conditions, major flooding, and significant power outages (typically weather related).

While the high profile emergency incident events occur less frequently, the Sycamore Fire Department responds daily to emergency medical service requests, fire suppression emergencies, motor vehicle accidents, fire alarms, and many non-fire emergency requests. The requests for emergency services received by the Sycamore Fire Department are steadily increasing. Over the last nine fiscal years, requests for emergency services have increased at a rate of 1.45% per year, a total increase of 13% over nine years.

In FY14, 2,021 requests for emergency services were received. This was a slight increase from the previous fiscal year. In order to have emergency response data that is consistent and reliable, one needs to understand that when the Fire Department responds to a request for emergency service, the emergency incident then becomes an emergency response. Emergency responses are generally broken down into two categories: fire or non-fire, or emergency medical service. Only about 8.8% (179) of Fire Department emergency responses were shared between fire/non-fire and emergency medical services. These responses would entail all motor vehicle accidents, a fire incident resulting in injured persons, or an emergency medical incident requiring additional manpower assistance. All other emergency responses would be classified as either fire, non-fire, or emergency medical.

The following is a table of the Sycamore Fire Department Emergency Responses from 2005-2014

Fiscal Year	Emergency Responses
2005	1,791
2006	1,929
2007	1,954
2008	2,146
2009*	1,923
2010	1,695
2011	1,906
2012	1,965
2013	2,013
2014	2,021

*On January 1, 2009, the Fire Department changed its dispatch guidelines. This change was made to conform to the National Fire Incident Reporting System (NFIRS).

Over the last nine fiscal years, all emergency responses have increased at a rate of 1.45% per year. Throughout this period emergency medical responses have increased at a rate of just over 1.7% per year, while fire/non-fire responses have remained relatively flat.

If a person would look at the composition of the Sycamore community, the community may be seen as primarily a bedroom community. One could assume that most of the emergency activity would be located in the residential portion. A Fire Department analysis of emergency responses by property use for the period of January 1 to December 31, 2013 found that residential occupancies demand almost 41% of all service responses.

Type of incident	Both residential and non-residential	Residential occupancies	Non-residential occupancies
All emergency responses	1,984 incidents (100%)	809 incidents - 40.77%	1175 incidents - 59.23%
Emergency medical	1570 incidents (79.1%)	686 incidents - 43.7%	884 incidents - 56.3%
Fire/non-fire responses	414 incidents (20.8%)	123 incidents - 29.7%	291incidents - 70.3%

Residential occupancies were classified as one and two family homes, duplexes, apartments, and boarding houses. Non-residential occupancies include commercial or industrial structures, institutional, and roadways (car fires, motor vehicle accidents).

While this study is a one year's snap shot in time, it does indicate that almost 60 % of emergency activity originates in non-residential occupancies. Thus, the development of both residential and commercial/industrial occupancies will have an impact upon emergency service demand. For additional emergency response activity data, please refer to Appendix 1.

Fire Department operations support - Automatic aid

Automatic aid was first initiated between the Sycamore and DeKalb Fire Departments on February 12, 1996. In order to enhance the emergency services to the citizens of Sycamore and DeKalb, both city's fire service organization's have agreed to mutually respond to certain incidents in the area between Sycamore and DeKalb. The general geographical area involved is the area between Sycamore and DeKalb. Two basic types of automatic aid are administered. Fire automatic aid and EMS automatic aid for motor vehicle accidents.

- Fire automatic aid involves all institutional, commercial, retail, and industrial buildings. Sycamore Fire Department requesting fire automatic aid from the DeKalb Fire Department will receive a Truck Company response. DeKalb Fire Department requesting fire automatic aid from the Sycamore Fire Department will receive an Engine Company response.
- Motor vehicle accident automatic aid involves any motor vehicle accident at designated intersections. Sycamore Fire Department requesting fire automatic aid from the DeKalb Fire Department will receive a single ambulance response. DeKalb Fire Department requesting fire automatic aid from the Sycamore Fire Department will receive a single ambulance response.

If either Fire Department cannot provide automatic aid to the other due to manpower limitations from emergency call(s), a Fire Department Company Officer or Chief Officer shall contact the appropriate Public Safety Answering Point (PSAP) as soon as possible to inform them that the automatic aid is not responding. In FY14, the Sycamore Fire Department provided mutual aid/automatic aid on 78 occasions and received mutual aid/automatic aid on 42 occasions. Please see Appendix 1 for additional emergency response data.

Fire Department operations support – mutual aid

When an individual fire department uses up all of their resources for emergency response(s), additional assistance may be summoned from neighboring Fire Departments. This is commonly known as mutual aid. The Sycamore Fire Department belongs to the Mutual Aid Box Alarm System (MABAS) Division #6. Division #6 Departments include:

- Cortland Fire Protection District
- DeKalb Fire Department
- Genoa-Kingston Fire Protection District and Genoa-Kingston Rescue Squad
- Kirkland Fire Protection District
- Lee Fire Protection District
- Leland Fire Protection District
- Malta Fire Protection District
- Shabbona Fire Protection District
- Somonauk Fire Protection District
- Sycamore Fire Department
- Waterman Fire Protection District

Fire Department operations support - specialty response teams and functions

In order to accomplish the Fire Department's mission and meet the demand for public service, a number of specialty teams were formed to provide specialized services to the community as well as individual firefighters who volunteer to support the various specialty functions within the Fire Department.

- Fire Investigation – the Fire Investigation team currently has four members trained to the Fire Investigator level. (Team compliment is 6 members). Two newer members are slated for their fire investigation basic training.
- Hazardous Materials team response – the Hazardous Materials team has four members trained to the Hazardous Materials Technician B level. (Team compliment is 6 members). Two newer members are in the operations and technician level training process.
- Technical Rescue team response – the Technical Rescue Response team has five members trained to the Operations level in all four disciplines (Team compliment is 6 members). Those five newer members are in the technician level training process. One newer member is in the operations and technician level training process.
- Vehicle and building maintenance - a Department Mechanic and Mechanic Assistant facilitate emergency vehicle and fire station building repair and maintenance.
- Public Fire Safety Education group – the Public Fire Education group has six members designated to provide public fire education training.

Fire Department operations support - specialty response teams: initial specialized training

All of the specialty team training is provided off site at various regional training sites).

- Hazardous Materials response team members must complete 120 hours of training.
- Technical Rescue team members must complete over 350 hours of training.
- Fire Investigators must complete 120 hours of training.

Fire Department operations support - specialty response teams: continuing training

Specialty team members are encouraged to participate in quarterly (5 hours per quarter) team training in order to maintain their skills.

Fire Department operations support - facilities

The City of Sycamore currently maintains two fire station locations and two support facilities.

- Fire Station #1 (535 DeKalb Avenue) built in 1957, is located in the central part of the city and houses a structural fire engine cross-manned with a rural fire engine and paramedic ambulance. Station #1 also houses a grass/brush fire vehicle, a reserve ambulance, and a reserve fire engine.
- Fire Department vehicle maintenance facility - behind Fire Station #1 (west). All in-house vehicle repair and maintenance is performed in this facility.
- Fire Department three bay garage facility and auxiliary storage - behind Fire Station #1 (east).
- Fire Station #2 (2100 Frantum Road), built in 2008, is located on the city's north side and houses an engine company cross-manned with a paramedic ambulance. Station #2 also houses a grass/brush fire vehicle, a reserve ambulance, and a Rescue Squad.

Fire Station #1 is a 58+ year old facility that needs attention regardless of any positive or negative impacts of community growth or emergency call volume changes. When discussing potential improvements to this building, one would ask if it is feasible and prudent to make significant investments into a structure that is almost 60 years old and has significant limitations due to its design and construction. Until this question is resolved, Fire Department employees will still inhabit the building. Therefore, we should make some short term investments to this facility to improve the existing living conditions. Fire Station #1 has a number of quality of work environment issues these include, but are not limited to:

- Inefficient leaky windows
- Low apparatus bay ceiling and narrow overhead door widths
- Inefficient heating and air conditioning systems
- No monitored fire alarm system
- Poor drinking water quality
- Building fronts a busy city street where egress and ingress to the apparatus bay is difficult at peak traffic periods

The consensus of the Committee regarding facilities includes the following:

- Make a modest investment into existing Fire Station #1 to make it serve more effectively until a decision is made regarding its long term future. Fire Station #1 is well over 50 years old and has some immediate needs that need to be addressed in order for the facility to continue to effectively serve the community as well as be employee friendly. This short term investment should include making the windows more energy efficient, replace the existing heating and ventilation system, installation of a fire alarm system, and update the emergency notification system.
- Conduct a formal evaluation of Fire Station #1 for its long term effectiveness. This effort is intended to take a long term view of the existing facility and determine if it is worthwhile to substantially invest in the existing facility or consider other options. Research conducted by the sub-committee recommended a space need analysis ($2,500) and a facility analysis ($15,000 - $20,000) be conducted to determine the long term use of the existing space.
- Continue to maintain a schedule of annual/semi-annual maintenance to existing fire stations.

- Conduct a study of the response times from the existing fire stations to the Sycamore - DeKalb corridor.

The Committee also maintained a long term view of facilities and suggested consideration of the following:

- Conduct a study to determine the effectiveness of the current location of Fire Station #1 or to consider alternate or an additional fire station site.
- As the land on the west side of Sycamore develops, take advantage of possible land donation for future fire station or fire department training site.
- Monitor all growth throughout the emergency response area and take advantage of opportunities to acquire land for future needs.
- Expand the city e-mail addresses to all Fire Department employees in order to enhance internal communication methods.
- Upgrade the City's computer network to allow for better intranet use among all city departments including the Fire Department.

Fire Department operations support - emergency apparatus

The Sycamore Fire Department currently maintains the following emergency vehicles: 4 Advanced Life Support (ALS) ambulances, 3 in service fire engines (2 Advanced Life Support (ALS) rescue pumpers and 1 engine/tender), 1 out of emergency service structural fire engine, 2 brush units, 1 rescue squad, and 4 Command vehicles (1 reserve).

The Committee's discussions regarding emergency fire apparatus (response vehicles) centered around the size of the Fire Department fleet, the amount of reserve equipment, and emergency vehicle maintenance. One of the biggest concerns is that the current reserve fire engine is not considered emergency response capable due to it's age, physical condition, and lack of required tools and equipment. For the past ten years, most of the tools and equipment on the reserve fire engine has been taken off the reserve fire engine and reassigned to other front line vehicles when a tool or specific equipment is removed from service due to wear or damage from use. A significant operational deficiency has been the Fire Department's inability to take advantage of available technology. Specifically, the Fire Department has not been able to participate in field patient care reporting (tablets or Toughbooks) or pursue any adjuncts to the County-wide computer aided dispatch system (mobile data terminals/automatic vehicle locators).

Size of the fleet

The Committee discussed equipment needs as related to the current number of fire stations (2) and history of emergency call responses. Some of the discussion involved the number and type of vehicles, the life span of vehicles, the replacement schedule of vehicles, and the changes in functional use of vehicles. Overall, the Committee felt that the current allocation of the various vehicle types was appropriate but, the deferring of the replacement of front line vehicles has affected the quality and maintenance of those vehicles. However, the current reserve fire engine is not considered emergency response capable due to its age, physical condition, and lack of required tools and equipment. This is a direct result of the Fire Department's inability to replace emergency response vehicles on a scheduled basis.

The consensus of the Committee regarding the size of the fleet is:

- Consider the addition of a ladder truck to the fleet to meet operational needs as well as potentially reduce the city's Insurance Services Office (ISO) rating.
- Any substantial residential or commercial/industrial growth in the community would require the re-evaluation of the vehicle replacement schedule as well as the potential need for additional frontline and reserve equipment.

Useful life

The staff estimates the useful life of fire apparatus is based upon local experience with vehicle reliability and maintenance cost. Fire Department staff has estimated the useful life for Fire Department vehicles as follows:

- Custom designed pumpers - 15 years front line service, up to 10 years reserve service
- Custom designed ambulances - 10 years front line and 3 years reserve service
- Commercial staff vehicles - 10 years service
- Brush/Grass vehicles - chassis: 10 years service
- Rescue Squad vehicle - 25 years service

The consensus of the Committee regarding the useful life of emergency apparatus is:

- We need to replace aging vehicles on a more scheduled basis.
- The current vehicle replacement schedule should be used as a general guideline and factors such as the use of the vehicle as well as the maintenance history should be taken into consideration. The replacement schedule should be regularly maintained/updated and available.

Reserve Equipment

The Committee acknowledges that reliability, serviceability, and safety are all factors that must be taken into consideration for equipment that is placed into reserve status. Reserve equipment occasionally serves as front line equipment during the routine maintenance of front line equipment or when front line equipment has a failure and is placed out of service (i.e. mechanical breakdown, motor vehicle accident damage). With an increase in the number of emergency calls received by the Department and keeping vehicles in service for longer periods of time, all emergency apparatus is experiencing increased wear.

One major concern of the Committee is that the Department's current reserve fire engine (Engine #4) is well beyond it's service life **and** is not outfitted with the required tools and equipment. It had been the Department's plan that when the current Engine #3 which was scheduled to be replaced in FY 2010, would then assume reserve status. However, the replacement of this vehicle has been deferred due to capital budget limitations. In addition, it became the practice to scavenge vital tools and equipment from the current reserve engine for front line vehicles due to operating budget limitations. It should also be noted that the specification process, bid preparation, bid advertisement, bid award, and finally delivery for a new engine would take approximately one year.

The consensus of the Committee regarding reserve equipment is:

- We need to provide a reliable, fully equipped, emergency response capable reserve fire engine
- We need to replace front line vehicles on a scheduled basis in order to have an effective useful reserve use time frame. In order to accommodate this need, Fire Department should follow a replacement schedule of 25 years on fire engines. Engines would serve 15 years of front line service and serve 10 years in a reserve role
- For ambulances, the replacement schedule of 13 years, would allow the ambulance to serve 10 years of front line serve and 3 years in a reserve role.

Apparatus replacement

As the costs for purchasing fire apparatus increase, the replacement of emergency fire apparatus is being done with function, standardization, and life span in mind. All staff vehicles are now standardized in their purchase and layout (Ford Expeditions). The current replacement schedule has staff vehicles slated to be replaced every ten years. All ambulances are now standardized by manufacturer and layout (Ford-MEDTEC). Ambulances are scheduled to be replaced every thirteen years, which results in an ambulance replaced every two to three years. Beginning in 1996, the front line replacement fire engine was redesigned to consolidate a number of functions (structural and rescue) which resulted in the design of the rescue pumper.

The Committee spent considerable time discussing vehicle replacement. The Fire Department has developed and revised a vehicle replacement schedule since early 2000. However, with the down turn of the economy in 2009, the replacement schedule has been lengthened to due capital budget limitations. Many variables affect vehicle replacement: custom versus commercial chassis purchase, frequency of use, dual-purpose vehicle designs, the size of the response district, and the physical size of the apparatus bay of Fire Station #1 (very low ceiling). The Committee reviewed the vehicle and equipment replacement schedule as it exists to date.

The Department sets its own guidelines for replacement based on many variables which include age, reliability, safety, cost to maintain, cost to operate, National Fire Protection Association (NFPA) standards, and Insurance Services Office (ISO) credit for replacement. The group noted that vehicle age, reliability, expense to maintain, and safety are the primary measures the Department uses when considering replacing vehicles. It was also noted that when custom fire equipment is purchased, although it is more costly than commercial fire equipment, it generally has a longer life span.

The consensus of the Committee regarding emergency apparatus/equipment:

- Overall, the Committee felt that the current allocation of the various vehicle types was appropriate. However, the deferring of the replacement of front line vehicles has affected the vehicles reliability and the amount of maintenance required of those vehicles.
- We need to purchase a new fire engine with tools and equipment in order to replace the out of service reserve fire engine (Engine #4 - 1979). This would then provide a reliable, fully equipped, emergency response capable, reserve fire engine. This initiative would help to provide a reliable reserve fire engine for the next 5 years and help bring us back closer to a realistic vehicle replacement schedule.
- We need to replace aging vehicles on a more scheduled basis.
- The current vehicle replacement schedule should be used as a general guideline and factors such as the use of the vehicle and maintenance history should be taken into consideration. The replacement schedule should be regularly maintained/updated and available.
- We recommend pursuing the resources necessary to facilitate the computer hardware/software/internet connection in order to connect tablets or Toughbooks to the hospital based patient care reporting system.

Long term view regarding emergency apparatus/equipment:

- Consider the addition of a ladder truck to the fleet to meet operational needs as well as potentially reduce the city's Insurance services Office (ISO) rating
- Any substantial residential or commercial/industrial growth in the community would require the re-evaluation of the vehicle replacement schedule as well as the potential need for additional frontline and reserve equipment
- We need to replace front line vehicles on a scheduled basis in order to have an effective useful reserve use time frame. In order to accommodate this need, Fire Department should follow a replacement schedule of 25 years on fire engines. Engines would serve 15 years of front line service and serve 10 years in a reserve role. For ambulances, the replacement schedule of 13 years, would allow the ambulance to serve 10 years of front line service and 3 years in a reserve role. For

staff vehicles, 10 years of service. For Brush/Grass vehicles - chassis: 10 years service, and for Rescue Squad, 25 years service.

Fire Department operations support - personnel training

The Fire Department has consistently experienced an increasing number of demands regarding new regulations and liability issues. In order to meet those demands, the Sycamore Fire Department needs to remain current in the training of all Fire Department personnel. Due to the economic downturn beginning about 2008, basic training needs for line fire personnel have not been achieved. In 2012, Fire Department management and representatives from the Firefighters Collective Bargaining group met to find a way to provide Fire Department personnel the needed basic training in a tight fiscal environment. Through a number of meetings and discussions, a temporary cooperative agreement was forged to facilitate a three year plan to bring existing career personnel up to the basic training level. One part of the initiative was to cooperatively provide some of the needed line firefighter and officer minimum training by offering courses at the Sycamore Fire Department using Fire Department personnel as instructors. Over the past two years, three 40 hour courses were offered (Hazardous Materials First Responder - Operations level, Advanced Firefighter (Firefighter III), and Instructor I training) to all Fire Department members.

The temporary training plan was designed to phase in the needed basic training over a three year period. In year one, the Hazardous Materials First Responder - Operations and Advanced Technician Firefighter (Firefighter III) courses were offered and newer firefighters needing the Fire Apparatus Engineer course were sent. In year two, the Instructor I course was offered to all members and those members that needed Vehicle and Machinery Operations courses were sent. In year three, the final group of members that need the Vehicle and Machinery Operations course are slated to be sent and Fire Officers needing various Fire Officer I courses are slated to be completed in the final year of the project.

Fire Department operations support - personnel training: initial basic training

All firefighters are now trained to the 'basic' level of Firefighter II, Fire Apparatus Engineer, Hazardous Materials 1st Responder - Operations, Technical Rescue Awareness, and Emergency Medical Technician-Paramedic. We are currently in the final phase of training all firefighters to the Vehicle and Machinery - Operation level. With the evolution of the Firefighter II certification to the Basic Operations Firefighter (BOF) certification, newer employees must complete more components within the initial basic training requirements. In addition, the probationary employee receives an evaluation every three months during his/her twelve month probationary period by shift officers. These four evaluations test basic knowledge, skills, and evaluate employee behavior**.**

We are currently in the final phase of achieving the goal of having all fire officers trained to the 'basic' level of Fire Officer I (five - 40 hour courses).

Fire Department operations support - personnel training: continuing education training

Due to the varied types of emergency requests that the Fire Department may be tasked with, the Fire Department must keep emergency response personnel as prepared as possible to meet the increasing number of demands and minimize any liability. The Fire Department offers continuing training classes three to four days each week on emergency medical, fire suppression, rescue, and hazardous materials activities. Some of the continuing education is required by an outside agency, such as the Illinois Department of Public Health (IDPH). IDPH requires that all of our Emergency Medical Technician

Basic trained personnel complete fifteen hours and Paramedic trained personnel complete twenty-five hours of continuing medical education each year.

Specialized equipment needs

The federal and state government often place unfunded mandates on the Fire Department which impact the Fire Department/City budget and Fire Department operations. In 1997 and 1998, Federal OSHA introduced new requirements for confined space operations and trench rescue operations. These regulations require local responders to meet certain training and response equipment thresholds in order to be able to respond to these types of incidents and be able to comply with the law. To illustrate the point, suppose that the Fire Department is called to respond to a trench or confined space rescue. In our regional area, all of the area Fire Departments are very limited in their ability to meet the requirements to initiate a rescue operation on their own. Therefore, because most Fire Departments including Sycamore, cannot safely respond alone to these specialized responses, they must rely on mutual aid resources. In DeKalb County, for hazardous materials and technical rescue responses, the Division #6 Hazardous Material Team and the Technical Rescue Team are used. The Sycamore Fire Department participates in both specialty response teams with some personnel and equipment.

To date, the Sycamore Fire Department is approximately half way through of the training local members in the participation with the MABAS Division Technical Rescue Team and are just starting the training of two new replacement members of the Hazardous Materials Team.

Fire Department operations support - personnel training recommendations

The initial basic training and the maintenance of basic training should be considered a high priority for career (full time) and paid-on-call (part time) personnel.

- The Committee recommends that the Fire Department complete and maintain the current "basic training" goal previously set for firefighters and fire officers. The basic training for career firefighters includes Firefighter II (Basic Operations Firefighter), Paramedic licensure, Hazardous Materials Operations, Fire Apparatus Engineer, Vehicle and Machinery Operations, Fire Service Vehicle Operator, and Technical Rescue Awareness. The basic training for career fire officers includes all of the Firefighter basic training and Fire Officer I certification (five - 40 hour courses).
- The Committee recommends that the Fire Department continue to support Specialty Teams (Hazardous Materials Team, Technical Rescue Team, Fire Investigation Team) and other designated Department programs (Public Education, Vehicle maintenance). This support includes authorizing personnel to attend required continuing education training as well as facilitate new personnel to attend the required coursework.

The Committee also maintained a long term view of personnel training and suggested consideration of the following:

- Our long term goal should be that the Fire Department career personnel should receive the necessary training to allow them to do their jobs effectively. The Committee recommends that the Fire Department broaden the "basic training" goal for firefighters and fire officers. For career firefighters the following courses are recommended to be included in the established basic training coursework:

Firefighter III (Advanced Technician Firefighter), Vehicle and Machinery Technician, Water Operations, and Farm Rescue. These courses for incumbent firefighters could be phased in over a one to two year time period. For a new career firefighter, the completion of all of the recommended course work could take three years assuming two courses per year. For career fire officers the following courses are recommended to be included in the established fire officer basic training coursework: Fire ground Company Officer and Fire Officer II certification (five - 40 hour courses).

Fire Department operations support - building/facility maintenance

The Fire Department maintains four facilities including two fire stations; Fire Station #1 (535 DeKalb Avenue) and Fire Station #2 (2100 Frantum Road). As previously stated in this document, Fire Station #1 is a 58+ year old facility that needs some significant capital improvements and has gone for a number of years without any improvements in the facility. This fire station continues to be a maintenance intensive structure. It has been identified earlier in this document that this facility needs some significant attention.

The Fire Department maintains all Fire Department facilities through in-house maintenance and repair, and outside contractual repair as needed. Fire Station #1 has a part-time city custodian to help with the maintenance of the Administrative area. The living quarters and apparatus floor area of Fire Station #1 are maintained by on duty personnel in addition to their regular assignments. All of Fire Station #2 is maintained by on duty personnel in addition to their regular assignments.

Building maintenance is broken down into four categories: daily, contractual, fall cleaning (November-December), and station maintenance projects (May-August).

- **Daily maintenance** is defined as normal housework. This includes vacuuming carpets, mopping floors, cleaning all offices, common areas, dormitory, kitchen, and bathrooms.
- **Contractual maintenance** are repairs that cannot be completed by on duty personnel. This includes repairs to plumbing, electrical, overhead garage doors, or heating, ventilation, or air conditioning (HVAC) systems.
- **Fall cleaning** is the annual thorough cleaning of all Fire Department facilities.
- **Station Maintenance Projects** is the annual repair and/or cleaning of carpets, storage sheds, overhead doors, and storage areas.

The physical work environment is an important part of an employee's work atmosphere. A team effort has been undertaken to improve the physical fire station environment. Fire Department employees have volunteered for facility painting and other improvements to make the fire station environment more pleasing to the employee and the public.

In the past four years, the following improvements have been performed through city capital funds, bond issue, or Department employees. The following is a partial listing of improvements for Fire Station #1:

- Light remodel (paint, carpet, ceiling tile) of former 1st floor Police Department Detective Offices to Fire Department Secretary and Fire Chief office (2011)
- The swap of Police Department and Fire Department garage space (2011)
- Light remodel of former basement break room/locker room of Police Department to physical fitness work out area (2012)
- Performed significant repairs to building boiler (2013)
- Painting of day room and computer suite (2013)
- Painting of walls in apparatus floor (2013)
- Painting of exterior wall panels and installation of new fire station identifier (2013)
- Repaving of east and rear parking lots (2013)
- The development of the lobby area including installation of replica of Fire Department patch, pictures of Fire Department members, and historical items (2013)

- Installed keyless entry and panic hardware on main entry doors (2013)
- Front entry door replacement (2014)
- Installation of carpet in classroom and break out room (2015)
- Installation of vinyl tile in first and second floor hallways and stairwells (2015)

The following is a partial listing of improvements for Fire Station #2:

- Assistance with the installation of the flag pole and memorial plaza (2012)
- Installation of additional personnel lockers (2014)

Fire Department operations support - emergency vehicles: vehicle maintenance

Almost all of the emergency fire apparatus vehicle maintenance is performed in house by Fire Department firefighters who also have secondary assignments as Fire Department mechanics. They perform almost all repairs and preventive maintenance service to all emergency vehicles in house. These activities are performed by the mechanics both on duty and off duty (overtime). We have experienced very little down time of our emergency response vehicles due to their quick and efficient response to vehicle breakdowns. One of the keys to their effectiveness is to replace emergency response vehicles at their designated life span.

Committee members reviewed the various methods employed on how we are currently providing vehicle and equipment maintenance:

- Dedicated fire personnel (Department Mechanic and Mechanic Assistant) provide in-house vehicle maintenance both off and on duty
- Out sourcing repairs to qualified repair facilities

One aspect of having qualified fire personnel perform maintenance is that the firefighter/mechanics have great self interest and are highly motivated to maintain the vehicle to the highest quality for their own and co-workers safety and well being. In addition, internal personnel can facilitate quicker turn around in repairing the vehicle and thus placing the vehicle back into emergency service. However, the Fire Department Maintenance facilities are limited. Some larger more intensive repairs will have to be sent to an outside repair facility.

It has been stated previously that if vehicles are not replaced at a recommended time, the cost to maintain would increase as the vehicle ages, and the out of service time for maintenance and repair increases as well. The end result will be increased maintenance costs in both man hours and replacement parts.

The consensus of the Committee regarding vehicle maintenance is:

- If apparatus are not replaced according to the vehicle replacement schedule, existing emergency vehicles will probably experience greater maintenance needs and vehicle reliability will be reduced. Therefore, additional budget dollars will need to be allocated to maintain the existing fleet.
- Continue to deliver vehicle and equipment maintenance/repair in the current delivery system until the size of the fleet or complexity of the vehicles change significantly.

Factors affecting service delivery

Many factors affect the ability of the Fire Department to deliver services in a timely and efficient manner. These include the following:

- The location of existing fire stations and equipment in relation to differing types of land development
- The change in population and the change in demographics of that population
- The implementation of the Affordable Care Act (ACA) and its potential impacts
- The availability of adequate water flow and pressure for firefighting purpose
- The anticipated geographic areas and types of land development
- The transportation system allowing for efficient movement of fire equipment

Factors affecting service delivery - location of fire stations and equipment in relation to differing types of land development

The existing two fire stations are in good locations (but not ideal) for the present needs of the community. However, in consideration of changing land uses within the community and the anticipated location and pattern of new development, future sites need to be planned in order to better service both the existing community and the planned future development.

As stated in the earlier Committee recommendations, the City of Sycamore should plan to look at the long term feasibility of Fire Station #1 within the next five years.

Additional considerations are the growing area between the City of Sycamore and City of DeKalb and the ability of both communities to effectively provide services to this corridor area. This designated area sits well out of our ability to provide emergency service within the six minute or less response time window. The data of emergency calls by type of use (residential or non-residential) coupled with the potential growth of industrial/commercial development in this corridor, strongly suggest that there will be additional emergency service demand in this sector.

The Committee first focused on service area shortfalls that currently exist. The Committee first looked at the service areas provided by our two current fire stations. We used the known Insurance Service Office (ISO) recommendation of 1.5 miles for every engine company and 2.5 miles for every truck company. A city map was used and 1.5-mile-radius circles were drawn around each station. Once we analyzed how much of the city fell within these circles, we were able to quickly identify areas that lacked timely coverage. There were two small areas that fell outside the circles. One was the Stone Prairie subdivision, north of E. State Street and Airport Road. The other was the Heron Creek subdivision, north of Lindgren Road and east of Plank Road.

In addition, the Committee discovered that there was a large area in the southwest portion of the city that was outside of Station 1's coverage area. Those areas were: Electric Park, Edgebrook, all of Bethany Road and the Mercantile/Mediterranean/Midlands commercial corridor, all of the Gateway/Hauser Ross/Dosen commercial corridor, and everything along DeKalb Avenue from Woodgate Drive to Oakland Drive.

The Committee also took a more global view of the coverage areas. They looked at fire station coverage areas of DeKalb and Cortland in addition to the City of Sycamore. The same 1.5-mile radius was drawn around each of those communities' fire stations. The Committee discovered that not only was there no fire station that covered this southwest

portion of Sycamore but DeKalb also had a large portion of the northeast area of their city that was unprotected. These two areas of each city combined formed another 1.5-mile radius, yet there was no station within that radius. Therefore, no timely coverage in the case of an emergency exists.

A study was done on the number of emergency responses that the Sycamore Fire Department responded to in the 2012 calendar year in this southwest portion of the city outside the 1.5-mile service area of Station #1. An analysis of those calls found **410** emergency calls fell in this area. A similar study was done by the DeKalb Fire Department of the northeast area that is serviced by their Station #1. They found **421** emergency calls fell in this portion of their city outside of the 1.5 mile coverage area of their Station #1. The Committee's finding of over **800** calls that fell outside of ISO's recommended 1.5-mile radius for engine companies was compelling.

In order to meet this growing challenge, one should consider in the long view that a future fire station location may be needed in the area of Bethany Road, Mercantile, and Peace Roads. A facility in this general area would be to service future industrial and commercial development within the Peace Road, Bethany, and Sycamore Road corridor. For any significant development within the corridor, the City should consider a land dedication for a potential new fire station.

Factors affecting service delivery - change in population

Between 1970 and 2000, Sycamore's population grew an average of 1.8 percent per year. In 2000, the city's population was 12,020. In 2005, the population was 14, 866 and in 2010 the population was 17,519. Between 2000 and 2010, the City's population grew at just over a 4% pace.

Employment opportunities and residential housing have a direct relationship to city's population. As people desire to work and live in Sycamore, the population count of the community is affected. To help determine the potential impacts on population growth, one should look at a number of factors. Factors can include but are not limited to: the amount and area of land currently (and potentially available) dedicated to various residential and commercial/industrial uses; the history of building permits issued for the construction of residential and commercial/industrial structures; and the estimate of occupant per dwelling unit.

Potentially, an increasing population creates additional requests for services. One exercise used to estimate increase in population is to look at the number of residential units built multiplied by the number of potential occupants. Below is an example of a fourteen year look at units built along with the actual population bench marks and estimated population using 2.5 persons per dwelling unit. One could conclude that there is a direct correlation between the number of new dwelling units built and population increases. For additional information, please see Appendix 4 for the City of Sycamore residential building permit data.

City of Sycamore actual/estimated population

Fiscal Year	Units Built	x 2.5 persons per unit	Actual population	Estimated population *
2000	**128**	**320**	**12,020**	
2001	144	360		12,380
2002	197	492.5		12,872
2003	258	645		13,517
2004	331	827.5		**14,345**
2005	**712**	**1780**	**14,866**	16,125
2006	368	920		17,045
2007	227	567.5		17,612
2008	108	270		17,882
2009	76	190		**18,072**
2010	**23**	**57.5**	**17,519**	17,318
2011	27	67.5		17,386
2012	30	75		17,461
2013	69	172.5		17,633
2014	72	180		17,813

*assumes an average of 2.5 persons per dwelling unit (2014 Comprehensive Plan) using Fiscal Year 2000 as the starting point for the estimated population calculation.

Factors affecting service delivery - current land development

This report focuses on a select portion of the factors which can impact demand for emergency services. Three of factors discussed in this report are residential and commercial development, building permits issued, and existing land use. For additional planning information, please consult the City of Sycamore 2014 Comprehensive Plan.

The 2014 Comprehensive Plan identifies that much of the residential development is occurring on the northwest, west, and southwest sides of the community. In addition, the Plan identifies that the northeast, east, and southeast sides of the community are primarily aimed at large-scale commercial and industrial development. For additional information, please see Appendix 9 for the City of Sycamore Comprehensive Plan, Future land use map.

It is anticipated that most of the new residential growth (based on past housing starts) will occur on the east side of Sycamore. It is believed that the majority (75-80%) of future residential growth is going to occur from the north east side (Camden Crossing, Heron Creek - Phase 6, Northgrove Crossings) to the east side (Sycamore Creek - Unit 1 and 2, Townsend Woods) to the south east side (Parkside Estates, Reston Ponds) of Sycamore. In addition, there is approximately one square mile of residential land platted (not yet developed) east of Northgrove Crossings and Sycamore Creek subdivisions).

Residential housing to be built inventory

It is difficult to project what the pace of housing starts will be given the current economy. Listed below is an inventory of platted but un-built housing units as of March 1, 2014.

Sycamore's residential housing inventory by type

Subdivision Name	SF Det. (Lots)	Att. Housing (Units)*	Total
Camden Crossing	23	38	61
Grandview III Townhouses	0	53	53
Heron Creek – Phases 1-6	17	0	17
Heron Creek Country Estates	28	0	28
Heron Creek Estates	10	0	10
Hickory Terrace	27	12	39
North Grove Crossing	107	32	139
Parkside Estates	171	0	171
Prairie Ridge Townhouses	0	12	12
Primm Prairie	107	0	107
Reston Ponds	155	0	155
Somerset Farms/Gracious Living Homes (Senior Townhouses)	0	32	32
Stone Prairie (Formerly known as The Willows) *21 Units to be built in 2014	0	0	0
Stonegate Townhouses	0	20	20
Sycamore Creek, I	280	0	280
Sycamore Creek, II	200	0	200
Sycamore Creek, III (Wolfenberger Farm)	457	0	457
Sycamore Creek / The Commons of Sycamore (Mapes Farm)	200	0	200
Sycamore Creek / Hamlet of Sycamore (Lindgren Farm)	81	0	81
Sycamore Creek / The Traditions of Sycamore (Herst Farm)	170	55	225
Sycamore Crossing (Duplexes)	0	74	74
Townsend Woods	18	0	18
Villagio Estates	0	278	278
Whitwell Farms	381	0	381
Total	**2,432**	**606**	**3,038**

*Includes townhouses (source: Sycamore Building and Engineering Department)

Commercial/Industrial

Current commercial and industrial projects could result in new jobs as well as new retail/commercial development. The City has a number of locations available for new retail/commercial development. Areas along DeKalb Avenue, Mercantile Drive, Peace Road, Bethany Road are currently or potentially available for commercial/industrial development. Please refer to Appendix 5 for information on Industrial/Commercial building permits and their associate value.

Existing land use
As of March 1, 2014, the area within the existing corporate limits was approximately 6,242 acres, or 9.75 square miles. Of this total incorporated area, 6,239 acres are developed and 2.84 acres remain vacant or are used for agricultural purposes.

Existing Land Use by Zoning Designation, March 1, 2014

Land use	Area in Acres	Percent
R-1, One Family Residential	2,406.08	38.55%
R-2, Two Family Residential	309.3	4.95%
R-3, Multiple Family Residential	412.07	6.60%
Total Residential	3,127.18	50.10%
C-1, Neighborhood Business	21.32	0.34%
C-2, Central Business	110.35	1.77%
C-3, Highway Business	661.72	10.6%
C-4, Mixed Use	99.99	1.6%
Total Commercial	893.38	14.31%
M-1, Light Manufacturing	199.26	3.19%
M-2, Heavy Manufacturing	312.96	5.01%
ORI, Office, Research, and Light Manufacturing	27.26	0.44%
Total Industrial	539.48	8.64%
Agricultural/Vacant	2.84	0.05%
Schools/Institutional	168.06	2.69%
Parks and Open Space	596.847	9.56%
Misc. (ROW, Floodplain)	25.059	0.40%
Total Other	792.806	12.7%
Total:	6,242.02	100%

Factors affecting service delivery - change in demographics
Nationwide, two trends are creating additional burdens upon Fire Department services. One of these trends includes a significant segment of the population known as "Baby Boomers". As this large group (those born in 1946to 1964) of the population ages, service calls for basic and advanced paramedic care will increase.

The other demographic trend is a decrease in the number of persons per household. Partly due to the increasing number of one-parent households, this demographic trend has been called one of the major contributors to increasing levels of new urban development. While new development in Sycamore has not nearly reached the magnitude of development being experienced elsewhere, the additional land development does contribute to an increase in service load and response times, as Fire Department services are stretched over a larger geographic area.

Factors affecting service delivery- implementation of the Affordable Care Act (ACA) and its potential impacts
As a committee, we have been watching very closely the potential impacts of the Affordable Care Act (ACA) on the provision of health care services. We are beginning to see a trend across the country where local hospitals are turning to pre-hospital ambulance service providers to provide after hospital care services in an effort to control

hospital health care costs. Locally, this could take the form of having designated Fire Department paramedic personnel committed on designated days of the week available to providing follow up checks on patients recently discharged from an area hospital(s). These follow up checks could entail, but may not limited to well being checks including obtaining basic vital signs, providing wound care, the administration of certain medications, and the performance of certain medical procedures. At this point, it appears that local hospitals will be funding this effort in order to keep from being penalized two percent of their total Medicare and Medicaid reimbursements, if a patient is readmitted to the hospital within 30 days. While we do not have any specific proposals in front of us at this time, we are very concerned regarding the potential impacts this may have on municipalities providing pre-hospital ambulance transport service.

Factors affecting service delivery - transportation systems

One significant factor affecting the response times for emergency service delivery is the transportation system. No fire department can do its job unless it can get to the location of the emergency in a quick and direct manner. The city currently has five main arterial streets (north - Peace Road north/N. Main; south - Somonauk Road/DeKalb Avenue/Peace Road south; east/west - W. Peace Road/State Street/Bethany Road). Three of the five arterials converge to the intersection of State and Main Street. The density of traffic can hamper emergency response times to some occupancies, particularly during peak periods of travel.

The City must carefully plan for new development to be adequately interconnected with major streets. The land uses around these major streets must also be carefully planned, to prevent the conflicts between entering and exiting homeowner traffic and the thru traffic. Potentially, traffic congestion can cause delays in response times outlined above. For additional information, please see Appendix 8 for the City of Sycamore Comprehensive Plan, Transportation Plan map.

ISO Classification

The hazard insurance premiums that residential and commercial customers pay are set in part on a rating system set by the Insurance Services Office (ISO). In its evaluation, ISO considers the water system and the fire protection provided for the community. The rating system is based on a scale from one to ten, with one being the best and ten classified as the worst. All occupancies in the corporate limits of the City of Sycamore are classified as a Class 4, and all occupancies in the Sycamore Fire Protection District (Sycamore County) are a Class 8B. Based on the ISO Grading schedule, various improvements may be made to improve the ISO rating.

Possible improvements can be made in the following areas:

- improvements to fire alarm and communications systems (including telephone systems, telephone lines, and dispatching systems)
- improvements to the Fire Department (including equipment, staffing, training, and geographic distribution of fire companies)
- improvements to the water supply system (including condition and maintenance of hydrants, alternative water supply operations) and a careful evaluation of available water compared with the amount needed to suppress fires up to 3,500 GPM)

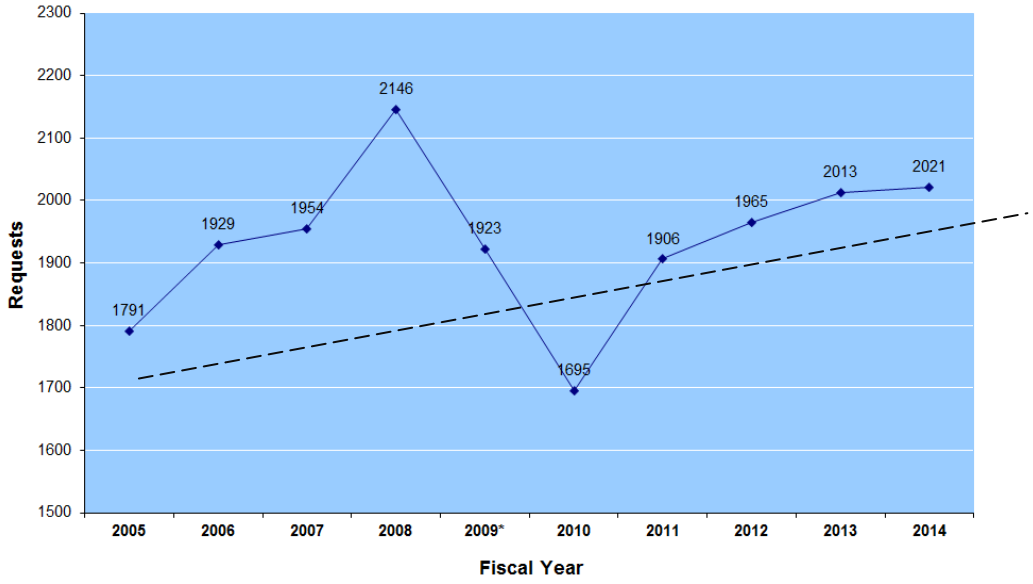
An improvement in an ISO Class (lowering of the ISO number) could result in some annual premium savings to both commercial/industrial and homeowners insurance premiums. In Sycamore, some of the potential improvements identified to lower the ISO Class from a 4 to a 3 could include the addition of on duty personnel, a more aggressive maintenance of city fire hydrants, the enhancement of fire personnel training (addition of training tower), and the purchase of an aerial apparatus. Please see Appendix 7 for the 2008 ISO Public Protection Summary Report for the City of Sycamore.

A brief historical record of the City of Sycamore ISO rating:

- In 1927, the City was rated as a Class 6
- In 1947, the City was rated as a Class 6
- In 1954, the City was rated as a Class 7
- In 1958, the City was rated as a Class 6
- In 1960, the City was rated as a Class 6
- In 1970, the City was rated as a Class 6 and the Fire Protection District was rated as a Class 9
- In 1981, the City was rated as a Class 6
- In 1994, the City was rated as a Class 5
- In 2008, the City was rated as a Class 4
- In 2009, the Fire Protection District was rated a 8B
- The current (2014) ISO rating for the City of Sycamore and Sycamore Fire Protection District is Class 4/8B

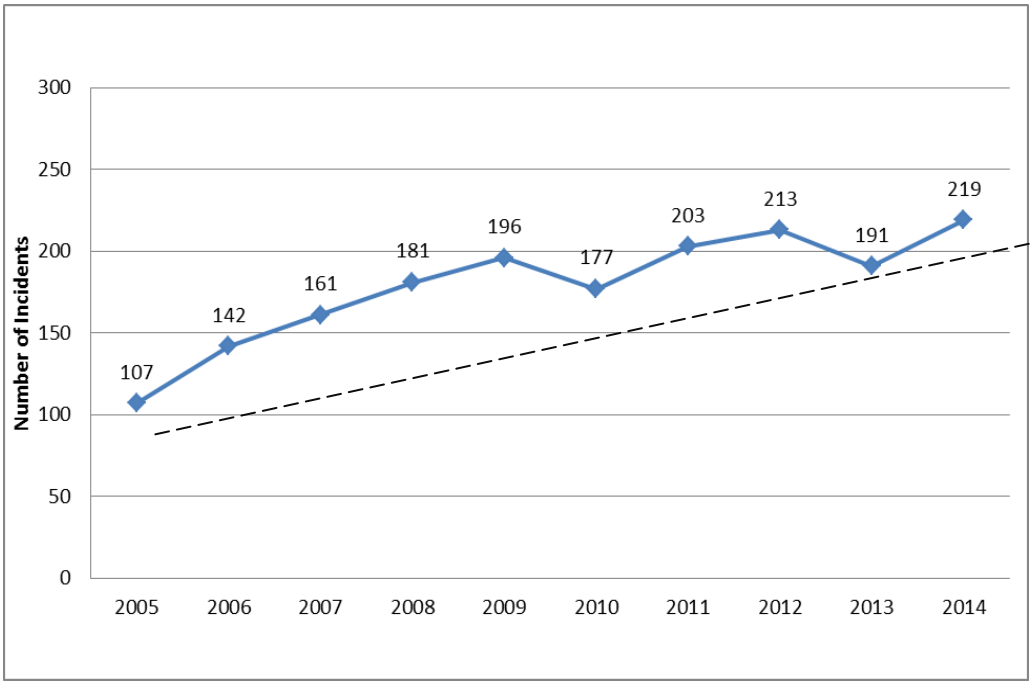
Appendix 1 - Additional statistical data

Requests for Emergency Service FY05 – FY14



In FY13, we received 2,013 requests for emergency service. This was a 2.41% (+48 incidents) from the previous fiscal year.

Multiple call incidents FY05 - FY14



In FY14, we had 219 occasions where we experienced simultaneous calls for emergency service (both fire stations out on one or separate emergency responses)

2009 * On January 1, 2009, the Fire Department changed its Dispatch Guidelines. This change was made to conform to the National Fire Incident Reporting System (NFIRS). Prior to 2009, we would give separate incident numbers for a fire and EMS unit dispatched to an emergency. In FY09, this change reduced our incident numbering by 153. This means that we responded to 70 fewer emergency calls in FY 2009 than in FY 2008.

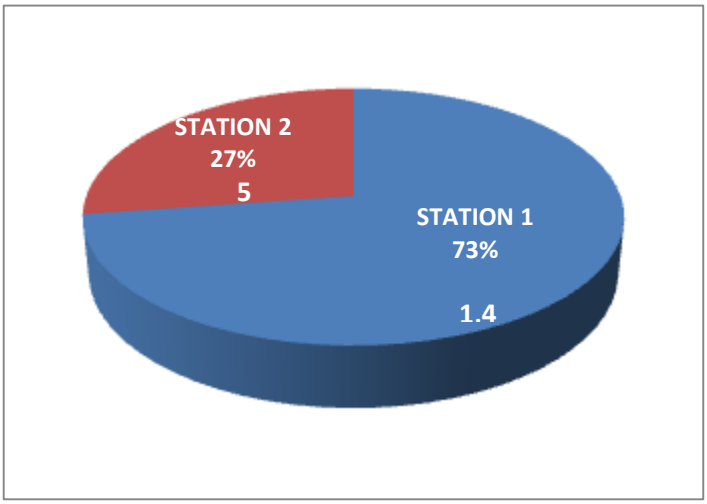
Emergency calls by Fire Station location

Seventy-three percent of our initial responses were from Station 1, with a call volume of 1,470. This station response area is the most populated, and this station is dispatched for Automatic Aid and Mutual Aid fire calls.

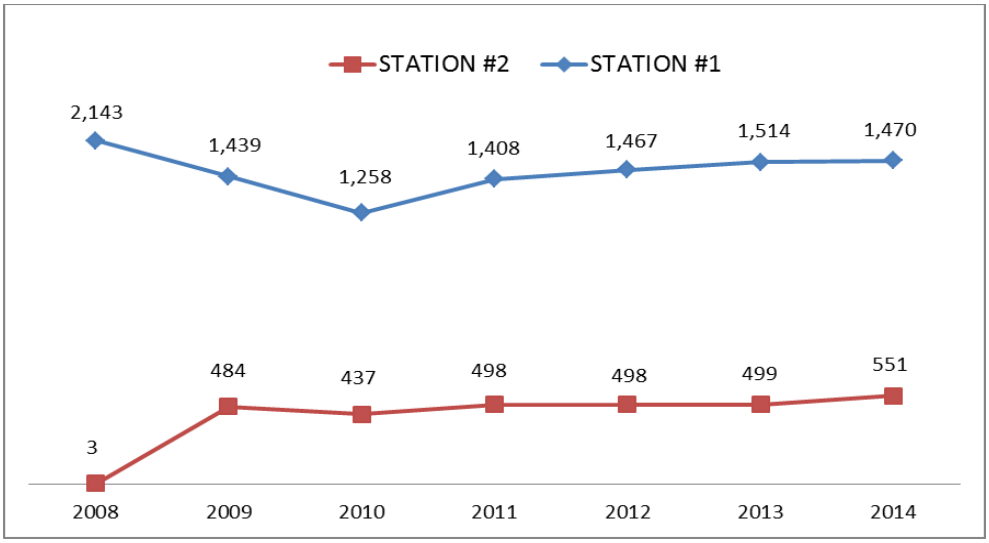
The dividing line between Station #1 and #2 runs east and west. From the west heading east - all land north of and including Route 64, including the intersection of Route 64 and Peace Road, Peace Road north of Rt. 64 to the South Branch of the Kishwaukee River. The Kishwaukee River east to a point north of the Stone Prairie subdivision and then the line moving east to County Line Road south of Mt. Hunger Road.

Station 2 responded to 551calls as the initial response station. This number does not reflect all incident responses from this station, only the calls originally dispatched to this station.

Emergency responses by Fire Station district FY 14

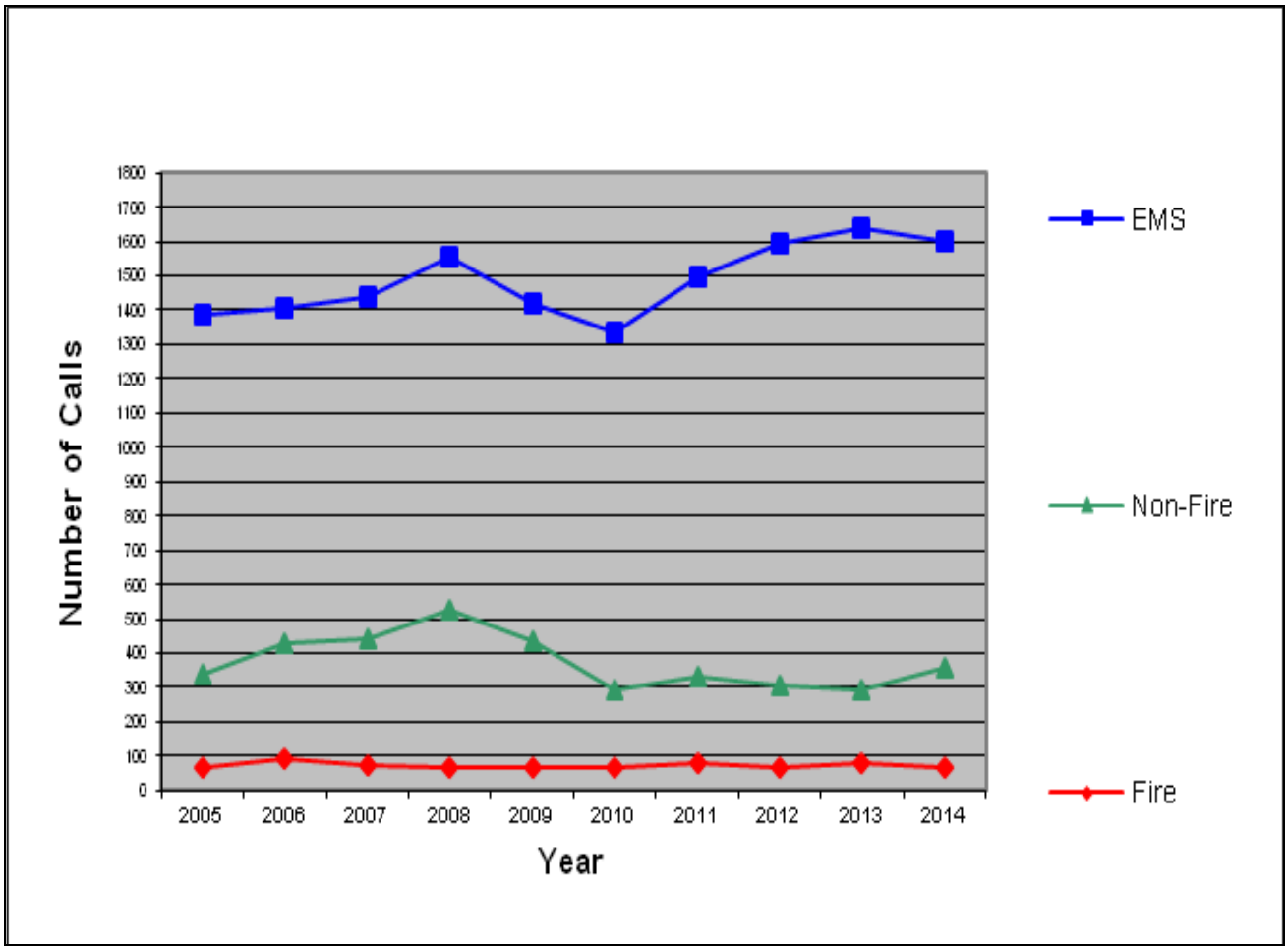


Emergency responses by Fire Station history FY 08-14



***Fire Station #2 opened on June 2, 2008**

Emergency Medical/ Fire/ non-fire response history FY 05-14

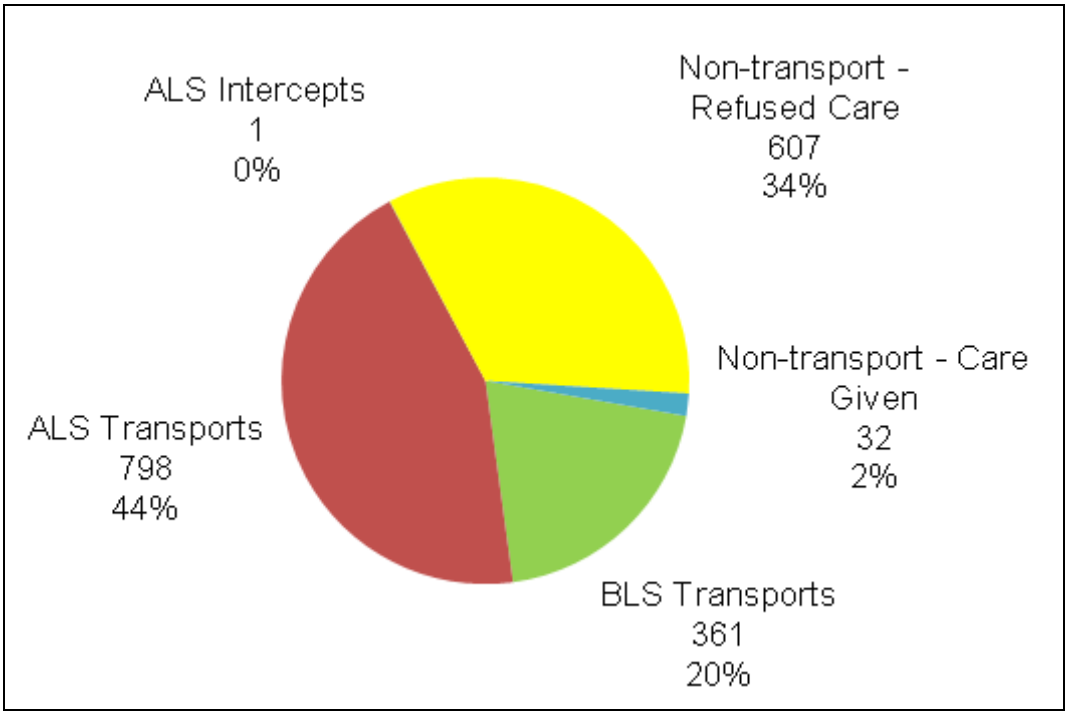


YEAR	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Fire Suppression	68	95	74	68	64	66	79	64	79	85
Non-Fire	339	429	442	524	438	291	333	306	296	368
Total Fire and Non-Fire	**407**	**524**	**516**	**592**	**502**	**357**	**412**	**370**	**375**	**453**

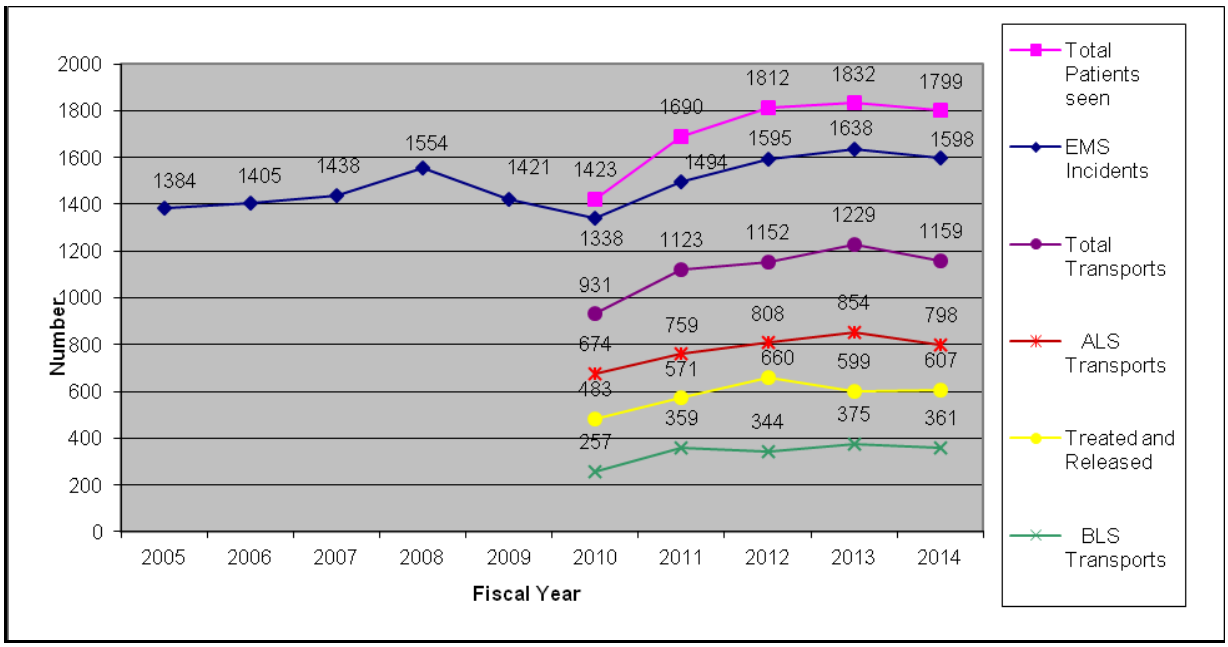
Prior to Incident numbering change *After Incident numbering change*

Since FY10, we have seen a 100 incident per year increase in EMS incidents, while fire and non-fire calls this past fiscal year remained relatively flat for the past 6 fiscal years.

Emergency Medical Services activity FY 14



Emergency Medical Services activity FY 05-14



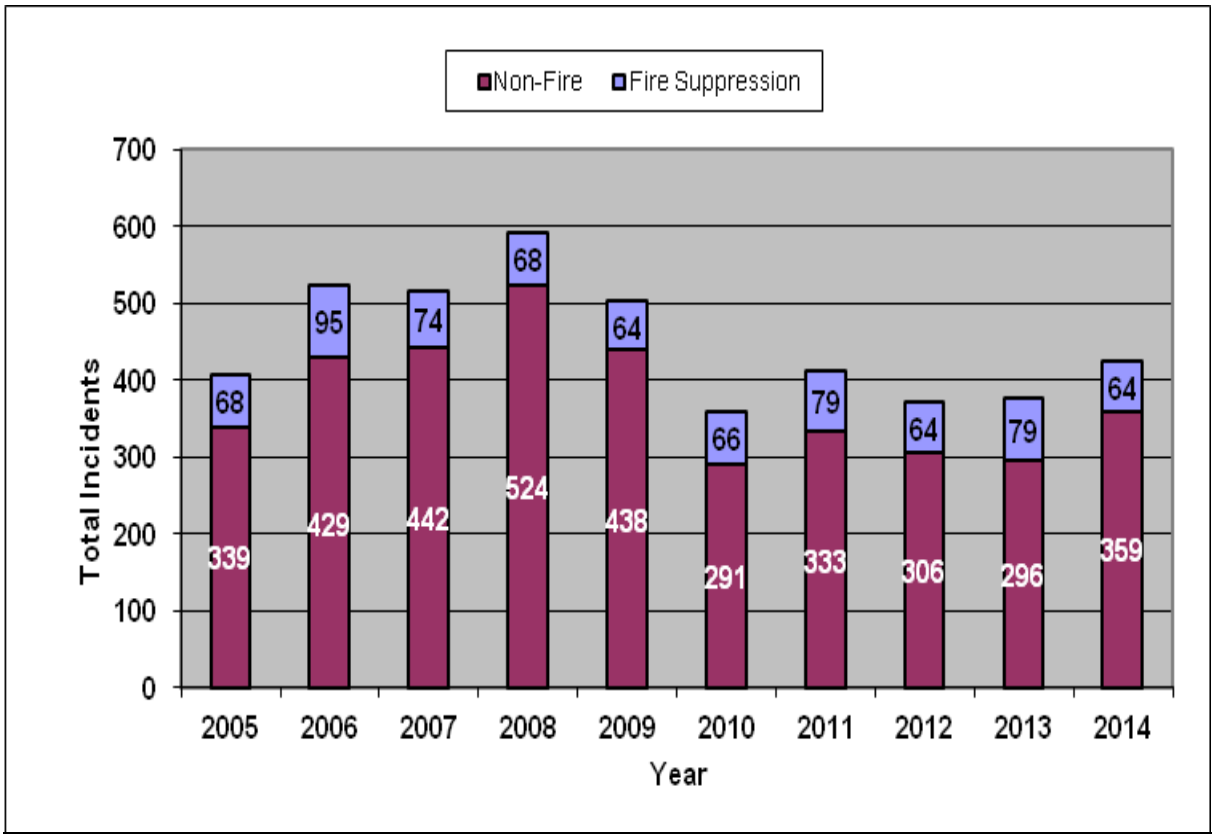
Generally, emergency medical activity is trending upward. However, In FY14 we saw a slight decrease in emergency medical activity. Overall, we saw 33 fewer patients and transported 70 less patients to the hospital than last year. We responded to 1,598 ambulance requests and 1,799 patients in FY 14. We transported 1,159 patients to the hospital.

We began tracking the level of service given for ambulance transports, treat and no transports, and patient counts in fiscal year 2010.

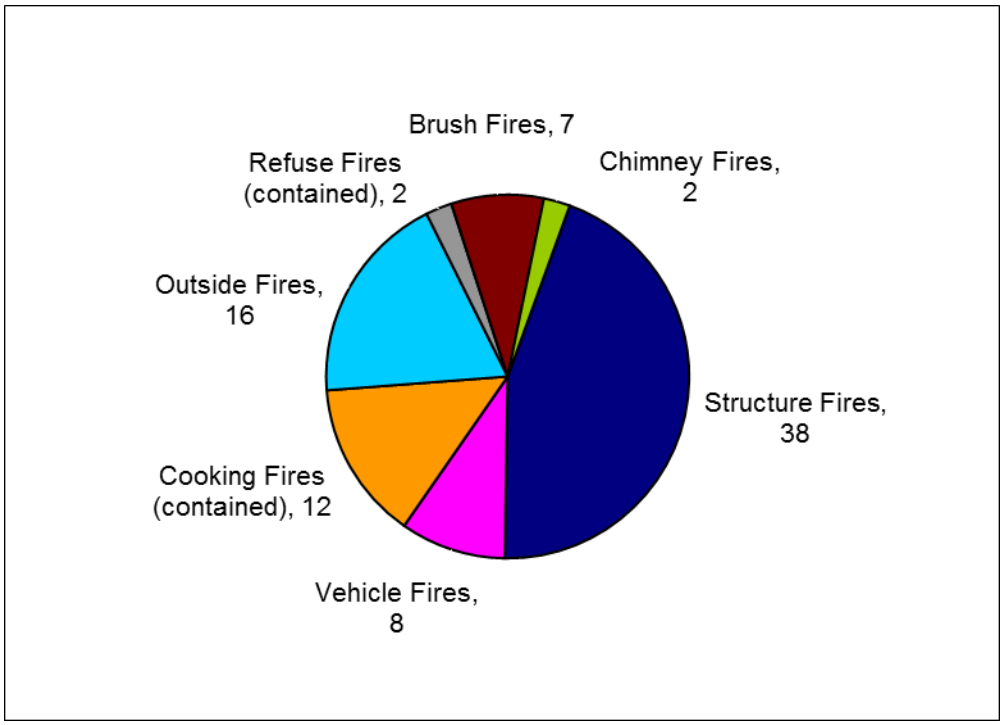
Fire and Non-Fire Incidents FY 14

Fire Suppression Responses		**85**
Structure Fire	38	
Vehicle / Motor home	8	
Cooking (confined to container)	12	
Outside (rubbish & equipment)	16	
Refuse (dumpster, trash contained)	2	
Brush Fire	7	
Chimney	2	
Non-fire Responses		**368**
False / Malicious Alarms	175	
Good Intent	77	
Burning Complaints	10	
Hazardous Conditions	77	
Service Calls	29	

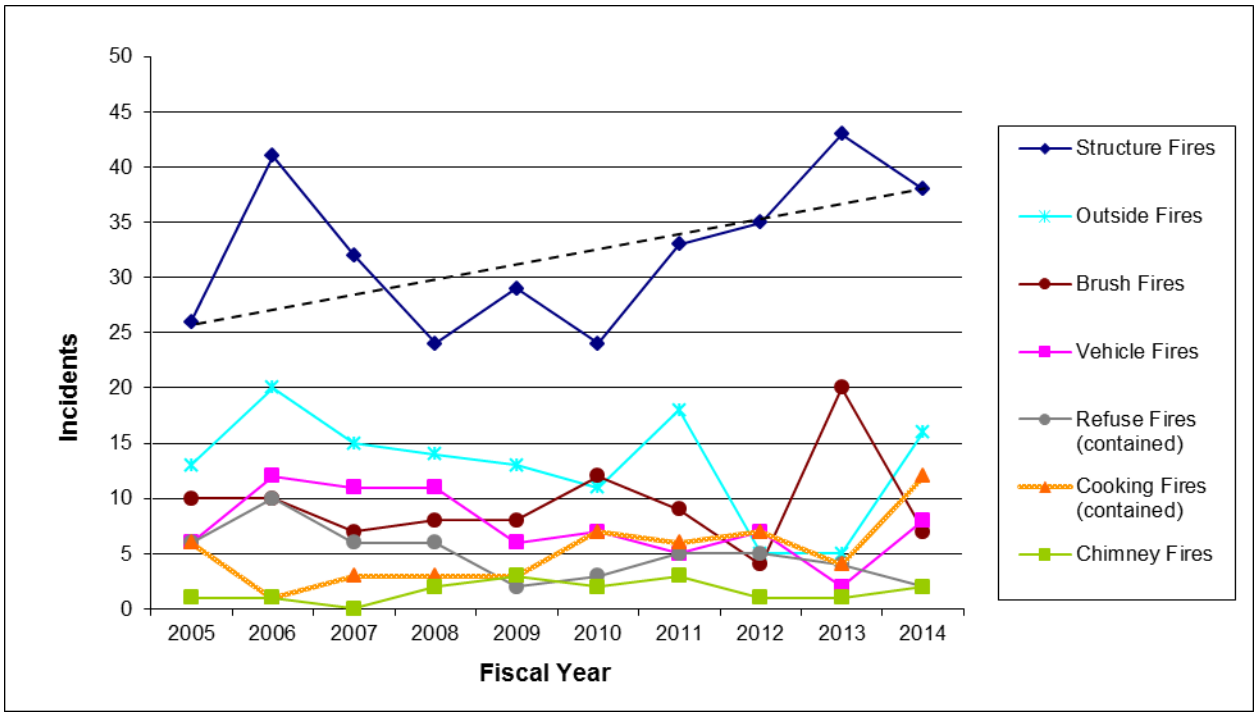
Fire and Non-Fire Incidents FY05-14



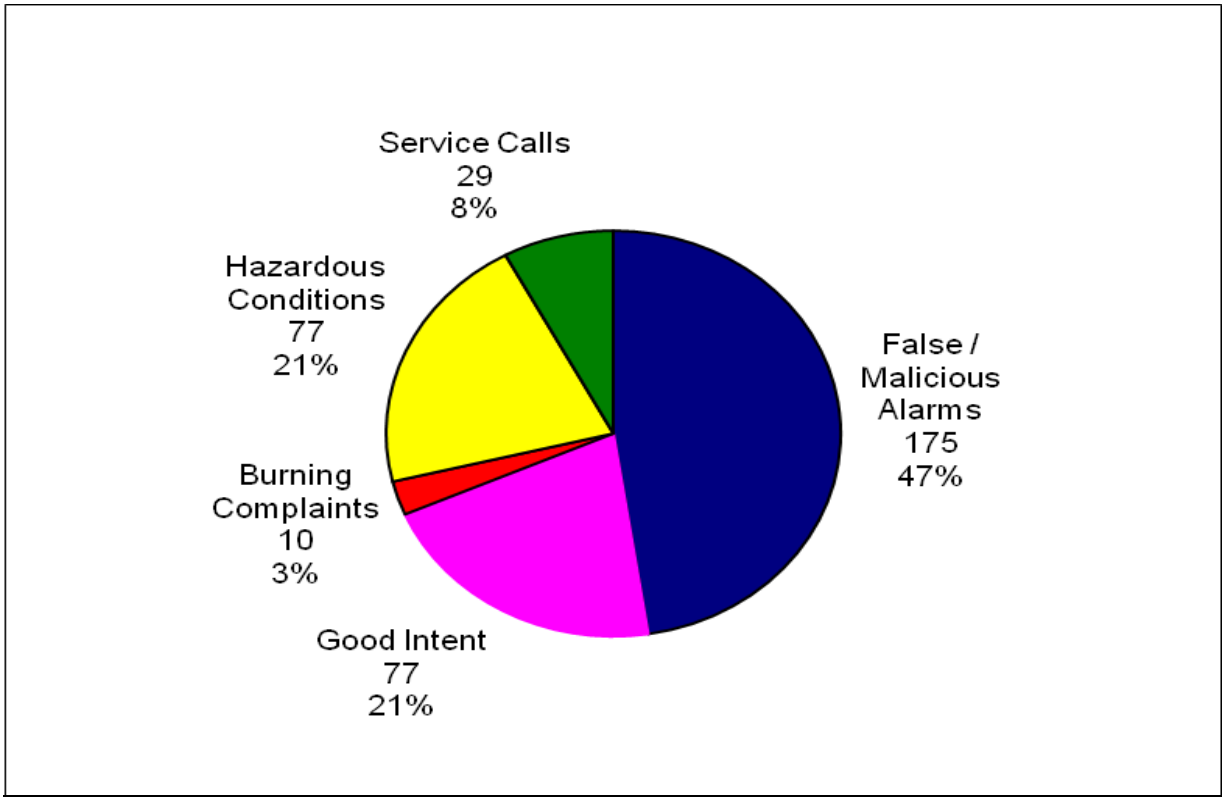
Fire suppression responses FY 14



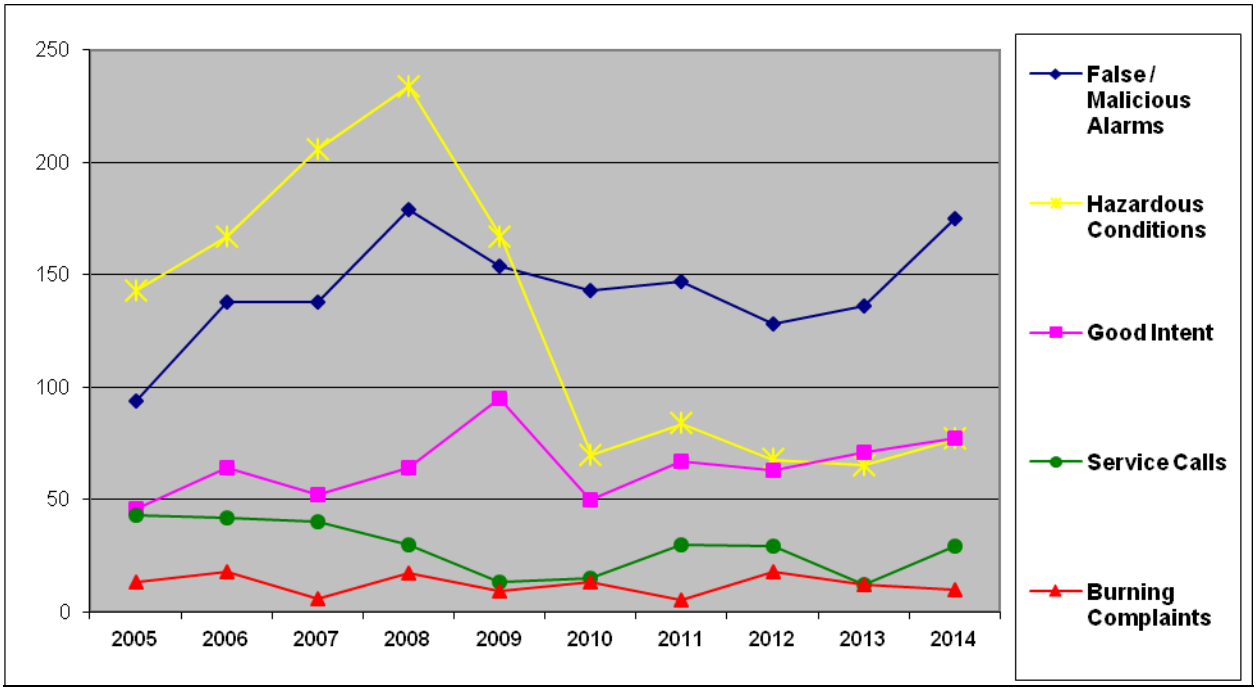
Fire suppression responses FY 05-14



Non - fire responses FY 14



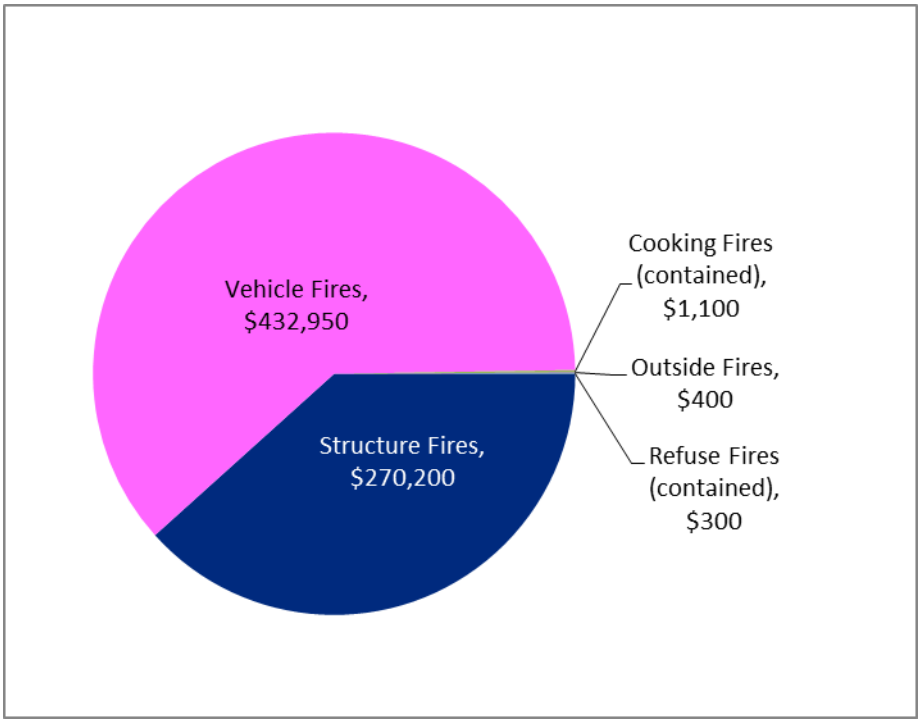
Non - fire responses FY 05-14



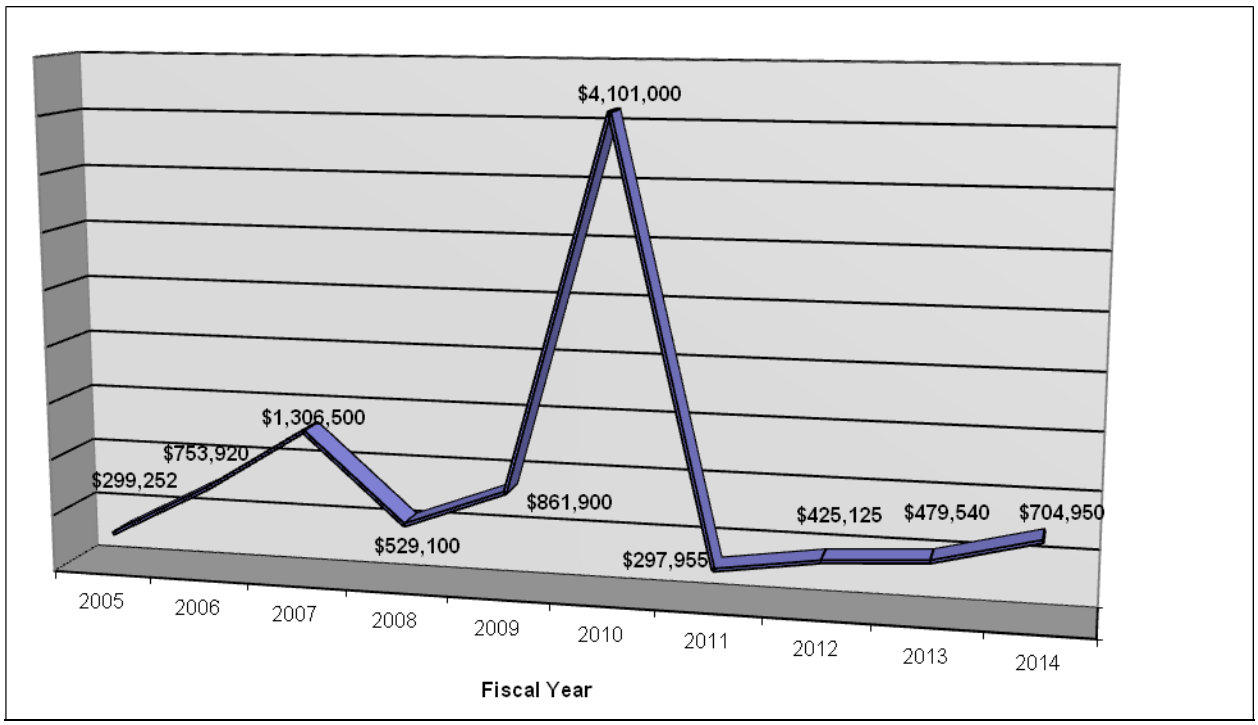
Hazardous condition related responses were better defined in 2010, which resulted in an appearance of a significant drop in these type of responses.

Fire loss FY14

In FY14, we had $704,950 dollar loss attributed to 18 of the 85 reported fires



Fire loss history FY05 – FY14

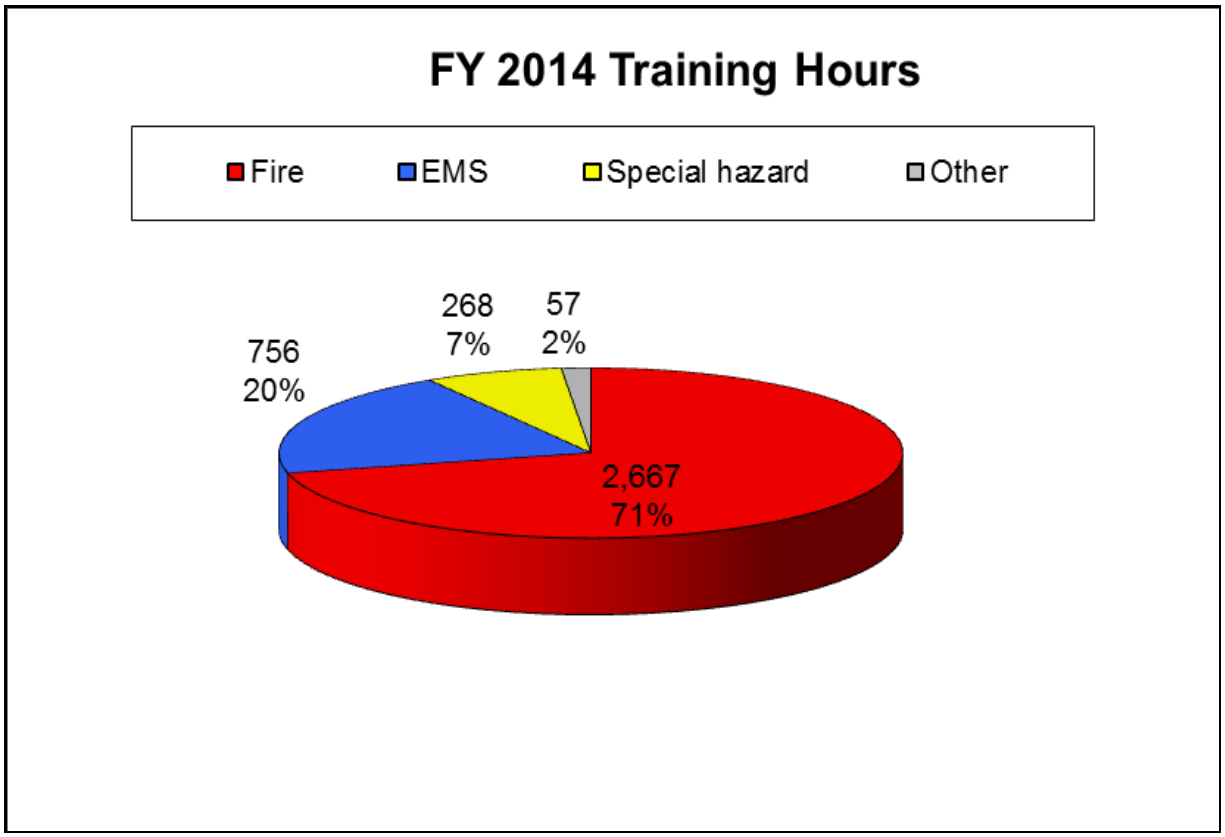


The nine year average fire loss is just under a million dollars ($975,924). The baseline average of fire loss for the past 9 years (without the large dollar loss in 2010) is $628,694.

Training hours FY 14

Our fire department members attained 41 fire certifications in this fiscal year. The newly achieved certifications (41) were for Basic Operations Firefighter (Firefighter II), Advanced Firefighter (Firefighter III), Fire Apparatus Engineer, Vehicle and Machinery Operations, Hazardous Materials Operations, Technical Rescue Awareness, Fire Department Health and Safety Officer, Fire Investigator, and Juvenile Fire Setter Interventionist.

3,748 training hours were performed by Fire Department personnel. Training hours are divided into four categories: Fire, Emergency Medical Services (EMS), Special hazard, and Other training.



Fire training - includes fire equipment, fire apparatus, building construction, electric vehicle response, driver's training, fire operations review, fire investigation, and various fire drills.

Emergency Medical Service (EMS) training - includes required continuing monthly medical training in various areas which enable the paramedics to meet the hourly requirements by the Illinois Department of Public Health (IDPH).

Special hazards training - included hazardous materials and technical rescue response training.

Other training – this category includes the review of SOG's, Policy, and Procedures, review of streets, required NIMS training, firefighter and officer orientation, and safety training.

Appendix 2 – Sycamore Fire Department emergency apparatus fleet:

CHIEF 1.....Fire Chief's vehicle
CHIEF 2.....Assistant Fire Chief/Training/EMS vehicle
CHIEF 3.....Assistant Fire Chief/Fire Operation's vehicle

CAR 4……..……reserve staff vehicle

BOAT 2.....Zodiac Boat with trailer assigned to Station 2

BRUSH 1.....Grass/brush fire vehicle assigned to Station 1
BRUSH 2.....Grass/brush fire vehicle assigned to Station 2

ENGINE 1.....Engine (structural) assigned to Station 1
ENGINE 2.....Engine (structural) assigned to Station 2
ENGINE 3.....Engine (rural) assigned to Station 1
ENGINE 4.....Reserve Engine assigned to Station 1

MEDIC 1..... Paramedic ambulance assigned to Station 1
MEDIC 2..... Paramedic ambulance assigned to Station 2
MEDIC 3..... Reserve paramedic ambulance assigned to Station 1
MEDIC 4..... Reserve paramedic ambulance assigned to Station 2

SQUAD 2.....Squad vehicle assigned to Station 2

Appendix 3 – Sycamore Fire Department apparatus/equipment replacement schedule

Sycamore Fire Department — Capital Budget spreadsheet — 2012-2027

Capital Item - vehicles	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027
Car #1 Expedition (2013)		$30,000										$35,000			
Car #2 Colorado (2005)					$35,000								$35,000		
Car #3 Expedition (2010)								$35,000							
Car #4 Tahoe (2001)															
Engine 2 - KME/Darley (1996)									$450,000						
Engine 3 - Alexis/Spartan (1/1989)				20,250											
Engine 1- Central States/Spartan (3/2005)															
Engine 4 - Mack (1979)															
Medic #4 - Medtec diesel (1999)					$155,000										
Medic #3 - Medtec diesel (2002)							$160,000								
Medic #1 - Medtec gas (2012) ($65,000/130,000)	$65,000												$160,000		
Medic #2 - Medtec diesel (2008)										$160,000					
Brush #1 chassis (4/2008)												$40,000			
Brush #1 skid unit (4/2008)															
Brush #2 chassis (1992)			FPD -45,000												
Brush #1 skid unit (12/2011)															
Squad #2 (1989)		$45,000			$250,000										
Boat #2 (2000)															
Capital Item - equipment															
loose equipment (E4)			$45,000	$30,000											
Rescue Equipment - TRT				$5,500											
Rescue equipment -water				$1,000											
SCBA										150,000					
Lifepack 15 Lead Monitor															
BLS/ALS equipment for 4th ambulance (Medic #4)		$25,000	$27,000	$28,000	$29,000										
ALS equipment for two front line engines		$15,000													
Tablets/Ipads (4) for EMS patient care reporting			$5,000	$5,000	$5,000										
Computer/monitor/printer replacement both Stations	$3,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000			
Gas Detectors (3)	2 - AFG/FPD					$2,000					$2,000				
Turnout Gear	$6,000	$6,000	$8,800	$8,800	$9,000	$9,000	$9,200	$9,200	$9,400	$9,400	$9,400	$9,400	$9,400	$9,400	$9,400
Rescue equipment (Ankus/vetter)															
vehicle repeater			$7,000	$7,000											
Capital Item - building															
Station #1 - overhead door electrical eyes		$1,400	$1,400	$1,400											
Station #1 - relocate antenna			$1,000												
Station #1 - smoke Alarm /CO alarm Syste	$25,000		$25,000												
Station #1 - tone alert system			$9,700												
Station #1 apparatus bay floor drains	$20,000														
Station #1 phone system - city wide (2015)															
Station #1 - PlymoVent Drop /Track		$6,000													
Station #2 phone system - city wide (2015)	$8,000														
Station #2 - PlymoVent Drop /Track															
Capital Item - long term need															
Ladder Truck / Equipment	$1,200,000														
Water Rescue (jon boat & Trailer)	$3,500														
Totals	68000	77000	136400	143650	242200	262000	170000	45200	460200	320400	12400	85400	204400	9400	9400
Vehicle lifespans															
ambulances 10 yrs front/3 years reserve															
engines 15 yrs front/10 years reserve															
command vehicles 10 yrs															
brush chassis 15 yrs															
brush skid unit 25 yrs															
rescue squad 25															

U:\Chief Polanek\FD Budget\Capital budget\FY 15 Capital budget\Capital replacement spreadsheet 2-3-15

Appendix 4 – City of Sycamore residential building permits:

The values of the residential building permits for the 17 years are listed below.

Residential permits by type

Year	MF*	SF Detached	Total	%MF
1997	43	45	88	48.86%
1998	75	65	140	53.57%
1999	79	64	143	55.24%
2000	40	88	128	31.25%
2001	66	78	144	45.83%
2002	83	114	197	42.13%
2003	119	139	258	46.12%
2004	134	197	331	40.48%
2005	457	255	712	64.19%
2006	210	158	368	57.07%
2007	75	152	227	33.04%
2008	99	14	108	91.66%
2009	66	10	76	86.84%
2010	4	19	23	17.39%
2011	11	16	27	40.74%
2012	17	13	30	56.66%
2013	40	30	70	57.14%
2014	33	39	72	45.83%

The values of the residential building permits for the 17 years are listed below.

Residential building permit values

Year	Single Family	Multi-Family*	Total
1997	$5,734,300	$2,565,000	$8,299,300
1998	$8,753,100	$4,800,071	$13,553,171
1999	$8,469,000	$8,455,015	$13,985,000
2000	$13,059,400	$3,523,000	$16,852,400
2001	$12,677,600	$5,147,000	$17,824,600
2002	$20,004,600	$7,606,000	$27,610,600
2003	$27,601,170	$9,628,000	$37,229,170
2004	$36,118,212	$9,858,650	$45,976,862
2005	$63,837,224	$29,633,625	$93,470,849
2006	$40,346,932	$14,491,750	$54,838,682
2007	$15,025,398	$10,685,000	$25,710,398
2008	$3,279,220	$6,826,000	$10,105,220
2009	$2,951,000	$1,923,000	$4,874,000
2010	$4,261,000	$240,000	$4,501,000
2011	$2,568,700	$660,000	$3,228,700
2012	$2,589,000	$1,388,000	$3,977,000
2013	$5,859,500	$3,919,000	$9,778,500
2014	$6,998,965	$3,627,000	$10,625,965

*Includes townhouses, condos, duplexes and apartments

Appendix 5 – City of Sycamore industrial building permits:

The values of the industrial building permits for the 17 years are listed below.

Industrial permits and valuation (based on City permit records)

Year	Number of Permits	Permit Valuations
1996	1	$97,000
1997	9	$2,100,000
1998	2	$194,000
1999	3	$1,237,000
2000	3	$196,000
2001	4	$3,993,000
2002	2	$3,905,000
2003	3	$1,437,000
2004	5	$6,805,000
2005	6	$1,719,000
2006	6	$2,651,800
2007	9	$3,860,393
2008	11	$4,980,000
2009	2	$451,000
2010	13	$8,803,100
2011	15	$369,620
2012	16	$1,280,100
2013	11	$1,523,275
2014	7	$48,000

The values of the commercial building permits for the 17 years are listed below.

Commercial permits and valuation (based on City permit records)

Year	Number of Permits	Permit Valuations
1996	8	$2,266,500
1997	5	$5,550,000
1998	23	$10,829,250
1999	33	$11,584,399
2000	22	$5,324,066
2001	22	$9,341,867
2002	33	$7,582,420
2003	24	$3,881,300
2004	20	$8,817,012
2005	50	$14,472,556
2006	54	$9,779,554
2007	66	$19,801,296
2008	43	$15,398,500
2009	46	$4,713,724
2010	69	$8,717,432
2011	91	$17,235.645
2012	112	$11,779,011
2013	91	$7,974,570
2014	86	$9,335,675

Appendix 6 – Water Supply requirements

Sycamore Fire Department

Needed Fire Flows for Fire Protection

Needed fire flows are for fire department pumper supply for fire protection of structures.

Private fire protection demands such as supplying standpipe systems, automatic sprinkler systems, etc., will not be considered cumulative with public fire flow demands. They are in addition to other demands. However, it should be recognized that such requirements will be based upon the height and area of buildings, including use and construction types.

Fire flow requirements used will be approved by the Fire Department. These minimums may be increased based upon construction types, size, and height of buildings. All fire flows are based on a residual pressure of 20 PSI. Fire flows are exclusive of domestic water use and fire protection system requirements. Minimum fire flows:

1. Single or multiple family buildings, four units or less. 2,000 gpm
2. Multiple family buildings, greater than four units. 3,000 gpm
3. Business & Office 3,000 gpm
4. Commercial 3,000 gpm
5. Industrial type, mercantile 5,000 gpm
6. Manufacturing and Storage 5,000 gpm
7. Structures larger than 15,000 sq. ft. will be calculated by the Iowa State University method for needed fire flows

The Sycamore Fire Department reserves the right to adjust needed fire flows, dependent on the occupancy of the building or any special hazards related to the building.

Fire Hydrants and Fire Department Connections

1. All fire hydrants shall have a maximum distance of 300 feet between fire hydrants. There shall be a maximum distance of 300 feet from a fire hydrant to a protected structure, or protected property. This measurement is made by roadway, the same as you would drive. Access roads shall be maintained during all seasons.
2. All fire suppression systems shall have a fire department connection (Siamese); a fire hydrant will be required to supply the system. A fire hydrant for a fire suppression system shall be located no closer to the building (Siamese) than 30’ and no farther from the building (Siamese) than 50’ or the height of the building.
3. Any building that has an E.S.F.R. fire suppression system will be required to contact the Sycamore Fire Department for specific regulations.
4. Fire hydrants shall be located no closer than 5 feet to a street curb.
5. A fire hydrant shall have a maximum of 24 inches, a minimum of 18 inches in height from the bottom of the pumper connection to the final grade (ground level). The Pumper connection shall face the street.
6. All Fire Department connections (sprinkler, standpipe) shall be located per Fire Department recommendations.
7. All fire hydrants shall be on a looped water main system – no dead end water mains, without the approval of the City Engineer and the Fire Chief.
8. A fire hydrant for a cul-de-sac shall be located at the throat of the bulb, not in the bulb.

These guidelines for fire hydrants and Fire Department connections shall be required. The Fire Department shall have the authority to go on private property for the purpose of testing and inspecting fire hydrants for emergency use.

Appendix 7 – ISO Public Protection Summary Report

PUBLIC PROTECTION
SUMMARY REPORT

Sycamore

Illinois

Prepared by

Insurance Services Office, Inc.
111 North Canal Street, Suite 950
Chicago, Illinois 60606-7270
(312) 930-0070

November 24, 2008

Background Information

Introduction

ISO collects and evaluates information from communities in the United States on their structure fire suppression capabilities. We analyze the data using our Fire Suppression Rating Schedule (FSRS™) and then assign a Public Protection Classification (PPC™) number to the community. The surveys are conducted whenever it appears that there is a possibility of a classification change. As such, the PPC program provides important, up-to-date information about fire protection services throughout the country.

A community's investment in fire mitigation is a proven and reliable predictor of future fire losses. Statistical data on insurance losses bears out the relationship between excellent fire protection – as measured by the PPC program – and low fire losses. So, insurance companies use PPC information for marketing, underwriting, and to help establish fair premiums for homeowners and commercial fire insurance. In general, the price of fire insurance in a community with a good PPC is substantially lower than in a community with a poor PPC, assuming all other factors are equal.

ISO is an independent company that serves insurance companies, communities, fire departments, insurance regulators, and others by providing information about risk. ISO's expert staff collects information about municipal fire suppression efforts in communities throughout the United States. In each of those communities, ISO analyzes the relevant data and assigns a Public Protection Classification – a number from 1 to 10. Class 1 represents an exemplary fire suppression program, and Class 10 indicates that the area's fire suppression program does not meet ISO's minimum criteria.

ISO's PPC program evaluates communities according to a uniform set of criteria, incorporating nationally recognized standards developed by the National Fire Protection Association and the American Water Works Association. A community's PPC depends on:

- **Fire alarm and communication systems**, including telephone systems, telephone lines, staffing, and dispatching systems
- **The fire department**, including equipment, staffing, training, and geographic distribution of fire companies
- **The water supply system**, including condition and maintenance of hydrants, alternative water supply operations, and a careful evaluation of the amount of available water compared with the amount needed to suppress fires up to 3,500 gpm.

Data Collection and Analysis

ISO has evaluated and classified over 44,000 fire protection areas across the United States using its Fire Suppression Rating Schedule (FSRS). We use a combination of a meeting between a trained ISO field representative and the dispatch center coordinator, community fire official, and water superintendent in conjunction with a comprehensive questionnaire to collect the data necessary to determine the PPC number. In order for a community to obtain a classification better then a Class 9, three elements of fire suppression features are reviewed. These three elements are the fire alarm and communication system, the fire department and the water supply system.

A review of the **fire alarm and communication system** accounts for 10% of the total classification. The review focuses on the community's facilities and support for handling and dispatching fire alarms. This section is weighted at **10 points** broken up as follows:

- Telephone Service 2 points
- Number of Needed Operators 3 points
- Dispatch Circuits 5 points

A review of the **fire department** accounts for 50% of the total classification. ISO focuses on a fire department's first-alarm response and initial attack to minimize potential loss. In this section, ISO reviews such items as engine companies, ladder or service companies, distribution of fire stations and fire companies, equipment carried on apparatus, pumping capacity, reserve apparatus, department personnel, and training. The fire department section is weighted at **50 points** distributed as follows:

- Engine Companies 10 points
- Reserve Pumpers 1 point
- Pumper Capacity 5 points
- Ladder/Service Companies 5 points
- Reserve Ladder/Service Trucks 1 point
- Distribution of Companies 4 points
- Company Personnel 15 points
- Training 9 points

A review of the **water supply system** accounts for 40% of the total classification. ISO reviews the water supply a community uses to determine the adequacy for fire-suppression purposes. We also consider hydrant size, type, and installation, as well as the inspection frequency and condition of fire hydrants. The water supply system is weighted at **40 points** with concern for the following:

- Credit for the Supply System 35 points
- Hydrant Size, Type & Installation 2 points
- Inspection/Condition of Hydrants 3 points

There is one additional factor considered in calculating the final score – **Divergence**.

Even the best fire department will be less than fully effective if it has an inadequate water supply. Similarly, even a superior water supply will be less than fully effective if the fire department lacks the equipment or personnel to use the water. The preliminary FSRS score is subject to modification by a divergence factor, which recognizes disparity between the effectiveness of the fire department and the water supply.

The Divergence factor mathematically reduces your preliminary scores if the fire department and water-supply scores are out of line with each other. The factor is introduced in the final equation.

Public Protection Classification Number

The PPC number assigned to the community will depend on the community's score on a 100-point scale:

PPC	Points
1	90.00 or more
2	80.00 to 89.99
3	70.00 to 79.99
4	60.00 to 69.99
5	50.00 to 59.99
6	40.00 to 49.99
7	30.00 to 39.99
8	20.00 to 29.99
9	10.00 to 19.99
10	0.00 to 9.99

The classification numbers are interpreted as follows:

- Class 1 through (and including) Class 8 represents a fire suppression system that includes an FSRS creditable dispatch center, fire department and water supply.
- Class 8B is a special classification that recognizes a superior level of fire protection in otherwise Class 9 areas. It is designed to represent a fire protection delivery system that is superior except for a lack of a water supply system capable of the minimum FSRS fire flow criteria of 250 gpm for 2-hours.
- Class 9 is a fire suppression system that includes a creditable dispatch center, fire department but no FSRS creditable water supply.
- Class 10 does not meet minimum FSRS criteria for recognition.

ISO develops a single Public Protection Classification for a community when 85% or more of the buildable area is served by a water supply capable of delivering 250 gpm of fire flow, uninterrupted, for a minimum period of 2-hours, and there are no areas beyond 5 road miles of the responding fire station. Under this condition, all of the structures in the community receive that classification. Over 60% of the communities ISO has evaluated do not have this capability, so ISO develops a split classification (for example, 5/9). When a split classification is published the first class (Class 5 in the example) applies to properties within 5 road miles of a recognized fire station and within 1,000 feet of a fire hydrant. The second class (Class 9 in the example) applies to properties within 5 road miles of a recognized fire station but beyond 1,000 feet of a hydrant. ISO generally assigns Class 10 to properties beyond 5 road miles.

Summary of Public Protection Classification Review
Completed by ISO on Aug 29, 2008
for
Sycamore

FSRS Item	Earned Credit	Credit Available
Receiving and Handling Fire Alarms		
414. Credit for Telephone Service	2.00	2
422. Credit for Operators	2.79	3
432. Credit for Dispatch Circuits	3.30	5
440. Credit for Receiving and Handling Fire Alarms	8.09	10
Fire Department		
513. Credit for Engine Companies	9.41	10
523. Credit for Reserve Pumpers	0.89	1
532. Credit for Pumper Capacity	5.00	5
549. Credit for Ladder Service	1.27	5
553. Credit for Reserve Ladder and Service Trucks	0.17	1
561. Credit for Distribution	1.72	4
571. Credit for Company Personnel	7.13	15
580. Credit for Training	2.52	9
590. Credit for Fire Department	28.11	50
Water Supply		
616. Credit for Supply System	33.01	35
621. Credit for Hydrants	1.80	2
631. Credit for Inspection and Condition	2.70	3
640. Credit for Water Supply	37.51	40
Divergence		
700: Divergence	-7.51	--
Total Credit	66.20	100.00

Community Classification = 4

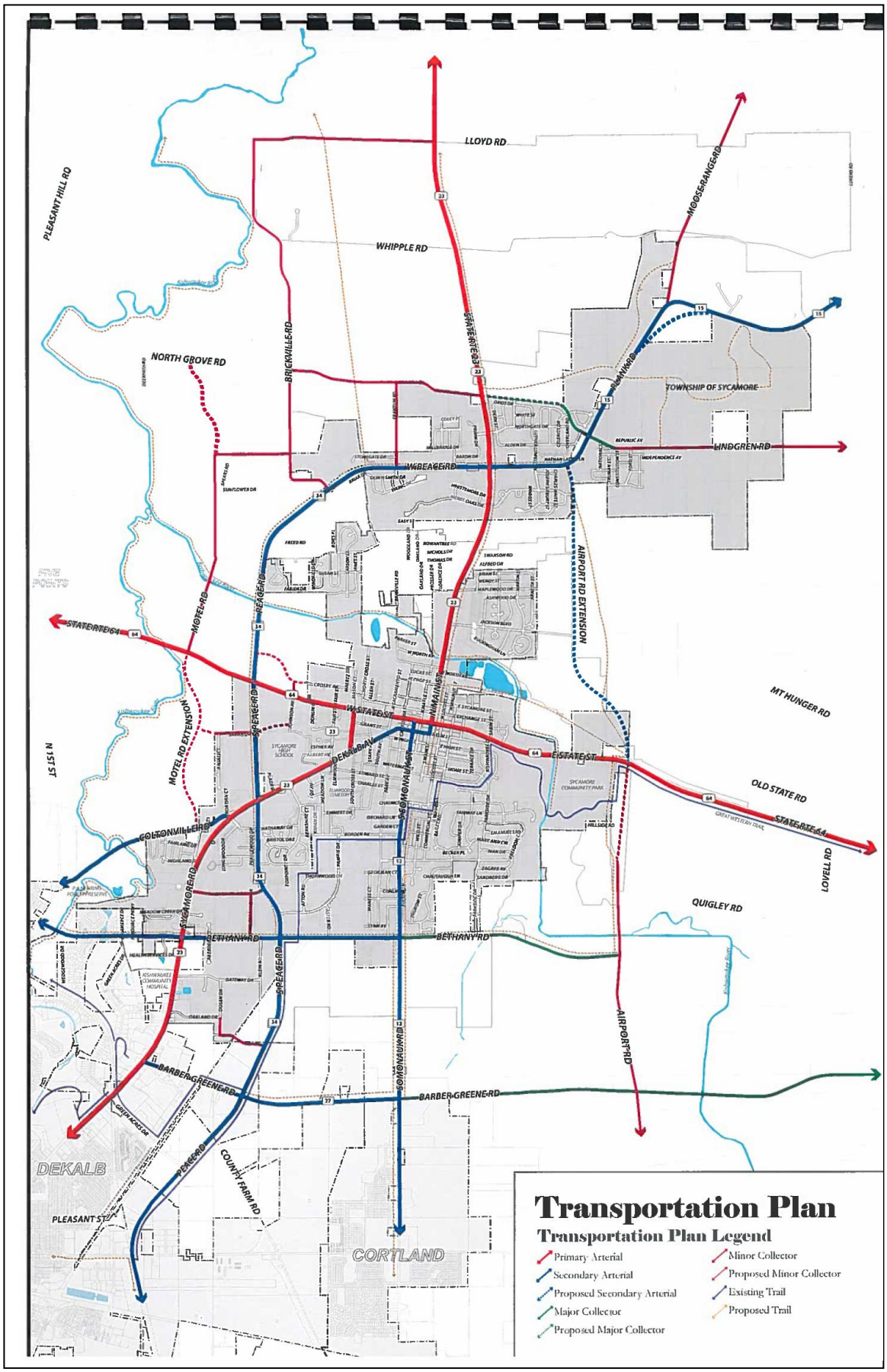
If the individual scores Sycamore achieved for receiving and handling fire alarms; fire department; and water supply were translated into a 100 point scale instead of the (10, 50 and 40) points actually used, the relative Fire Suppression Rating Schedule classification for each of these sections would be:

Receiving and Handling Fire Alarms: a (relative) **Class 2**

Fire Department: a (relative) **Class 5**

Water Supply: a (relative) **Class 1**

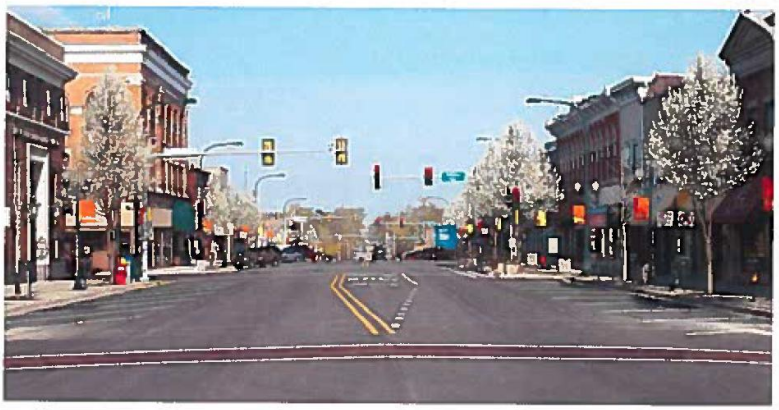
Appendix 8 – City of Sycamore Comprehensive Plan 2014 - Transportation Plan



Transportation

Sycamore's existing road network is mainly characterized by a grid of primary, secondary, collector and minor streets. This grid is bisected by Illinois Route 23 and Illinois Route 64 that provide important links to a broader, developing region. The five existing roadway classifications are described below:

Primary Arterials. Such roadways may have from two to six lanes and typically provide regional access with posted speed limits between 25 and 55 mph, depending upon the nature of adjacent land uses. Primary arterials provide local access to the regional road system for all types of vehicles including large trucks. They typically have signalized intersections with commercial and industrial driveways at permitted locations. Average daily traffic (ADT) volumes typically range from 10,000 to 25,000. Illinois Route 23 and Illinois Route 64 are the two primary arterials serving Sycamore.



Minor or Secondary Arterial. Such roadways provide access and circulation for all land uses within a community and often connect adjacent communities, serving limited regional or county-wide travel. Speed limits vary from 25 to 55 mph, depending on the nature of adjacent land uses. Driveway and intersection spacing are restricted by local policy and, ideally, residential driveways are not located on such roadways. Average daily traffic (ADT) volumes typically range from 7,000 to 18,000. Peace Road and Somonauk Road are the secondary arterials serving Sycamore.

Collector Street. Collector streets are usually built using a grid system that penetrates neighborhoods with all types of land uses and collects local street traffic for direction to the arterial system. There are residential, commercial and industrial collector streets. Speed limits are usually posted in the 25 to 45 mph range, depending on surrounding land uses. Average daily traffic (ADT) volumes typically range from 1,000 to 5,000.

Minor Street. Minor or local streets provide access to abutting properties and typically connect to the collector system rather than arterial streets. Speed limits are usually not posted but are enforced at 25 mph in most areas. Minor streets typically serve daily traffic volumes of less than 1,000 ADT.

Cul-de-sac. The purpose of cul-de-sacs is similar to that of minor streets. Traffic volumes on cul-de-sac streets are typically less than 400 ADT.

Appendix 9 – City of Sycamore Comprehensive Plan 2014 - Future land use map