

II. EXECUTIVE SUMMARY



This report presents a re-evaluation of the existing Louisville Fire Protection District (LFPD) Comprehensive Plan. It also establishes new policy framework to implement the District's current vision and the actions necessary to implement its goals. As in the past, the LFPD Comprehensive Plan was designed to support the City of Louisville Comprehensive Plan and an assessment of the surrounding District needs.

The LFPD has a history of using task forces and committees to increase participation in the District's decision-making processes. The Louisville Comprehensive Plan of Fire and Emergency Services was developed by Chief Tim Parker and the LFPD Planning Team, with the approval of the District Board of Directors. *It should be noted that nearly all of the actions, policies, procedures, and programs recommended in the last plan have been accomplished.* We believe this is a remarkable department accomplishment and the entire LFPD team should be commended.

Finally, we believe that the new analysis and action plans provide a basis for future policymaking, as well as a method of ensuring quality and predictable fire and emergency services.

Section II - Executive Summary describes the overall approach, objectives, and scope of the study. It concludes with a summary of policy directions aimed at achieving the study's goals. The Planning Team adopted a mission statement for the development of this report, which was reviewed and amended as necessary. The mission statement reads as follows:

"The mission of the Louisville Fire and Emergency Services Comprehensive Planning Team is to provide a source of input and expertise to the development of the 5 - 10 year planning document for review by stakeholders and policymakers."

The team's objectives in this planning process were to: review the Louisville Fire Department's basic organizational and performance requirements, identify the general goals for the comprehensive planning process, collect input on fire service policy and programming projections for the next 5-10 years, and evaluate the results of the last comprehensive plan operating period. These objectives were largely met through various meetings, work sessions, SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis group meetings, and 360-degree internal reviews.

The goal of this study was for the LFPD Management Team to provide the community with information needed to best manage resources in the next 5-10 year planning period. Planning conducted now will increase the District's ability to maintain or increase levels of service, achieve cost savings, and decrease duplication of effort. In order to achieve project goals, the Planning Team developed a methodology that would result in findings and recommendations aimed at allocating fire and emergency resources in the future.

The study included a review of the following key factors:

- The District’s population and development growth trends and patterns
- The Fire Department’s operational policies and practices
- Basic fire protection practices and principles
- Overall District policy direction as it relates to fire and emergency services

Section III – Introduction provides a comprehensive description of the concepts used in defining response times, as well as an overview of critical task analysis and a review of fire station locations.

Section IV - Overview of the Louisville Fire Protection District and City of Louisville. This section includes the city’s growth patterns over the last 10 years and a description of the projected growth of the city, based upon its comprehensive general plan. It describes a city that has grown slowly but steadily in the past 10 years. Louisville was once centered on an older downtown business district but has now grown from that center. There is a general distribution of business and industry that is highly technical in building and occupational nature which presents hazardous operations concerns.

Currently, there is a minor to moderate amount of undeveloped land that is anticipated to be a part of the “in-fill” pattern of the city. The older downtown is located in the eastern central part of the city. To the south and east, the majority of the property is currently zoned for industrial use. Commercial and general services are around the city center while residential development is focused in the central corridor. The areas covered outside the city limits range from rural to slow growth residential. Extensive growth is not expected outside the city during this 10-year planning period with the exception of technical and industrial occupancies.

Section V - Program and Practices examines the actual program activity and preparation elements of the Department. It looks at everything from overall administration to specific activities like fire prevention, training and public education.

There are three distinct elements in this section that should be noted: code compliance, plans review, and public education. The Division of Life Safety and Fire Prevention (LSFPD) is responsible for coordination and management of all District LSFPD programs. It is designed to provide better coordination of plan checks, code enforcement and project reviews with city and county planning departments. The LSFPD has done an excellent job of incorporating modern fire prevention techniques into the construction and development process.

Section VI - Policy Direction and Recommendations is designed to identify decision points that need to be acted upon. It sets some targets and criteria that must be pursued if the Department's capacity to perform is to be fulfilled by the end of this planning period. This section is also designed to implement change and keep the department's growth parallel to the District's growth. It is recognized that not every recommendation will be achieved; therefore, every desired outcome may not occur. Nevertheless, it is essential that these recommendations are at least considered.

Section VII - Performance Goals and Standards of Care describes the objectives under which the fire protection and emergency services operate. These goals reflect the Department's desire to maintain its current level of service in light of increasing demands for service and the need to reduce response times. Each goal has specific associated objectives. All of the objectives are quantified, in order to provide performance measures for existing and future service.

Section VIII - Summary and Cost of Recommendations suggests an annual review of this plan should be conducted to determine if any of the triggering mechanisms occur. The plan also recommends that this document be reviewed every five years to determine if there are changes in the District that demand a new direction. This section provides a road map as to how changes should be developed and implemented. It does not suggest that there are any specific dates when changes should be made, except by the definition of the triggering criteria.

Executive Summary - 1

This planning activity included two distinct ways of collecting information. First was the creation and utilization of the Planning Team appointed by the LFPD Board of Directors. This was done to achieve a high degree of involvement in the community and to ensure review of the complex concepts that are part of contemporary fire protection and emergency services programs. The second was through one-on-one interviews with individuals in the community, and those in positions of authority in other areas of the city and county. This was done to ensure an accurate assessment of the whole system.

Executive Summary - 2

The statistical portion in Section IV displays a portrait of a District that will not likely change in any significant way over the next 5-10 years. The population is anticipated to increase, but the corporate boundaries are not expected to change significantly, however, "in-fill growth" will impact the population base. As a result, the District will become denser from the influx of population. If the assumptions made within this plan are linked to projections that change, the specific factors being evaluated may have to be recalculated. Changes in risk inventory or District boundaries may also result in a need to modify the assessments done during this planning period.

In Section IV, Overview of the Fire Department, we depict the Louisville Fire Department as an “all-hazards” or “all-risk” oriented fire protection agency that currently delivers fire prevention, fire education, fire suppression, and basic emergency medical services.

The Insurance Services Office (ISO) analyzes and classifies fire protection efforts to help establish appropriate fire insurance premiums. They assign a Public Protection Classification from 1-10. Class 1 generally represents superior property fire protection and Class 10 indicates that the area’s fire-suppression program doesn’t meet ISO’s minimum criteria. The LFPD’s ISO ratings are Class 4 within city limits and Class 9 in rural areas; however, the District is at risk of losing its current ratings. (The fire suppression capability rating has declined over the last two rating periods.)

The Planning Team believes that an ISO Class 4 is a good rating for a department of this size and it appears to be standard for departments in this area. For the majority of homeowners, and those in industrial & commercial occupancies that are not sprinklered, improving the District’s ISO rating will have a significant effect on lowering their insurance rates. However, a considerable increase in expenditures by the District will be required to achieve this objective should the Board of Directors choose to move forward.

It is important to note that some substantial operational changes and improvements will be necessary to maintain the District’s current rating.

The Department still operates two fire stations, however, the District has prioritized increasing its volunteer and career staffing levels in an attempt to ensure 24/7 coverage and deliver paramedic transport services. Since 2006, the District increased its fire suppression staff from 38 to 90 personnel; two are career chief officers, three civilian personnel, two fire prevention personnel and nine fire medics. The Planning Team also looked for ways to evaluate the relative cost of fire protection compared to similar sized departments. Using the cost per capita model, the current cost for emergency services is \$115 per capita, compared to \$60 in 2005 with an increase to 3.3 firefighters per 1,000 in population. The average for a district of this population class is about \$200 per capita (2010 Data, see Appendix G). According to the International City/County Management Association, the average career staffing at the national level is one firefighter per 1,000 in population for career departments.

The LFD currently responds to approximately 1,400 emergencies per year, the majority of which are emergency medical calls. Calls for service have doubled from 1992 to 2010, which corresponds to an increase in population and commercial construction. Additionally, there was a 30% increase from 2000 to 2010, with limited population growth during that time period (using a 5-year moving average to calculate the increase in call percentage).

Goals have been established to manage the Department and in many cases they are utilized as a performance standard. The most important is the response time performance goal, which is for the fire department to arrive at the scene 90% of the time within 8 minutes from the time the department is notified of the call.

The Planning Team spent considerable time analyzing and evaluating this definition of response time (see Section IV, Fire Department Overview).

Executive Summary - 3

This document also reviewed fire station locations. Some basic assumptions were made utilizing current station locations and staffing patterns, automatic aid, and the proposed addition of a third fire station.

A sample of the fire station findings in Section III follows:

- Currently, the two Louisville fire stations alone provide a response to most of the concentrated values (e.g., downtown district, commercial occupancies) in the District, which is within the stated goal.
- Unfortunately, the District still has high-risk areas (as determined by RHAVE) that can't be served within the stated response goal (compounded by staffing availability and skills mix challenges). This has been an unresolved finding for some time; however, the District has taken several improvement actions to minimize this long-term issue. While facility improvements have been made since 2005 to better accommodate 24/7 operations at both stations, the construction of Fire Station #3 remains in the discussion phase.
- The current deployment pattern is subject to future changes that are outside the District's control, therefore it's imperative that station locations meet District needs. For example, the City has approved a new campus in South Louisville that could bring up to 10,000 employees and visitors into the District each day. The District should take the necessary steps to build a station to protect these high-risk, high-value properties.
- As identified in the 2005 assessment, an additional fire station is still required to provide response time coverage to areas that are currently outside the optimum response distances and areas that will be developed by 2013/2014.

The Planning Team reviewed these findings and developed a set of criteria that was incorporated into this document. The criteria for future fire station locations should be as follows:

- Provide service to areas that cannot be reached with existing stations
- Reach areas that have a measurable quantity of property or life at risk
- Reach areas where there is a workload that becomes statistically significant
- Improve the overall distribution of resources

Executive Summary - 4

Emergency medical services (EMS) continue to be a significant part of the Department's program activity, which has an impact upon workload, training, professional development, and customer expectations. Moreover, Louisville has the 5th largest population in Boulder County and it remains a challenge to ensure adequate staffing on every call. This can, and does, have an impact on the effectiveness of the overall operation and delivery of service.

Most notably, however, the District has greatly improved its EMS response times by implementing a paramedic transport program in 2007. Providing its own EMS transports within the District has had a positive influence on the program and improved the quality of life of District residents.

As meaningful as the improvements have been, the Planning Team strongly recommends staffing the second ambulance to ensure quick response times in District #2 and improve the overall minimum staffing profile. Finally, the District should seek ways to ensure that minimum staffing is maintained, support all initial response requirements, and most importantly, meet the basic emergency service needs of the service area.

Executive Summary - 5

The Department's ability to train and maintain firefighting skills is impacted by the lack of adequate training facilities and volunteer turnover. Over the last six years, the Department has made some meaningful improvements in its volunteer programs, going to a combination staffing model and transitioning to a predominantly duty crew in-station staffing model.

In spite of these improvements, there are several times during a 24-hour period that adequate coverage is not available. The lack of predictable resources has negatively affected the Department and could impact the community also.

The volunteer program continues to serve the community well and will continue to be a major component of the Department's emergency services programs; however, the Planning Team believes that a more reliable staffing plan needs to be developed. This

does not necessarily mean that more people should be hired, but to design a system that will ensure 24/7 initial fire response coverage.

The District Board and Management Team must also evaluate its combination staffing and make the necessary adjustments to ensure that a baseline capability is always available. The current combination approach has proven to reduce operational costs (over a full career staff) and strengthened all of its emergency services programs. However, if not addressed, staffing shortages will impact its ability to adequately serve the customer and possibly jeopardize firefighter safety. The District Board should determine what the minimum 24/7 baseline capabilities are for the District.

Executive Summary - 6

Like most fire departments today, the District is concerned with its ability to maintain the necessary funding to meet the community's current and future fire protection and emergency services needs.

In developing this plan, the Planning Team believes that the District is in a unique position to complete some of the capital projects recommended in this document; however, the District can't wait until all of its operating funds are exhausted before seeking a mill levy increase. Assuming the District can purchase a reasonably priced piece of land, it is conceivable that a modest station can be built with available funds and an aggressive savings plan. While the District has done a good job of managing its financial resources, it is unrealistic to believe that all of the 2011 Comprehensive Plan recommendations can be accomplished without additional support from the taxpayers. The question policymakers must answer is whether to move forward with these recommendations or accept the risks associated with current service gaps.

As with the 2005 Comprehensive Plan, it is reasonable and wise to take a graded approach when prioritizing funding to support these improvements and projects. To that end, the team recommends proposing a property tax increase of 2 to 3 mills for consideration by 2014/2015. The purpose of this increase is to construct a training and fleet service center, offset the increased cost of general operations, and establish a reserve fund to support hiring additional resources. The District must also maintain adequate funds to replace aging apparatus (with a priority of replacing Engine #2703), fully staff the second ambulance, and sustain a 24/7 baseline staffing model.

The six executive summaries outlined are intended to only highlight specific sections of this document. The Action Plan Summary, as described in the next table, defines the organizational priorities and outlines recommendations for consideration and implementation.

Note: Not all findings and recommendations that appear in this report are listed in the Executive Summary.

Action Plan Summary

Priority	Recom Number	Summary	In Effect	Responsible Party
C	1	Fire Station #3 has been in the discussion phase for over 20 years. Existing and proposed new development in South Louisville, has impacted response times to high-risk/high occupancy occupancies. (Finding #1)	24-60 months	Fire Chief
C	2/3	The Management Team and the Board of Directors should establish a funding mechanism and timeline to meet its future capital needs, specifically facilities. (Finding #1)	24 months	Fire Chief/ Board
C	4	Fully implement the paramedic transport program. The District maintains 2 ambulances, however it is only staffed with 1 ½ personnel. While this staffing model has served the District well, it's had some unintended consequences. Engines are short-staffed when a firefighter is assigned to support the second ambulance. (Finding #2)	12 months	Fire Chief
C	5	Re-engineer the existing staff scheduling system to better accommodate 24/7 coverage. Several modifications have been made over the past 5 years, however, significant periods of minimal or no response coverage remains. A career engine company should be considered. (Finding #2)	12-60 months	Fire Chief
C	8	Modify current duty crew schedule. Increase length, include weekends, & implement an e-scheduler and cell phone notification system. Evaluate the need for incentives to cover weakest periods. (Finding #3)	12 months	Fire Chief
C	6	Improve skills mix and consider hiring career command staff to accommodate coverage and incident command and control. Improvement can be realized by certifying additional Driver/Operators and implementing the Battalion Chief staffing concept. (Finding #2)	12-24 months	Fire Chief
C	7	Establish a baseline staffing and capabilities standard (Standards for Cover). Using a graded approach, the District should work to a minimum staffing standard of 10 per day using any combination of staffing options. (Finding #2)	12-60 months	Fire Chief
N	10	Improve EMS quality assurance program and physician advisor interface. The District should strengthen its current QA programs and have more interaction with its physician advisor. (Finding #4)	12-24 months	Operations Chief

Priority	Recom Number	Summary	In Effect	Responsible Party
N	9	<i>At a minimum, the District should have one supervisor on each shift and at each station. (Finding #4)</i>	12-24 months	Fire Chief
N	12	<i>Due to the EMS call volume and amount of activity, there should be a program manager dedicated to ensuring the quality and supervision of the program. The District has made significant advancements in its EMS programs since assuming transport responsibilities, but it lacks the necessary oversight and program supervision to ensure quality. The Planning Team believes that this can still be managed as collateral job function; however, it's simply not practical under the current organizational structure. Training responsibilities require more than 70% of the time, which directly impacts EMS oversight. As outlined in the comprehensive plan, the EMS program would benefit from a dedicated Operations Chief or by implementing the BC concept. (Finding #4)</i>	12 months	Fire Chief
N	13	<i>There has been a need for a dedicated training site for several years. The Department's career/ volunteer staff has doubled in the past 5 years, resulting in more training, and wear & tear on city streets and private buildings. Most importantly, every time training must be conducted outside the District, it reduces overall protection of District residents and properties. (Finding #5)</i>	12-60 months	Fire Chief
N	14	<i>Complete transition to the State of Colorado Driver/Operator certification. At a minimum, the District should initiate a dedicated wildland team and train all members to meet S130/190 certification. (Finding #5)</i>	12-36 months	Training Chief
N	15	<i>The Department has a formalized and well-documented training program plan that meets all local, state, and federally mandated training. However, the Training Division should include annual drills and simulation as a part of its program. (Finding #5)</i>	12 months	Training Chief
N	18	<i>Evaluate the funding necessary to maintain or reduce its current ISO rating. The District should also determine the benefits of the Center for Public Safety Excellence Accreditation and set a target date for implementation, if approved. (Finding #8)</i>	36 months	Fire Chief

Priority	Recom Number	Summary	In Effect	Responsible Party
B	19	<i>As a general business practice, the District should invest in a “technology refresh” every 3 to 4 years. Maintaining modern computers and software is no longer considered a luxury, but a necessity. (Finding #11)</i>	36 months	<i>Fire Chief</i>
N	9	<i>Continue to replace fleet as outlined in Table #12. Moreover, additional specialized apparatus should be purchased to protect & access open space, wildlife preserves, and agricultural lands. (Finding #10)</i>	Ongoing	<i>Fire Chief</i>
B	20	<i>The District has implemented a formalized mutual aid agreement with surrounding area agencies and is part of the “Metro Mutual Aid” agreement with 50 participating agencies. The District should, however, implement an auto-aid program for areas of high-risk and longer response times. (Finding #12)</i>	12-24 months	<i>Fire Chief</i>
B	22	<i>The District has done a remarkable job of developing a computer-based preplan program. That said, the strategies and tactics portion are lacking and should be updated. (Finding #14)</i>	36 months	<i>Operations Chief</i>
N	21	<i>The Management Team and Board of Directors should determine the parameters or set points for requesting additional funding from the taxpayers. It’s not realistic to assume that current funding will support District needs beyond 2015. (Finding #13)</i>	12 month review	<i>Fire Chief/ Board of Directors</i>
N	5a	<i>As a contingency, the District should consider and plan to supplement its career staff during staffing shortages. Staffing Station #3 should be considered as a longer term solution.</i>	12-48 months	<i>Fire Chief/ Board of Directors</i>
N	5b	<i>The District should consider increasing volunteer staffing to support its minimum baseline capability goals. If Recommendation #5a is implemented, the increase in reserves should be re-evaluated. (Finding #2)</i>	12-36 months	<i>Fire Chief</i>
B	18	<i>Performing truck maintenance in a fire station has become a safety issue. Damage to buildings, apparatus, and personnel has occurred during maintenance. The District should move maintenance out of fire stations and, to the extent financially feasible, build a small maintenance facility. (Finding #10)</i>	12-60 months	<i>Fire Chief</i>
B	15	<i>The District does have a documented public education program; however, it still lacks consistent implementation and coordination. Currently, there is no resource assigned to manage this function. (Finding #6)</i>	24 months	<i>Fire Chief</i>

Priority	Recom Number	Summary	In Effect	Responsible Party
B	11	Implement a community-based defibrillator program. The District should consider grants and private funding to facilitate this objective. (Finding #4)	12-60 months	<i>Fire Chief</i>
B	16	The Management Team has done a good job of requiring sprinklers beyond the minimum code requirements. However, it still lacks implementation of the residential component of the 2009 ICC code. The District should continue to work with the city to include this provision. (Finding #6)	12-24 months	<i>Fire Marshal</i>
N	17	<i>Initiate an annual review of the Department's specific goals for each program element. This review should include baseline and benchmark performance measures for fire services. (Finding #7)</i>	Annually	<i>Board of Directors</i>
B	5c	<i>Along with the annual performance and accountability review of District operations, it is always prudent to evaluate other delivery systems. While not considered a priority, the Planning Team believes that evaluating consolidation options completes the operational review cycle. (Finding #2)</i>	12 months	<i>Fire Chief/ Board of Directors</i>

Priority Definitions

(C) Critical: Considered mission critical or directly related to the community's safety envelope or firefighter safety. These are considered a generally higher District priority.

(N) Necessary: Required to maintain current service levels or essential to Fire Department operations and firefighter safety. Will improve public safety and prevention programs.

(B) Beneficial: Fire Department and District operations will benefit from these improvements. Is generally considered a lower priority, however overall public safety will benefit from these programs.