

## **Category 2: Assessment and Planning**

Assessment and planning are defined as the processes used to identify the community's fire protection and other emergency service needs to identify potential goals and objectives. All agencies should have a basic source of data and information to logically and rationally define the organization's mission. Assessment and planning are critical to the establishment of service level objectives, standards of cover, and ultimately, the quality of program outcomes.

The overall purpose of using these processes is to establish a long-range general strategy for the operation of the system.

## **Criterion 2A: Documentation of Area Characteristics**

The agency collects and analyzes data specific to the distinct characteristics of its legally defined service area(s) and applies the findings to organizational services and services development.

### **Summary:**

The department conducted a comprehensive risk assessment of the community served as part of the 2022 Community Risk Assessment Standard of Cover (CRASOC) document. This assessment included analyzing existing department resources: facilities, apparatus, equipment, and personnel.

The department has identified fourteen (14) geographical planning zones in which to analyze risk and forecast future needs. There are seven (7) urban planning zones, which include the City of Lawrence, City of Eudora, and Baldwin City, and seven (7) rural planning zones located in Douglas County. Demographic, socio-economic, and risk information is utilized to provide a thorough description of each planning zone.

Infrastructure information such as roads, transportation systems (rail, highway, air), public transportation, water systems, and electrical stations are all documented within the CRASOC. Topography and geological aspects of the community are also considered in the risk assessment process.

Incident response data from the previous five years is used in a risk assessment methodology to categorize and classify risk across all service provisions. Additionally, critical task analysis for each incident type has been developed and are included in the CRASOC.

**Performance Indicators:**

2A.1 Service area boundaries for the agency are identified, documented, and legally adopted by the authority having jurisdiction.

**Description**

On December 16, 1996, the City of Lawrence entered into an inter-local agreement with Douglas County to merge the existing Lawrence Fire Department and the Douglas County Ambulance Service into one combined agency. This combined agency was named Lawrence-Douglas County Fire and Medical. Pursuant to this inter-local agreement, the City of Lawrence adopted Chapter VIII, Article I, section 8-101 of the municipal code that legally establishes within the City of Lawrence, Lawrence-Douglas County Fire and Medical.

As a result of the combining of the two agencies, the department became the sole EMS provider for all of Douglas County. This has been managed through a cooperative agreement between Douglas County and the City of Lawrence in 2021. The agencies agreed to governance obligations, a specified financial obligation including cost share breakdown, and other items related to EMS resources.

On August 6, 1957 the governing body of the City of Lawrence adopted Ordinance No. 2725, which established that the City agreed to furnish firefighting service to Grant Township. This agreement, between Grant Township and the City of Lawrence, has been updated multiple times since its inception, to make necessary adjustments regarding reimbursement and payment. The most recent agreement concerning the provision of fire services by the City of Lawrence to Grant Township was entered into on November 22, 2021 and is set to terminate on December 31, 2022.

**Appraisal**

The service area boundaries for each service provision have been formally identified, documented, and legally adopted, however, the department sees potential for the provisions of Hazardous Material Response and Technical Rescue services to be more specifically addressed in a formal document.

**Plan**

The 2021-1122 Grant Township Fire Services Agreement expires at the end of 2022. Therefore, the authorities having jurisdiction will need to review and propose a new agreement. The Governance Committee will continue to monitor the effectiveness of the 2021 EMS Cooperative Agreement and propose amendments as needed.

The department will work through the governance committee and with external agencies to evaluate an opportunity for a formal agreement regarding hazardous material and technical rescue responses throughout Douglas County.

**References**

2021-1122 Grant Township Fire Services Agreement  
Cooperative Agreement Regarding the Provision of Emergency Medical Services in  
Douglas County 2021 (2021 EMS Cooperative Agreement)  
Chapter VIII, Article I, Section 8-101  
Ordinance 5087  
Ordinance 5471  
Ordinance 2725

2A.2 Boundaries for other service responsibility areas, such as automatic aid, mutual aid, and contract areas, are identified, documented, and appropriately approved by the authority having jurisdiction.

**Description**

The department identifies and defines boundaries for service responsibility areas within the Community Risk Assessment Standards of Cover (CRASOC). The department is the sole EMS provider within Douglas County and only provides fire suppression to the City of Lawrence and Grant Township.

The department also provides HazMat services under the Douglas County EOP - Resolution 89-47. The department does not operate under a formal agreement for Technical Rescue. The department supplements the county departments during technical rescue incidents, county-wide.

The department provides services to three major urban population density areas: City of Lawrence, City of Eudora, and Baldwin City. All city and county boundaries are incorporated into the department's deployment model to mobilize resources based on approval by the authority having jurisdiction.

**Appraisal**

The department's lack of clarity and formal agreements with Douglas County regarding the hazardous materials and technical rescue services has created uncertainty in the department's role and responsibilities for upholding these provisions. The department is recognized as the primary response agency for mitigating hazardous materials incidents and is funded accordingly, however, there has not been an updated agreement since 1989.

The department's current agreement with Grant Township does not support the department's perspective of a fair funding level. In 2021, the department conducted a financial analysis regarding the current and proposed fire services agreement between the City of Lawrence and Grant Township. The agreement for 2021 did not accurately reflect what the department and city felt like were fair.

**Plan**

The department will continue to maintain defined service boundary areas and re-evaluate as necessary to improve response capabilities. The department will consider discussing the opportunity to establish updated agreements depicting service responsibility areas in relation to hazardous materials and technical rescue incidents. Discussions between the department, AHJ, and Grant Township will continue regarding future renewal regarding the coverage of Grant Township.

### **References**

2022 Community Risk Assessment Standards of Cover (CRASOC)

2021-1122 Grant Township Fire Services Agreement

Cooperative Agreement Regarding the Provision of Emergency Medical Services in Douglas County 2021

EOP Base Plan Douglas County

Resolution No 89-47 (HazMat)

2022 City of Lawrence Grant Township Fire Service Agreement Analysis\_Final

Douglas County Tender Response Auto Aid Agreement

Kansas Mutual Aid System Overview

**CC 2A.3 The agency has a documented and adopted methodology for organizing the response area(s) into geographical planning zones.**

**Description**

The department currently has urban and rural geographical planning zones throughout all of Douglas County. The current zones are correlated with the primary response district for each fire medical station. These geographical planning zones are documented and formally adopted in the 2022 CRASOC.

**Appraisal**

The fourteen (14) geographical planning zones currently utilized by the department were designed to coincide with station response areas. These planning zones were used to develop the 2022 CRASOC. While developing this document, it was determined that the current planning zones are too large and need to be reduced in size. This reduction would enable to the department to capture additional data about the community served, response performance gaps and additional needs related to community risk reduction.

It has been the department's intent to redesign the current planning zones in conjunction with station expansion. Changes related to the redesign of planning zones has not been completed because station expansion has not yet been funded. The department has also identified opportunities to redesign the planning zones to align with mutual aid agencies.

**Plan**

The department sees potential in adjusting the geographical planning zones in order to enhance communication to the authority having jurisdiction related to response performance and service gaps. When funding for station expansion is identified, the department will work to complete short term recommendation #1 in the CRASOC and recommend a new design for planning zones. Re-evaluating geographical planning zones will increase the department's ability to provide higher quality community risk reduction efforts and aid in inter-agency initiatives. The department needs to develop a secondary plan and timeline to rethink planning zones in the event that station expansion is unfunded.

**References**

2022 CRASOC Draft – Planning Zones (page 3, pages 53-54, and pages 66-95)

2022 CRASOC Final – Planning Zones (page 3, pages 57-58 and pages 70-98)



**CC 2A.4**      **The agency assesses the community by planning zone and considers the population density within planning zones and population areas, as applicable, for the purpose of developing total response time standards.**

**Description**

In the department’s 2022 CRASOC, all planning zones within Douglas County are evaluated. The department serves seven (7) urban population density areas along with seven (7) rural population density areas in Douglas County. Population densities are taken using United States Census data and Environmental Systems Research Institute (ESRI) Geographic Information Systems (GIS) software. On an annual basis, documented in the Annual Compliance Report, the department reports response performance related to High Risk Fire, High Risk EMS, and Moderate Risk EMS incidents for each relevant planning zone. The CRASOC identifies benchmark service level objectives and baseline performance.

**Appraisal**

The department has annually assessed the response performance for each planning zone. The department’s critical response gap areas within the City of Lawrence and Douglas County were identified in the CRASOC, using the coverage of the 4-minute travel time and 10-minute travel time polygons. Recommendations on department coverage capabilities were produced to address these gap areas. It has been identified that the current planning zones are broad in nature, and would not be suitable for effective planning and community risk reduction efforts.

In 2021, a CRASOC task force was formed by operations and administrative employees to analyze the community’s need for hazard mitigation and has identified updated critical tasking related to call natures. Through the critical tasking activity, the task force considered incident location potential and correlated resource needs.

**Plan**

As the community and response area grows, the department plans to re-evaluate and re-design planning zones throughout the entire county. The accreditation manager and fire chief will monitor and coordinate efforts to do so.

The department will work with the AHJ to review and adjust, if necessary, response performance benchmarks for all planning zones.

### **References**

2022 CRASOC Draft – Planning Zones (pages 53-54 and pages 66-95)

2022 CRASOC Final – Planning Zones (pages 57-58 and pages 70-98)

2022 CFAI Annual Compliance Report (pages 15, 20-21)

CRASOC Work Session Review Notes

2A.5 Data that include property, life, injury, environmental, and other associated losses, as well as the human and physical assets preserved and/or saved, are recorded for a minimum of three (initial accreditation agencies) to five (currently accredited agencies) immediately previous years.

### **Description**

The department collects and records incident data using the record management system (RMS), ESO. The data is recorded in the Fire Incidents module for any incident that has loss or saved values. ESO is a cloud-based system and is contracted to retain the data while the department retains an active user agreement. The department has created a quality control mechanism that includes multiple reporting tool documents and a quality control daily report. The reporting tool documents are located on the department's intranet and available to all employees. The quality control daily report is created by the Administrative Division and provided to command staff. The command staff communicates with report writers to ensure quality control compliance.

The department transitioned to the ESO RMS for Fire Incident Reports in 2021. Incident data from 2017-2020 was recorded in Firehouse RMS. The City of Lawrence Information Technology group has exported this data and is kept in an in-house database.

### **Appraisal**

The department collects data related to property, life, injury, environmental, and other associated losses, as well as human and physical assets preserved and/or saved. Annually, the department conducts a program appraisal that includes this information. The program appraisals have been beneficial for creating a standardized template to communicate program effectiveness. The appraisal has been used to influence and steer budget requests through operational funding proposals, enhanced community risk reduction efforts, and station expansions. Formal reports are made on an as needed basis.

### **Plan**

The City Information Technology (IT) Department plans on using the newer governing technology policy (draft) and corresponding procedures for technology-related and physical assets. Document retention will continue to adhere to the State of Kansas policy

and local city government procedures. The department will continue to maintain quality incident data within the ESO RMS system and archived Firehouse records. This data will be utilized to develop future community risk reduction efforts in order to target areas in which greater loss is being recorded.

The department will continue to evaluate the effectiveness of the department's quality control mechanisms and reporting tool documents. The department will continue analyzing loss/save numbers to quantify its ability to prevent, mitigate, and plan for hazards in the community.

### **References**

[Kansas Records Retention Schedule website](#)

Quality Control Daily Report

LDCFM ESO Fire Training Manual

NFIRS Codes and Descriptions 2022

NFIRS 5.0 Complete Guide January 2015

2021 Fire Suppression Program Appraisal

Firehouse RMS (available on-site)

2A.6 The agency utilizes its adopted planning zone methodology to identify response area characteristics such as population, transportation systems, area land use, topography, geography, geology, physiography, climate, hazards, risks, and service provision capability demands.

### **Description**

The department has adopted fourteen (14) planning zones. This includes seven (7) urban and seven (7) rural planning zones. As documented in the 2022 CRASOC, these planning zones are each described using various data sets that include: population totals, median age, household information (household totals, average household income, average household size), persons with 1+ disability, households with no vehicles, and number of businesses.

Additionally, the department has described characteristics unique to each planning zone in the CRASOC that includes building type profiles, area land use, transportations systems, special hazards, and associated risks.

To stay current on information related to planning zones, the department collaborates with the City's IT Department to utilize GIS data and mapping capabilities.

### **Appraisal**

The utilization of planning zone characteristics and datasets in the 2022 CRASOC has enabled the department to communicate current and future needs within the service area to the community and authority having jurisdiction (AHJ). The department would like to increase the use of planning zone characteristics to influence deployment and enhanced community risk reduction efforts.

### **Plan**

Using the 2022 CRASOC, the department will collaborate with internal and external partners to update the planning zones throughout Douglas County. Updated planning zones will be used to coordinate community risk reduction activities with our regional

partners. This has been identified within the 2022 CRASOC Short Term Recommendation #2.

The department will continue utilizing the CRASOC task force to evaluate potential for bolstered deployment and resource management recommendations. Response area characteristics will be used to guide recommendations. The department will work through management channels to communicate and propose the recommendations.

**References**

2022 CRASOC Draft – Planning Zones (pages 53-54 and pages 66-95)

2022 CRASOC Final – Planning Zones (pages 57-58 and pages 70-98)

2022 CRASOC – Short Term Recommendation #2 (page 3)

CRASOC Work Session Review Notes

2A.7 Significant socioeconomic and demographic characteristics for the response area are identified, such as key employment types and centers, assessed values, blighted areas, and population earning characteristics.

### **Description**

The department participates with the city executive team, other city departments, strategic plan outcome teams, and county groups to evaluate and plan future service needs. The planning process includes an in-depth study of economic indicators, which includes population earning characteristics.

The department uses the 2022 CRASOC to document the community's significant socioeconomic and demographic characteristics, including population earning characteristics (median family income and median household income), and housing data. Additionally, the CRASOC documents the top ten largest employers in Douglas County and their related employment type (i.e. manufacturing, government, healthcare).

### **Appraisal**

The department has worked extensively with the City of Lawrence's Planning and Development Services in previous studies, such as the 2020 Station Optimization Analysis, to identify growing population trends within the City of Lawrence. The department has identified several socio-economic and demographic characteristics for the response area and provided them in the CRASOC (pages 23-28 and 66-95). However, the department has not had a standardized process of utilizing community and population characteristics to directly impact community risk reduction efforts and initiative recommendations.

### **Plan**

As the City of Lawrence continues to grow and expand, the department will continue to work with the City's GIS team to re-evaluate developing areas to ensure all demographics are current and reflective for the response area annually. The department will utilize non-traditional community data to build more collaborative systems for a safer community.

**References**

2022 CRASOC Draft – Planning Zones (pages 23-28 and pages 66-95)

2022 CRASOC Final – Planning Zones (pages 24-30 and pages 70-98)



2A.8 The agency identifies and documents all safety and remediation programs, such as fire prevention, public education, injury prevention, public health, and other similar programs, currently active within the response area.

### **Description**

The department uses annual program appraisals to identify and document all safety and remediation programs. Program managers are identified and documented in SOP 103.30 Continuous Improvement System and SOP 102.2 Program Management-Assignments. The program appraisals are reviewed at the command staff level during the budget proposal period to identify opportunities for funding to enhance program effectiveness.

The department's Prevention and Training Divisions primarily lead the safety and remediation programs. The Prevention Division performs several activities related to safety and remediation, such as: burn permits and requirements, code enforcement, fire investigations bureau, home fire safety inspection program, plans review, night consultants, and occupant services. The oversees several programs specific to community education and outreach: public education visits, public CPR, safety and hazard house, wheeled sports safety program, and youth fire setter prevention and intervention program.

### **Appraisal**

Program appraisals are updated on an annual basis, reviewing the previous year. Using quantifiable data within program appraisals has enabled the department to evaluate effectiveness in a standardized manner. The department has maintained a commitment to utilize data to influence recommendations to the AHJ on business practices. Value would be added if the program appraisals were easier to digest by internal reviewers to implement changes.

### **Plan**

The accreditation manager will review the program appraisal process and propose a way to institutionalize the review and usage of the program appraisals to fit into the Continuous Improvement System by updating SOP 103.30 Continuous Improvement System with proposed changes in 2023. The department will continue to utilize quantifiable data for program review and evaluation.

**References**

SOP 103.30 Continuous Improvement System

SOP 102.20 Program Management Assignments

2021 Public Education Program Appraisal

2021 Community Risk Reduction Program Appraisal

2A.9 The agency defines and identifies infrastructure that is considered critical within each planning zone.

**Description**

The department defines and identifies critical infrastructure within the City of Lawrence and Douglas County in the 2022 CRASOC. The department has identified important public infrastructure that supports emergency response. Infrastructure is an essential resource that plays a role in determining the department's ability to reach, control, and terminate an emergency incident. Planning zone profiles are listed in the 2022 CRASOC and depict zone characteristics along with minor infrastructure information.

The Prevention Division communicates changes in critical infrastructure to the department through emails.

**Appraisal**

The Prevention Division has been involved in the development process as early as the Initial Inquiry and concept or pre-submittal meetings. Through these meetings the need for waterlines, hydrant placement, street size, access needs, and utility locations are determined. Regular feedback is provided as plot plans, subdivision, preliminary and final development plans, and site plans are submitted. Special consideration has been given to underground utility locations, notably pipelines. Development projects and review comments are managed within the City Innoprise Community Development software program which has been available to staff and developers.

Information related to infrastructure was used within the 2022 CRASOC to highlight essential resources that play a role in determining the department's ability to reach, control, and terminate an emergency incident.

**Plan**

The department will work with Planning and Development Services to identify critical infrastructure within planning zones as the City of Lawrence expands.

The department will work the Planning and Development Services and the Municipal Services and Operations Departments to create a streamlined process to communicate when there are changes made to critical infrastructure. The department will evaluate the potential of utilizing geographical information systems (GIS) to access and display critical infrastructure information (i.e. hydrant status).

**References**

2022 CRASOC Draft (pages 12-16 and 66-95)

2022 CRASOC Final (pages and pages 70-98)

Innoprise Community Development Software (available on site)

**Criterion 2B: All-Hazard Risk Assessment and Response Strategies**

The agency identifies and assesses the nature and magnitude of all hazards and risks within its jurisdiction. Risk categorization and deployment impact consider factors such as cultural, economic, historical and environmental values, as well as operational characteristics.

**Summary:**

The department has documented the adopted methodology for identifying, categorizing, and classifying all risks in the recent publication of the 2022 Community Risk Assessment Standards of Cover. Using the three-axis risk methodology with agreed upon metrics, the department is working to re-assess, categorize, and classify risks in Douglas County. The three-axis model includes probability of occurrence, consequence to the community, and impact to the organization.

## **Performance Indicators:**

**CC 2B.1      The agency has a documented and adopted methodology for identifying, assessing, categorizing and classifying all risks (fire and non-fire) throughout the community or area of responsibility.**

### **Description**

The department has documented the adopted methodology for identifying, categorizing, and classifying all risks in the 2022 CRASOC. Using the three-axis risk methodology with agreed upon metrics, the department is working to re-assess, categorize, and classify risks in Douglas County. The three-axis model includes probability of occurrence, consequence to the community, and impact to the organization. This methodology uses Heron's formula modified for tetrahedrons to calculate a measure of risk by incorporating three values. The scores are inserted into the formula to create a risk rating. The risk rating is equivalent to the surface area. The department utilizes the scores to assign a category of risk, based on the degree (low, moderate, high, or maximum).

### **Appraisal**

In 2022, the department updated its risk scoring to include call natures that were adopted after the publication of the 2017 CRASOC. Some of these include Structure Fire Level 1, Structure Fire Level 2, Arcing Line, Powerline Down, Stabbing Level 1, Shooting Level, 1, and Hazardous Materials Level 1.

Additional enhancements were recognized as needed through the evaluation of the risk scoring and assigned to a task force, the CRASOC Task Force, to propose updated risk methodology scoring matrices and related deployment alterations. Thus far, the task force has crafted updated risk matrices, refined the call nature list, and critical tasked every incident type.

### **Plan**

Critical tasking of incident types is being updated by the 2022 CRASOC task force and will be used to update SOP 202.10 Alarms and Responses. The task force will present the

recommendations to the department's command staff after reconciling technical implications and process changes with the Douglas County Emergency Communications Center. Operational changes will follow. The department will be working collaboratively with the City of Lawrence Information Technology team, the Douglas County Sheriff's Office Information Technology team, and the Douglas County Emergency Communications Team to update and implement the new alarms and responses procedure.

The department's CRASOC task force is working towards an enhanced risk scoring for all call types. The task force is creating a list of recommended call natures, updated deployment models, risk scoring matrices, and associated critical tasking.

### **References**

2022 CRASOC Draft (Module 3, pages 53-100)

2022 CRASOC Final (Module 3, pages 57-104)

Updated 3 axis risk scoring matrices

SOP 202.10 Alarms and Responses

CRASOC Work Session Review Notes

2B.2 The historical emergency and nonemergency service demands frequency for a minimum of three immediately previous years and the future probability of emergency and non-emergency service demands, by service type, have been identified and documented by planning zone.

### **Description**

The department analyzes historical response time performance against risk category and class. High-risk fire and EMS incidents of a period of the last five years are mapped and published in the 2022 CRASOC. The map identifies the location and frequency of quality response time responses.

The department identifies and documents emergency and non-emergency service demands by incident type on an annual basis. Reports including historical datasets are created on an as-needed basis. The department evaluates projected population growth, proposed annexation areas, and historical service demands to evaluate future probability. On an annual basis, documented in the Annual Compliance Report, the department reports response performance related to High Risk Fire, High Risk EMS, and Moderate Risk EMS incidents for each relevant planning zone. The department also utilizes GIS mapping to visualize the frequency of all incidents, emergency incidents, and incidents per classification and category.

### **Appraisal**

The maps in the CRASOC have assisted the department to identify where response gaps are in the community, and where these gaps may be impacted by community development. This information was used to assist in the formulation of time-based recommendations to maintain or enhance response time quality to the community.

The focus on organizational demands has been on emergency response performance. Non-emergency demand has not been evaluated from the stand point of how it impacts the standard of cover. The impact of non-emergency medical transfers should be monitored



closely. The commit time of units on these incident types is significant due to definitive care facilities being located thirty miles or more away from the City of Lawrence. Emergency resources are used for non-emergency incident type responses.

The department has identified an opportunity to utilize historical emergency and non-emergency data to influence community risk reduction efforts and increase communication to AHJ. Communication to the AHJ has primarily focused on emergency response performance data within each planning zone and annual call count in a broad sense. Utilizing more specific data related to service demand frequency and planning zones could help create a more holistic representation of department activity.

### **Plan**

The Administrative Division will aggregate emergency and non-emergency data to be visualized on maps to supplement future probability forecasting of resource demands. Incorporating this data could help create a more holistic representation of department activity. This data will influence recommendations moving into the future related to resource needs. The accreditation manager will collaborate with City GIS staff to continue to expand these maps to include other risk classifications and categories.

### **References**

- 2022 CRASOC Draft (pages 147-158, 162-163)
- 2022 CRASOC Final (pages 153-164, 168-169)
- 2022 CFAI Annual Compliance Report

2B.3 Event outputs and outcomes are assessed for three (initial accrediting agencies) to five (currently accredited agencies) immediately previous years.

**Description**

The department utilizes the annual program appraisals to evaluate and document outputs and outcomes for fire suppression, emergency medical services, hazardous materials, and technical rescue programs.

The 2022 CRASOC and related recommendations consider the adopted emergency response performance benchmarks. Understanding that time directly impacts the severity of risk during emergency events, the department and AHJ recognize the correlation between response time capabilities and expected community outcomes. Therefore, the community’s expected outputs and outcomes from emergency response performance drive department resource recommendations, of life and property related to mitigation time of an incident is considered.

Through the city’s strategic plan, the department has specific key performance indicators (KPI’s) that are tied to program outcomes. The programs that are specifically addressed include EMS, fire suppression, and community risk reduction. The department reports on the outcomes to the following KPI’s:

SaS-3: Percent of fires contained to their room of origin

SaS-4: Percent of cardiac arrest patients with pulsatile rhythms upon arrival to a hospital

SaS-5: Number of responses to a mental health crisis per 1,000 residents

SaS-8: Percent of residents rating trust in emergency services departments as satisfied or very satisfied (Fire)

Opportunities for program improvement are identified and incorporated into the department’s budget proposal.

**Appraisal**

The process of reviewing event outputs and outcomes has been evaluated at the program level on an annual basis and has the potential to be enhanced if conducted on a more frequent basis. The department has maintained a commitment to utilize data to influence recommendations and communicate to the AHJ on quality practice standards. Value would be added if the program appraisals were easier to digest by internal reviewers to implement changes.

### **Plan**

To align actionable change with the outputs and outcomes identified in the program appraisals, the department will review the program appraisal process. Through the evaluation, the department will aim to create a system to utilize program appraisals in a more beneficial way.

### **References**

2021 Fire Suppression Program Appraisal

2021 Emergency Medical Services Appraisal

CIP Request Fire Medical Station Number 6

[City's Strategic Plan Safe and Secure KPI's](https://lawrenceks.org/strategic-plan/) (https://lawrenceks.org/strategic-plan/)

**CC 2B.4 The agency's risk identification, analysis, categorization, and classification methodology has been utilized to determine and document the different categories and classes of risks within each planning zone.**

**Description**

Documented in the 2022 CRASOC, the department identifies and analyzes calls for service by risk categories and risk classifications based on the three-axis risk methodology scores. The department's risk categorization and classification are analyzed per planning zone. The department's risk classifications include fire, emergency medical services, technical rescue, and hazardous materials. The department's risk categorization includes low, moderate, high, and maximum. Not all risk classifications have a maximum risk category. The department identifies risk categorization and classification for each call nature (dispatching call type) and incident type (NFIRS codes).

**Appraisal**

The department utilized the call nature list to identify risk scoring using the three-axis methodology. Each call nature and incident type categorization and classification have been established and uses for risk identification, analysis and remedial action recommendations.

Additional enhancements were recognized as needed through the evaluation of the risk scoring and assigned to the CRASOC Task Force to propose updated risk methodology scoring matrices and related deployment alterations. Risk categorization and classifications may look different with the work completed through this process. Thus far, the task force has crafted updated risk matrices, refined the call nature list, and critical tasked every incident type.

**Plan**

Risk categorization and classification in each planning zone will continue to be utilized to analyze department demand, hazard potential, and response capabilities to mitigate. The department will continue utilizing the established risk categorization and classification lists until the recommended updates are approved.

Critical tasking of incident types is being updated by the 2022 CRASOC task force and will be used to update SOP 202.10 Alarms and Responses. The task force will present the recommendations to the department's command staff after reconciling technical implications and process changes with the Douglas County Emergency Communications Center. Operational changes will follow. The accreditation manager will work to incorporate more specific data related to service demand frequency and planning zones could help create a more holistic representation of department activity.

### **References**

2022 CRASOC Draft (pages 53-100)

2022 CRASOC Final (pages 57-104)

Updated 3-axis risk scoring matrices

2022 CRASOC Task Force Risk Scoring Work

CRASOC Work Session Review Notes

2B.5 Fire protection and detection systems are incorporated into the risk analysis.

### **Description**

The city maintains a database of locations within the City of Lawrence that have fire protection and detection systems. Currently, the department does not incorporate these systems into the risk analysis. These items are not currently used when deploying emergency resources. The department's deployment package for a structure fire does not differentiate between a building with a suppression system and one without. The current call natures and associated deployment packages do not differentiate between any building characteristics. The call natures for structure fire include Structure Fire Level 1, Structure Fire Level 2, and Structure Fire Level 3.

The department is working with the City of Lawrence GIS team and Douglas County Emergency Communications Center to investigate the viability of incorporating GIS data to influence deployment of emergency resources.

### **Appraisal**

Through the 2022 CRASOC work sessions, the department collaborated with the city's Information Technology team and the Douglas County Emergency Communications Center and discussed the opportunities related to enhancing call natures and associated deployment packages to better utilize and manage resource resiliency. The department has identified the opportunity to enhance the deployment model and resource allocation through the usage of GIS data to determine if a location has fire protection or detection systems.

### **Plan**

The department will be moving forward through collaborative efforts with the emergency communications center and the city's GIS team to implement the enhanced deployment model that aligns with the department's critical tasking. Critical tasking of incident types is being updated by the 2022 CRASOC task force and will be used to update SOP 202.10 Alarms and Responses. The task force will present the recommendations to the department's command staff after reconciling technical implications and process changes

with the Douglas County Emergency Communications Center. Operational changes will follow.

**References**

2022 CRASOC Draft (pages 53-100)

2022 CRASOC Final (pages 57-104)

SOP 202.10 Alarms and Responses

CRASOC Work Session Review Notes

Proposal Risk Matrix Draft

2B.6 The agency assesses critical infrastructure within the planning zones for capabilities and capacities to meet the demands posed by the risks.

**Description**

The department defines and identifies critical infrastructure within the City of Lawrence and Douglas County in the 2022 CRASOC. The department has identified critical infrastructure that supports emergency response. Planning zone profiles are listed in the 2022 CRASOC and depict zone characteristics, along with minor infrastructure information. The infrastructure within each planning zone is considered when evaluating deployment and resource capabilities.

**Appraisal**

Currently, the department and Planning and Development Services (PDS) work primarily independent of each other when analyzing critical infrastructure and associated risk. Progress has been made on the integration and collaboration related to critical infrastructure information through the use of GIS. The department’s collaboration with the city’s GIS team has been beneficial in regards to the additional information provided relative to infrastructure throughout the City of Lawrence.

**Plan**

The department will work with Planning and Development Services to identify critical infrastructure within planning zones as the City of Lawrence expands. Efforts to utilize critical infrastructure information relative to department capabilities and capacities will be considered in future deployment recommendations.

**References**

2022 CRASOC Draft (pages 29-52 and pages 66-95)

2022 CRASOC Final (pages 31-56 and pages 70-98)



2B.7 The agency engages other disciplines or groups within its community to compare and contrast risk assessments in order to identify gaps or future threats and risks.

### **Description**

The department's 2020 Station Optimization Analysis kicked off collaborative efforts between the department and other groups in the community. Internal and external stakeholders exchanged data and maps. Douglas County Public Health, Lawrence Police Department, Planning and Development Department, and the City's GIS group were amongst the contributors. The department has continued to build on these relationships through collaborative efforts when developing the 2022 CRASOC. Specifically, city GIS and the Douglas County Emergency Communication Center's staff were present through the work sessions facilitated by the Technical Advisors Program (TAP) and have continued to provide integral data and information to the department.

The department participates in the Douglas County Data Sharing Collaborative. The group meets monthly to review and discuss risk and areas of focus within the Douglas County health system. The department participates in agency and system-wide high-utilizer studies. To identify patient treatment gaps, the department uses My Resource Connection software to aid in real-time data sharing between the local public health agencies.

### **Appraisal**

Currently, the process to compare and contrast risk assessments is very reactive. The work to identify gaps or future threats and risks is performed on an as-needed basis. The Douglas County Data Sharing Collaborative has the potential to be an effective resource for enhanced risk assessment identification projects. The Douglas County Emergency Management team conducts a risk assessment every five years. This risk assessment was not utilized when the 2022 CRASOC was developed.

### **Plan**

For the future development of the CRASOC, the department will collaborate with internal and external partners and utilize other risk assessment publications to develop a more comprehensive and collaborative document. Other risk assessment publications will also be considered when organizational and deployment related recommendations are made.

## **References**

2022 CRASOC Draft

2022 CRASOC Final

Defining High Utilizers and Understanding the System's Impact on Patient Outcomes

## **Criterion 2C: Current Deployment and Performance**

The agency identifies and documents the nature and magnitude of the service and deployment demands within its jurisdiction. Based on risk categorization and service impact considerations, the agency's deployment practices are consistent with jurisdictional expectations and with industry research. Efficiency and effectiveness are documented through quality response measurements that consider overall response, consistency, reliability, resiliency, and outcomes throughout all service areas. The agency develops procedures, practices, and programs to appropriately guide its resource deployment.

### **Summary:**

The department uses the Community Risk Assessment Standards of Cover to identify and incorporate risk, service areas, demographics, and socio-economic factors which serve as the basis for the current response deployment. This risk assessment includes hazards associated with fire, emergency medical services, technical rescue, and hazardous materials to develop a consistent response strategy for all service programs.

Deployment levels and capabilities are evaluated and communicated annually to the Authority Having Jurisdiction (AHJ). Emergency response performance is assessed and measured against established benchmarks to determine effectiveness and areas for improvement.

Guidance is established within department policies and procedures and evaluated through operational deployment. The department has identified the need for more consistent and agile performance evaluation and solution implementation.

## **Performance Indicators:**

**CC 2C.1** Given the levels of risks, area of responsibility, demographics, and socio-economic factors, the agency has determined, documented, and adopted a methodology for the consistent provision of service levels in all service program areas through response coverage strategies.

### **Description**

The department uses the Community Risk Assessment Standards of Cover to identify and incorporate risk, service areas, demographics, and socio-economic factors which serve as the basis for the current response deployment. This risk assessment includes hazards associated with fire, emergency medical services, technical rescue, and hazardous materials to develop a consistent response strategy for all service programs. SOP 103.20 Response Performance and Outcomes establishes outcome objectives for each risk class. A compliance methodology is in place to monitor and identify trend that may negatively impact service quality.

Each year, the department updates the demand and performance tables. The strategic plan is also updated on an annual basis to document progress on goals and objectives. This information is used to influence budget initiatives and proposals.

The department is in the soft launch phase of deploying an operational dashboard. The dashboard displays active incidents, incident count, unit availability and status, and a map with incident and unit locations. The map is currently being used and evaluated by operations chief officers. The objective of the map is to provide the department, specifically chief officers, with a visual representation and understanding of resource commitment and dispersion.

### **Appraisal**

The department has performed several tasks which were included in the formulation of risk identification, classification, and categorization. Specifically, critical tasks to mitigate hazards associated with risk classes which influence the quality of outcomes to the community. While exploring opportunities relative to potential deployment changes,

additional enhancements were recognized through the evaluation of the current risk scoring. To continue developing ideas brought up throughout the creation of the current CRASOC, the CRASOC task force identified the need to further update the risk methodology matrices and recommend updates to the department's deployment model. Thus far, the task force has crafted updated risk matrices, refined the call nature list, and critical tasked every incident type. The department has recognized that specific service level expectations relating to coverage strategies and outcome quality, versus output quality should be discussed with the AHJ if funding for deployment enhancements is not secured.

### **Plan**

The command staff will update SOP 103.20 Response Performance and Outcomes to accurately reflect outcomes and alignment with the city's strategic plan. Service level expectations, related to emergency response performance will be discussed with the AHJ.

The CRASOC task force will continue its efforts to update deployment relative to department capabilities and risk management. The task force will present the recommendations to the department's command staff after reconciling technical implications and process changes with the Douglas County Emergency Communications Center. Operational changes will follow.

The department will continue working through the soft launch of the operations dashboards with a goal of department-wide implementation within each station in 2023. This will enhance the department's ability to have access to real-time information and increase resource dependability.

### **References**

SOP 103.20 Response Performance and Outcomes

2022 CRASOC Draft (pages 66-95)

2022 CRASOC Final (pages 70-99)

CRASOC Work Session Review Notes

ESRI GIS Dashboard (available on-site)



**CC 2C.2      The agency has a documented and adopted methodology for monitoring its quality of emergency response performance for each service type within each planning zone and the total response area.**

**Description**

SOP 103.20 Response Performance and Outcomes documents the department’s methodology for monitoring its quality of emergency response performance. This methodology primarily relies on the accreditation manager to produce and monitor data which is communicated to the command staff.

The current methodology includes monitoring of annual response performance for the whole response area and the reliability of benchmark response travel time on High Risk Fire, High Risk EMS, and Moderate Risk EMS events by relevant planning zone. Additional monitoring of service type performance within each planning zone is conducted on an as-needed basis.

The department evaluates all risk classification and categorization emergency response performance metrics and reports on significant baseline performance in the annual compliance report. Low classification risk data and small datasets for risk classification/categories are excluded from the ACR baseline performance tables. The tables are used to establish the departments baseline performance levels.

**Appraisal**

The department’s SOPs that cover response performance and outcomes have created a standardized way of capturing and evaluating data. The department has identified a need to increase its capabilities related to compliance monitoring through both human and technology resources. This need extends beyond the position of the data analyst in order for the department to effectively and sustainably monitor how the rapidly growing community is affecting response time quality and outcomes.

**Plan**

The department will work towards creating a standardized process to evaluate service type performance outputs and outcomes within each planning zone to more effectively

communicate the department's need for deployment evolution and community risk reduction efforts. The department will also work to create depth within the Administrative Division to produce and monitor data to show emergency response performance.

The department will continue to explore tools within ESO records management system to increase accessibility to response performance data. The department will also continue to collaborate with the city's Information Technology Department to explore data analysis tools. Microsoft PowerBI has been mentioned throughout city-wide tool discussions.

### **References**

SOP 103.20 Response Performance and Outcomes

SOP 103.21 Response Performance and Outcomes Appendix A, Baseline

SOP 103.22 Response Performance and Outcomes Appendix B, Benchmarks

2022 CFAI Annual Compliance Report (pages 13-29, 149, 152, and 153)



2C.3 Fire protection systems and detection systems are identified and considered in the development of appropriate response strategies.

### **Description**

The City of Lawrence GIS team and the department has identified the presence of fire protection systems within the City of Lawrence; however, the department does not currently incorporate fire protection and detection systems into the deployment of emergency resources. The department's deployment package for structure fires does not differentiate between a building with a suppression system and one without.

The department is working with the City of Lawrence GIS team and Douglas County Emergency Communications Center to investigate the viability of incorporating GIS data to influence deployment of emergency resources.

### **Appraisal**

The department has recognized an opportunity to enhance deployment and increase data intelligence information like the presence of fire protection systems and detection systems. Through the 2022 CRASOC work sessions, the department collaborated with the city's Information Technology team and the Douglas County Emergency Communications Center and discussed the opportunities related to enhancing call natures and associated deployment packages to better utilize and manage resource resiliency. The department has identified the opportunity to enhance the deployment model and resource allocation through the usage of GIS data to determine if a location has fire protection or detection systems.

### **Plan**

The 2022 CRASOC task force will continue to make recommendations for integration of various datasets to enhance response deployment. The task force will present the recommendations to the department's command staff after reconciling technical implications and process changes with the Douglas County Emergency Communications Center. Operational changes will follow. The department will work through management channels to discuss data integration through the IT Governance Committee.

**References**

2022 CRASOC Draft (pages 66-95)

2022 CRASOC Final (pages 70-99)

SOP 202.10 Alarms and Responses

Fire Suppression Systems Map

Proposal Risk Matrix Draft

**CC 2C.4     A critical task analysis of each risk category and risk class has been conducted to determine the first due and effective response force capabilities, and a process is in place to validate and document the results.**

**Description**

The department uses a critical task analysis for each call type, relative to the risk category and class. These critical tasks are found in the 2022 Community Risk Assessment Standards of Cover (2022 CRASOC) document. The resulting staffing and apparatus needs are then incorporated into the Effective Response Force (ERF). There is an established ERF for each risk classification and category.

The department revised critical tasking with the development of the 2017 CRASOC for all risk classifications and categories. These lists were revised by department employees who were assigned to complete the 2017 CRASOC. The lists were then reviewed by chief officers and revisions were made to reflect consensus, and ultimately published in the document.

The department evaluates performance capabilities through multi-company evolutions during training. Annual skill evaluations using scenario-based training and checklists are conducted to evaluate the accuracy of the critical task analysis.

**Appraisal**

During the development of the 2022 CRASOC, the department identified room for improvement relative to resource deployment and critical tasking. Specifically, it was recognized that the department may be under-deploying to certain incidents, and over-deploying to others. It was identified that the 2022 CRASOC task force would update and re-evaluate the risk assessment methodology and subsequent critical tasking. Working with the Center for Public Safety Excellence Technical Advisors Program was beneficial

to the department because of the facilitation and third-party perspective on critical tasking and deployment.

The CRASOC task force has worked on evaluating risk scoring and critical tasks associated with current call natures. A new call nature list has been created for recommendation with an associated critical tasking exercise. The recommendations that are being proposed by this task force have been evaluated on actual risk mitigation activities. Using real-life scenarios, the task force identified task assignments and related resource needs to mitigate each type of incident. These scenarios led to the creation of a compiled list of call natures and revised deployment packages when the team saw opportunity for improvement. Department resiliency and reliability were considered during the exercises.

The COVID-19 pandemic created challenges by limiting multi-company training opportunities. Scenario-based training at the departments drill field was limited to single company evolutions and required members to maintain social distancing. Through the redistribution of department personnel, specifically in the Training Division, the department was limited in the ability provide innovate and effective training. Consequently, the effectiveness of deployment relative to critical tasking was not able to be conducted as it had been done previously. Continuing past the pandemic, the Training Division continues to experience these challenges.

## **Plan**

The 2022 CRASOC task force will work through management channels to recommend an updated deployment model that includes a revised risk scoring matrix and critical tasking. The task force will present the recommendations to the department's command staff after reconciling technical implications and process changes with the Douglas County Emergency Communications Center. Operational changes will follow. Once finalized, adjustments will be made to the 2022 CRASOC.

The department will create a standardized way to incorporate a validation and verification procedure to support critical tasks and associated resource specifications relative to the department's capabilities.

### **References**

2022 CRASOC Draft (pages 96-100)

2022 CRASOC Final (pages 100-104)

CRASOC Work Session Review Notes

**CC 2C.5      The agency has identified the total response time components for delivery of services in each service program area and found those services consistent and reliable within the entire response area.**

**Description**

Total response time components for delivery of services in each program area has been conducted and are published in the CRASOC. Historical data is published in the document and identified as Baseline data. The baseline data is compared to the department’s identified Benchmarks to assess performance. The total response time performance components are used to identify specific areas for improvement. The department delineates service areas between urban and rural population densities. The total response time component benchmarks are not being met in the entire response area. The gaps have been communicated to the AHJ.

**Appraisal**

During the annual presentation to the AHJ, the total response time components are reviewed and discussed. The department has recognized the gap in response time performance relative to the adopted benchmarks. The gaps have been communicated to the AHJ during the annual presentation. The department has also used the CRASOC to communicate the service capability / capacity gaps to the AHJ. The department has experienced challenges in ability to review and produce reports. Response performance review has not been consistent outside of the annual compliance report. This is due to a lack of resources in the Administrative Division.

In 2018, the department received a strategic recommendation from the Commission on Fire Accreditation International to continue working collaboratively with Douglas County Emergency Communications Center (DGECC) to establish time-based performance objectives for alarm answering and alarm processing. The process changes were focused on facilitating faster processing times within the Primary PSAP. In June 2021, DGECC implemented the new call handling process through collaboration with the department. The department has seen a fluctuation in response time performance, specifically in alarm handling and turnout time. There is still room for improvement within the process.

## **Plan**

The department plans to continue its efforts to communicate gaps and propose solutions to improve response time performance. The fire chief will utilize the EMS Governance committee to address response time gaps and create actionable solutions to incorporate into budget requests. The department will continue working on increasing department-wide trust in the new alarm handling process through education and communication. The department will collaborate with the DGECC to aid in this work.

The department will continue working with the current administrative resources to conduct data analysis reports as necessary. Through the budget request process, the department will continue to communicate the need for more resources within the Administrative Division.

## **References**

2022 CRASOC Draft (pages 102-103, 105-106, 109, and pages 123-136)

2022 CRASOC Final (pages 106-107, 109-110, 113, and pages 127-140)

Cooperative Agreement Regarding the Provision of Emergency Medical Services in Douglas County 2021

DCECC Alarm Handling Benchmark Meeting Minutes

Dispatch Call Processing Timeline

2C.6 The agency identifies outcomes for its programs and ties them to the community risk assessment during updates and adjustments of its programs, as needed.

### **Description**

The department identifies and documents the outcomes for its emergency response programs in SOP 103.20 Response Performance and Outcomes. All department programs are evaluated on an annual basis and include outcomes. The department utilizes program appraisals and outcome metrics to influence budget requests and enhancements. The department aims to align outcome goals with department prioritization.

Through the city's strategic plan, the department has specific key performance indicators (KPI's) that are tied to program outcomes. The programs that are specifically addressed include EMS, fire suppression, and community risk reduction. The department reports on the outcomes to the following KPI's:

SaS-3: Percent of fires contained to their room of origin

SaS-4: Percent of cardiac arrest patients with pulsatile rhythms upon arrival to a hospital

SaS-5: Number of responses to a mental health crisis per 1,000 residents

SaS-8: Percent of residents rating trust in emergency services departments as satisfied or very satisfied (Fire)

### **Appraisal**

Program appraisals are updated on an annual basis, reviewing the previous year. Currently, the department does not have a seamless way to integrate recommendations from the program appraisals into operations. Value would be added if the program appraisals were easier to digest by internal reviewers to implement changes. Incorporating outcome goals with department prioritization through resource support, the department's ability to create sustainable and long-term initiatives has been difficult due to lack of continued funding for items outside basic operational activities.



The city's strategic plan key performance indicator reporting process was identified as insufficient, by city leadership. The process was never standardized and did not create an environment for actionable items. The city's commitment and outcome champions have begun work to revamp how the city supports, implements, evaluates, and reports on key performance indicator-related initiatives and data.

### **Plan**

The accreditation manager will review the program appraisal process and propose a way to institutionalize the review and usage of the program appraisals to fit into the Continuous Improvement System by updating SOP 103.30 Continuous Improvement System with proposed changes. The department will continue to propose budget requests and provide support showing alignment with identified outcome objectives. The department will work to enhance communication of resource support relative to the sustainability, and overall success, of initiatives related to outcome goals.

The department will remain active in the city's strategic planning process moving forward and report to KPI's.

### **References**

SOP 103.20 Response Performance and Outcomes

[City's Strategic Plan Safe and Secure KPI's \(https://lawrenceks.org/strategic-plan/\)](https://lawrenceks.org/strategic-plan/)

2021 Emergency Medical Services Program Appraisal

2021 Fire Suppression Program Appraisal

2C.7 The agency has identified the total response time components for delivery of services in each service program area and assessed those services in each planning zone.

### **Description**

The department does assess the service level quality by planning zone pertaining to reliability of high risk first due travel time response quality for both EMS and fire. This data is documented in the department's annual compliance report and used to communicate response performance to the AHJ. The department breaks emergency total response times down to show alarm handling time, turnout time, and travel time (distribution and ERF). This is conducted for all risk categories and classes.

### **Appraisal**

The department's emergency response performance review, broken down by alarm handling time, turnout time, and travel time has been effective in understanding resource capabilities. Identifying and analyzing total response time components has enabled the department to analyze data at the granular level to determine areas for improvement.

With the implementation of the new alarm handling procedures utilized by the Douglas County Emergency Communications Center (DCECC), the department began reviewing response time components on a monthly basis to track new procedure performance and identify trends. Value was identified by reviewing response time component performance outside the annual review. Other response performance review has not been consistent outside of the annual compliance report. This is due to lack of resources in the Administrative Division.

### **Plan**

The department will continue to report on and analyze response time components to bolster the identification of process improvement opportunities annually. Performance, compared to the set benchmarks for each component of the total response time will continue to be communicated to the AHJ on an annual basis.

The department will continue working with the current administrative resources to conduct data analysis reports as necessary. Through the budget request process, the department will continue to communicate the need for more resources within the Administrative Division. Additional tools, like technology tools will be explored to enhance performance evaluation and aim to create more real-time performance review.

**References**

High Risk Fire, High Risk EMS, Moderate Risk EMS Response Performance Maps (2022 LDCFM CFAI ACR Exhibits 1, 2, and 3)

2022 CFAI Annual Compliance Report

2017-2021 Emergency Response Data (available on-site)

Alarm Handling Response Performance Sample

Alarm Handling Data (available on-site)

**CC 2C.8** The agency has identified efforts to maintain and improve its performance in the delivery of its emergency services for the past three (initial accreditation agencies) to five (currently accredited agencies) immediately previous years.

### **Description**

The department's progressive outlook on providing emergency services can be seen through SOP 103.3 Continuous Improvement System. SOP 103.30 Continuous Improvement System is a great benchmark for the department and provides a specific timeline of when adjustments should be made. This SOP is set to be reviewed and updated every two years to stay relevant. The timeline depicts appropriate months for changes to be made in order for seamless and thorough implementation.

To drive innovation, the department utilizes response performance and demand data from the five immediately previous years. Analyzing trends in emergency call volume, non-emergency requests, and other department responsibilities, the department identifies gaps and areas for improvement. The department considers its mission, vision, and values when determining innovation alignment. The department's guiding documents prioritize organization evaluation, strategic planning, sustainability, and holistic approaches to a full analysis.

### **Appraisal**

The identification of need for alignment throughout guiding documents has been beneficial to sustain momentum in the direction of focused continuous improvement. Through the use of Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis, department efforts have been contained to specifically identified gap areas. The implementation of changes has not been fully executed. In recent years, the department has been better at dedicating resources to move recommendations forward for operational change. The department's lack of resources impacts its ability to constantly evaluate and innovate performance in the delivery of its emergency services.

### **Plan**

The department will continue to update SOP 103.30 Continuous Improvement System and identify areas where innovation can impact services to the community. The department will also continue to work with the city commitment and outcome champions to institutionalize processes that support efficiency and effectiveness of services provided.

The identification of department needs will continue to be evaluated and communicated through management channels. Process improvements at a micro level will be implemented to facilitate future organizational change. Using the department's guiding documents, tasks forces will continue to work towards identified goals.

### **References**

SOP 103.30 Continuous Improvement System

2022 CFAI Annual Compliance Report

2021-2026 Lawrence-Douglas County Fire Medical Strategic Plan (SWOT Analysis Appendix 3, page 40)

2C.9 The agency's resiliency has been assessed through its deployment policies, procedures, and practices.

### **Description**

The department assesses its resiliency on its ability to manage emergency resources. Understanding that current department practices, related to resource management, are not standardized or automated, create instability in the department's resiliency.

SOP 109.10 Staffing-Shift and Events addresses drawdown and exhaustion deployment levels. The department does effectively follow SOP 109.10 Staffing-Shift and Events. Operations chief officers manage resources based on anticipation of unit availability.

The department's operations chief officers are solely responsible for resource management and resource requests. To aid in this, the department utilizes an ESRI GIS operations dashboard to assist in the visualization of resource commitment and location. Having an EMS service area of 475 square miles, the department's ability to track medic units and associated response time is difficult.

### **Appraisal**

In January 2020, the department added a second operations chief officer to each shift. This addition has improved resource management by strengthening the response capability during high-risk incidents. When the department has a high-risk incident that includes a chief officer, the department is now better equipped to fully deploy to meet the effective response force (ERF).

Maintaining an adequate number of resources during high call volume times throughout Douglas County has been difficult. Operations chief officers individually managing resource levels has led to inconsistent and ineffective department resiliency.

The department's collaboration efforts to enhance resource management with the DCECC are in progress through the CRASOC task force recommendations. The department has

met with the DCECC director to discuss possible automation with incident location flagging and resource management.

### **Plan**

To standardize the drawdown and exhaustion deployment levels, the department will continue to evaluate solutions to better manage consistency across all shifts.

The department will deploy the ESRI GIS operations dashboard throughout the organization and will enable employees to have real-time access to incident information, unit status, and response time performance metrics. Other resource management tools will be assessed and integrated, when possible.

The department will continue its efforts to collaborate with the DCECC on enhanced resource management to include automation. Recommendations from the 2022 CRASOC task force will address the department's need for an improved deployment process.

### **References**

SOP 109.10 Staffing-Shift and Events  
ESRI GIS Operations Dashboard (available on-site)  
CRASOC Work Session Review Notes

## **Criterion 2D: Plan for Maintaining and Improving Response Capabilities**

The agency has assessed and provided evidence that its current deployment methods for emergency services appropriately address the risk in its service area. Its response strategy has evolved to ensure that its deployment practices have maintained and/or made continuous improvements in the effectiveness, efficiency, and safety of its operations, notwithstanding any external influences beyond its control. The agency has identified the impacts of these external influences and communicates them to the authority having jurisdiction.

### **Summary:**

The department has a published methodology for monitoring performance adequacies, reliabilities, resiliencies, and opportunities for improvement. The department utilizes SOP 103.20 Response Performance and Outcomes to provide general guidelines regarding operational response performance benchmarks, baselines, and the compliance methodology in meeting those goals. The 2022 CRASOC is the department's guiding document to analyze community wide risks and department capabilities.

Total response time performance and department programs is evaluated on an annual basis in conjunction with the annual compliance report. The use of standardized program appraisals maintains consistency throughout the evaluation process. It has been identified that the current process for appraising programs lacks sustainability when tied to actionable items. The department hopes to develop a program appraisal process that is more useful and frequent. The department's strategic plan, used in concert with the city's strategic plan, enables the department to remain focus on identified goals and objectives.



## **Performance Indicators:**

**CC 2D.1      The agency has a documented and adopted methodology for assessing performance adequacies, consistency, reliability, resiliency, and opportunities for improvement for the total response area.**

### **Description**

Published methodology for monitoring performance adequacies, reliabilities, resiliencies, and opportunities for improvement is documented in SOP 103.20 Response Performance and Outcomes. A compliance methodology is in place to monitor and identify trends that may negatively impact service quality.

The department has identified emergency response benchmarks for each risk classification and category. The benchmarks have not been updated recently. The department utilizes the ESO RMS software to report incident data and export raw data from NFIRS incident reports into spreadsheets. The raw data is used to identify a multitude of items such as trends in incident types, trends in response times, and deficiencies in report writing / completion.

### **Appraisal**

Emergency response performance evaluation has not been consistent outside of the annual compliance report. This is due to lack of resources in the Administrative Division. The department has maintained a sufficient level of quality control (QC) to comply with the NFIRS standards and requirements. Additional QC and report detail could be accomplished with more Administrative Division staffing and increased involvement from department members. The current process does not directly address quality of content, rather, focus has been on completing fields required by the system. The department has identified the QC process to be limited in scope.

With the implementation of the new alarm handling procedures utilized by the Douglas County Emergency Communications Center (DCECC), the department began reviewing response time components on a monthly basis to track new procedure performance and

identify trends. Value was identified by reviewing response time component performance outside the annual review.

### **Plan**

The command staff will update SOP 103.20 Response Performance and Outcomes to create an achievable performance evaluation and compliance strategy. The department has identified that the utilization of a diverse team to assist in the QC process would produce positive outcomes.

The department will continue to follow the standardized documented and adopted methodology for performance review and identify opportunities for improvement.

### **References**

LDCFM ESO Fire Training Manual

SOP 103.20 Response Performance and Outcomes

Alarm Handling Response Performance Sample

Alarm Handling Data (available on-site)

2D.2 The agency continuously monitors, assesses, and internally reports, at least quarterly, on the ability of the existing delivery system to meet expected outcomes and identifies and prioritizes remedial actions.

**Description**

The department reviews capabilities and capacities relative to outcomes on an annual basis using program appraisals. The department does not continuously monitor, assess, and internally report on these metrics quarterly. SOP 103.20 Response Performance and Outcomes identifies compliance teams, responsibilities, and schedule.

**Appraisal**

Response performance review has not been consistent outside of the annual compliance report. This is due to lack of resources in the Administrative Division. The compliance monitoring schedule has not been followed. The department has identified this as a significant gap and has communicated to the AHJ to request additional support.

**Plan**

The department’s Administrative Division and accreditation manager will work to identify a process to continuously monitor, assess, and internally report on the performance relative to outcome measurements and identify and recommend remedial actions on a quarterly basis. The department will continue working with current administrative resources to conduct data analysis reports as necessary. Through the budget request process, the department will continue to communicate the need for more resources within the Administrative Division.

**References**

- SOP 103.20 Response Performance and Outcomes
- 2023 Program Improvement Request Form LDCFM Support Services

**CC 2D.3      The performance monitoring methodology identifies, at least annually, future external influences, altering conditions, growth and development trends, and new or evolving risks, for purposes of analyzing the balance of service capabilities with new conditions or demands.**

**Description**

The department utilizes annual program appraisals to review service capabilities and influencing factors, such as community growth, demand trends, external and internal stakeholder relations, and evolving risks. Operational gaps are communicated to the AHJ through the annual presentations, given by the fire chief and accreditation manager.

The department’s 2022 Community Risk Assessment Standards of Cover identifies risk hazards that have and could impact emergency service capabilities. The department works with the city’s Information Technology GIS team to review changes related to projected population growth, annexation developments, and demographic information.

The department stays updated on developments within the city and county that might contribute to a changing community dynamic and emergency response demand.

**Appraisal**

The program appraisals have been successful in documenting qualitative and quantitative data related to capabilities and dynamic demands on department resources. The ability to pivot quickly in operational activity, based on this information has been delayed due to internal processes at the department and city levels.

The department has identified current and future trends of external influences to prepare and plan for evolving resource needs. The department has communicated the associated gaps and risk potential to the AHJ but recommended solutions have not been funded, at this time.

**Plan**

Performance monitoring utilized by the department will be bolstered through a redesign to create an attainable workflow process. The department’s accreditation manager will work

with command staff to re-evaluate and design a stronger integration between the continuous improvement model and identified goals. The objective will be to create a streamlined process to integrate enhancements into department operations.

The department will continue to participate in and stay up to date in community development and changes that could impact demand on emergency resources. This will be done through management channels, project teams, and city strategic plan outcome and commitment teams.

The department will utilize updated data to evaluate department deployment gaps and recommend solutions for increased reliability and resilience. The department will continue requesting resource needs through the budgetary process.

### **References**

2022 CRASOC Draft (pages 17-28, 66-95, 162-163)

2022 CRASOC Final (pages 18-30, 70-99, 168-169)

May 3rd, 2022 City of Lawrence Commission Agenda Item H4 Annual Update  
Presentation

2D.4 The performance monitoring methodology supports the assessment of the efficiency and effectiveness of each service program at least annually in relation to industry research.

### **Description**

Department program performance monitoring is conducted annually within the program appraisals. The department has incorporated outcome measures and monitoring along with the program outputs. Performance monitoring related to outcomes is not routinely performed outside of the annual update. For the annual compliance report, the department evaluates all components of total response time for all risk categories and classification.

To analyze performance on cardiac arrest incidents, the department reports to the Cardiac Arrest Registry to Enhance Survival (CARES) system and receives annual performance summaries. This data is used to push community risk reduction efforts and spread awareness to the public.

The department's participation in the city's strategic plan performance indicator reporting is completed annually. The programs that are specifically addressed include EMS, fire suppression, and community risk reduction. The department reports on the outcomes to the following KPI's:

SaS-3: Percent of fires contained to their room of origin

SaS-4: Percent of cardiac arrest patients with pulsatile rhythms upon arrival to a hospital

SaS-5: Number of responses to a mental health crisis per 1,000 residents

### **Appraisal**

The department has not routinely evaluated outcome quality in relation to industry research or benchmarking outside of the city's strategic plan performance indicator comparison.

The City of Lawrence's Strategic Plan's implementation has not been successfully implemented to impact organizational action. Because the city is working to make data

driven decisions that align with strategic activities which will directly impact the performance indicators, focus on influencing outcomes is vital. The city's commitment and outcome champions have begun work to revamp how the city supports, implements, evaluates, and reports on key performance indicator-related initiatives and data.

### **Plan**

The accreditation manager will review the program appraisal process and propose a way to institutionalize the review and usage of the program appraisals. Specifically, the department will utilize the identified outcome objectives, to fit into the continuous improvement process and align with the city's strategic plan.

The department will remain active in the city's strategic planning process moving forward and report to KPI's.

### **References**

SOP 103.20 Response Performance and Outcomes

SOP 103.30 Continuous Improvement System

Lawrence-Douglas County Fire and Medical 2021 CARES Summary Report

2D.5 Impacts of incident mitigation program efforts, such as community risk reduction, public education, and community service programs, are considered and assessed in the monitoring process.

### **Description**

The department utilizes annual program appraisals to review community risk reduction program and public education program capabilities. The department recognizes the opportunities that incident mitigation program efforts can have on emergency resource demand and overall community well-being.

### **Appraisal**

Community risk reduction and public education efforts have been impacted by low resource allocation and increasing call volume. The department has relied heavily on emergency resources to conduct community risk reduction efforts, public education, and other community service programs. The department has not been successful in performing a full assessment of incident mitigation program efforts.

### **Plan**

The department plans to prioritize risk reduction efforts through a more collaborative strategy with the Lawrence Police Department, Douglas County Public Health Department, and other local agencies. The accreditation manager will participate in committees and teams that focus on community engagement and public education for safe and secure communities.

In 2023, the department will deploy a Mobile Integrated Health program with two paramedics. The goal for this program will be to address incident mitigation and prevention efforts through community risk reduction and community service programs.

### **References**

MIH Expansion – Budget Award

2021 Public Education Program Appraisal

2021 Community Risk Reduction Program Appraisal



**CC 2D.6      Performance gaps for the total response area, such as inadequacies, inconsistencies, and negative trends, are determined at least annually.**

**Description**

The department formally determines performance gaps for the total response area annually during the completion of the Annual Compliance Report. High Risk Fire, High Risk EMS, and Moderate Risk EMS response performance is compared to the established benchmarks and communicated to the authority having jurisdiction. During the creation of the annual compliance report, the department analyzes all emergency response performance for every risk category and class. The department documents its emergency response time performance in the 2022 CRASOC when comparing baseline performance to benchmarks.

**Appraisal**

The department has seen trends in increased call volume and increased response time performance in specific planning zones. The department formally acknowledged this issue and provided recommendations to mitigate the inadequacies in response performance, relative to the established benchmark in the 2022 CRASOC. The department documented the aggregate performance gaps, from the previous five years, in the 2022 CRASOC. This reinforced the reality of ongoing performance gaps.

**Plan**

The accreditation manager plans to annually update the response performance gaps with the City of Lawrence GIS team, to evaluate the trending of response performance and propose recommendations to mitigate the performance gaps.

**References**

2022 CRASOC (pages 123-136, 148-159)

2017-2021 Emergency Response Data (available on-site)

2022 CFAI Annual Compliance Report

**CC 2D.7      The agency has systematically developed a continuous improvement plan that details actions to be taken within an identified timeframe to address existing gaps and variations.**

**Description**

The department’s SOP 103.30 Continuous Improvement System identifies and documents the adoption of the department’s plan to institutionalize the continuous improvement plan. The SOP provides a visual calendar, displaying the timeline for successfully addressing gaps and updating the system with enhancements. Program appraisals are utilized to conduct a formal and documented process to evaluate effectiveness of historic performance and identify goals.

Currently, the department is using the continuous improvement plan’s calendar to recommend alternative call nature and deployment packages. This work is being done with the DGECC. The department is continuing efforts to establish time-based performance objectives for alarm answering and alarm processing. Building off of the new call handling process, the department continues collaborating with the DGECC to address a strategic recommendation from the 2018 Accreditation Report, related to call handling.

**Appraisal**

Implemented in 2017, SOP 103.30 Continuous Improvement System has been beneficial to the department by formally adopting the ideology and timeframe related to system enhancements. Currently, the department uses the timeline as a goal, however, has not been successful in fully institutionalizing the timeline.

Through the new call handling process, the department has faced continuing problems related to an increased turnout time. The department has seen fluctuation in response time performance, specifically in alarm handling and turnout time. There is still room for improvement within the process.

**Plan**

The department’s accreditation manager will work with command staff to re-evaluate and design a stronger integration between the continuous improvement model and identified goals. The objective will be to create a seamless integration of enhancements into

operations. The department will continue to utilize program appraisals to improve performance within each program while developing more efficient operational procedures based on historic performance

The department will continue working on increasing department-wide trust in the new alarm handling process through education and communication. The department will continue to collaborate with the DGECC to aid in this work.

### **References**

SOP 103.30 Continuous Improvement System

2022 CRASOC Draft (Module 4, pages 101-136)

2022 CRASOC Final (Module 4, pages 105-140)

2022 CFAI Annual Compliance Report (pages 30 and 31)

2D.8 The agency seeks approval of its standards of cover by the authority having jurisdiction (AHJ).

### **Description**

The department's current CRASOC has been presented to the AHJ. The city commission, as well as the county commission have received the document and are annually updated on the status of the department's standards of cover.

The department is awaiting the published 2022 CRASOC, facilitated by the Technical Advisor's Program from the Center for Public Safety Excellence. The department worked with the Technical Advisors Program to present the process and a high-level overview of the newly created CRASOC to the city manager's office and county administrators office.

### **Appraisal**

The department has seen success in presenting the CRASOC to the AHJ and providing updates annually. This has allowed the department to present consistent information to the rotating boards that make up the commissions. The CRASOC provides an in-depth overview of department capabilities, community hazards, and information that the commissions have been interested in.

With the timing of the published 2022 CRASOC, the department has not had the opportunity to present and seek approval from the AHJ.

### **Plan**

The fire chief and accreditation manager will present the CRASOC document to the AHJ every time a new document is published. The 2022 CRASOC published document will be presented to the City Commission, City Manager's Office, and County Administrators Office late 2022. The department will continue to include CRASOC information in the annual presentations to the AHJ.

### **References**

2017 CRASOC

2022 CRASOC Final

LDCFM City Commission Annual Presentation 2022

May 3rd, 2022 City of Lawrence Commission Agenda Item H4 Annual Update  
Presentation

**CC 2D.9** On at least an annual basis, the agency formally notifies the AHJ of any gaps in current capabilities, capacity, and the level of service provided within its delivery system to mitigate the identified risks within its service area, as identified in its community risk assessment/standards of cover.

**Description**

The department presents an annual update during a public City Commission meeting. It is communicated that the presentation directly relates to 2D.8 and 2D.9. The accreditation manager and fire chief present current response performance metrics as well as department capabilities and gaps. The update is also presented to the Douglas County Commission on an annual basis.

Through the City of Lawrence Strategic Plan Commitment – Safe and Secure (SaS), the city dedicates time quarterly for the Commitment team to present information relative to the performance indicators. Through the SaS presentations, the department reports on the following performance indicators:

- SaS-1: Percent of residents who perceive Lawrence as safe or very safe
- SaS-3: Percent of fires contained to their room of origin
- SaS-4: Percent of cardiac arrest patients with pulsatile rhythms upon arrival to a hospital
- SaS-5: Number of responses to a mental health crisis per 1,000 residents
- SaS-8: Percent of residents rating trust in emergency services departments as satisfied or very satisfied (Fire)
- SaS-10: Expenditure per 1,000 residents for Fire
- SaS-12: Employee Engagement Index for Fire Medical
- SaS-14: Percent of Firefighters meeting or exceeding 228 hours of firefighter training

The department contributes to Safe and Secure presentations, which are made by the Safe and Secure Champions, to the City Commission throughout the year. The city dedicates time quarterly for the Commitment team to present information relative to the

Performance Indicators. Reporting to the AHJ on the Safe and Secure performance indicators, the department is able to work towards closing the communication gap created with only presenting department data annually.

### **Appraisal**

Through the presentations, the department has been able to formally share information relative to capabilities, capacity, and levels of service annually. The consistency and standardization of presentation topics has been received positively by the AHJ.

The presentations are usually scheduled late Spring / early Summer. The timing of the presentations does not always align with budget proposals or times where action can be coordinated with governmental initiatives. This has caused a delay in the department's ability to pivot quickly in operational activity that is discussed as recommendations in the presentations.

### **Plan**

The department will continue to formally notify the AHJ of gaps in current capabilities, capacity, and the level of service provided. The department will continue to contribute to Safe and Secure updates relative to the performance indicators.

The department will utilize the 2022 CRASOC to communicate emergency response capabilities and reliability.

### **References**

LDCFM City Commission Annual Presentation 2022

City of Lawrence Strategic Plan (available on-site)

May 3rd, 2022 City of Lawrence Commission Agenda Item H4 Annual Update  
Presentation

2022 CRASOC Final

2D.10 The agency interacts with external stakeholders and the AHJ at least once every three years, to determine the stakeholders' and AHJ's expectations for types and levels of services provided by the agency.

### **Description**

The department's 2021 Community-Driven Strategic Plan is supplemented and supported by external stakeholder input (54 external stakeholders). The external stakeholder list is made up of individuals from governance, public safety, local organizations, media, citizens, academia, and healthcare.

The department incorporates the AHJ throughout the process, including the survey / input gathering step. The 2021 Community-Driven Strategic Plan aligns with the AHJ's Strategic Plan through the Commitment and Outcome areas. The department also participates in the AHJ's strategic planning process through the Commitment and Outcome groups. The groups meet monthly to analyze performance indicators relative to the department's services.

The city of Lawrence conducts a community survey to receive input and direction from community members every few years. The city's Communications and Creative Resources Department manages the surveys and communicates results to each department. Survey results are utilized within the budget process and to drive city-wide initiatives.

### **Appraisal**

In 2021, the CPSE Technical Advisors Program was used to facilitate and assist with the department's Community-Driven Strategic Plan. The responses from the external stakeholder group were presented in an organized way, making the data review useful for the internal stakeholder workgroup. The input was not influenced by any department members, as they were not present during the external stakeholder work sessions. This provided valuable data from all factions of the community.

Historically, the department updated the Community-Driven Strategic Plan every five years. Because the department used the previous strategic plans as guiding documents for budget and special projects, there has been a focus on what was published in the plan versus analyzing and responding to rising risks.



## **Plan**

The department will consider changing the strategic plan from having a 5-year life cycle to a 3-year life cycle. This will allow the department to adapt and become more agile to an ever-changing community and evolving risks. Aligning strategic goals, objectives, and critical tasks to the AHJ's Commitments will be beneficial in centralizing the efforts and reinforcing direction of the department. The department also plans to utilize a third-party to conduct external stakeholder feedback in order to receive organic and honest responses from the public.

Changes to the standards of cover and/or risk assessment of the community will prompt an update of the CRASOC if made before the current edition is planned to sunset.

## **References**

2021-2026 Lawrence-Douglas County Fire Medical Strategic Plan

Community Stakeholder List (page 4)

Agency Stakeholder List (page 6)

LDCFM City Commission Annual Presentation 2022

2022 CRASOC Final