



Municipality of Middlesex Center Fire Services Master Plan

- Draft Presentation -



September 21, 2022



Isaac Comandante

Dale Mclean

Jeff Carlisle

Rich Hildebrand

What is a Fire Services Master Plan

A Fire Services Master Plan can be referred to as a 'road map' to the future and used as a guiding document for current and future fire service leaders and municipal decision makers.

It is highly recommended that this plan be reviewed and evaluated, at minimum, on an annual basis or when there are unusual changes in risk, response demands, population and residential or industrial development activity.

- A systematic and comprehensive approach to evaluating and mitigating risk to the communities
- Opportunities for improved service delivery
- An objective basis to support decision-making with respect to community emergency service needs and public safety
- Addresses local needs and circumstances based on municipal goals, fiscal realities and other competing demands
- Recommendations for how to address gaps

- Targeted Interviews
 - *Participants were asked questions related to their areas of purview and expertise*
- Online Firefighter Survey
 - *Provides balanced input by employing an online firefighter survey*
- Community Comparative Analysis
 - *An industry peer comparative analysis was conducted*

Community Specific Considerations

- Community risk assessment
- Growth, economy, demographics, community profile, population, etc.
- Development and area structure plans
- Buildings and structures concentrating on high-risk demands, including business, assembly occupancies
- Utilities, industrial activities including airport
- Local government, legislation, bylaws
- Financial resources and constraints
- Multi-jurisdictional requirements and cooperation

Department Specific Considerations

- Geographical boundaries & historical response
- Budgets, financial profile
- Core services and standards
- Fire prevention and public education
- Fire station location and other infrastructure
- Apparatus and equipment inventory, and future needs
- Human resources, training, qualifications, health and wellness, staffing levels, leadership, management, organization, etc.
- Technology, records and data management

- Diverse and large response area
- Transportation corridors with potential of hazardous materials release and motor vehicle collisions
- Structure fires
- Severe weather events

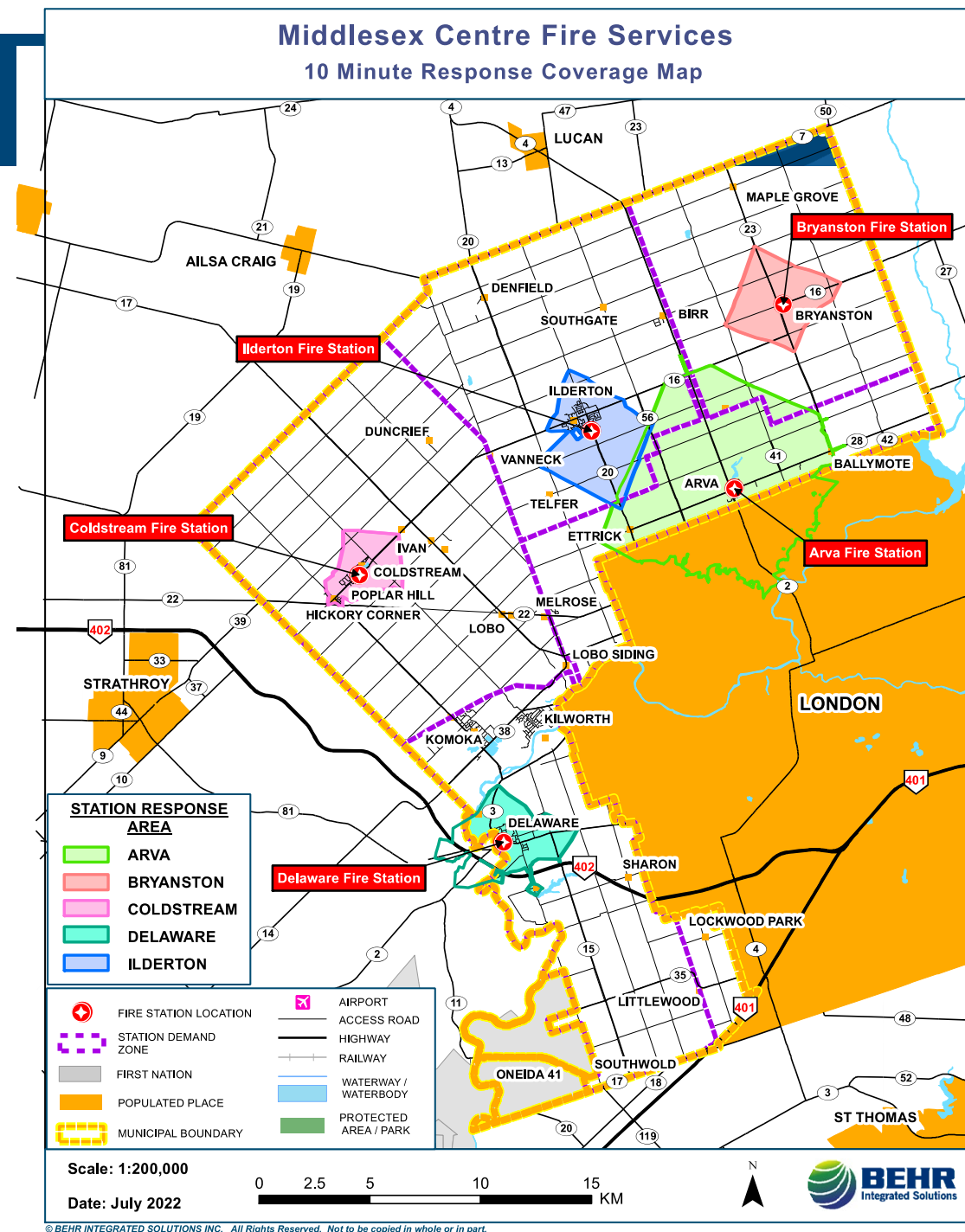
National Fire Protection Association (NFPA)

- NFPA 1710: Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments
- NFPA 1720 Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments

Response Time Maps

10-Minute response Coverage Map

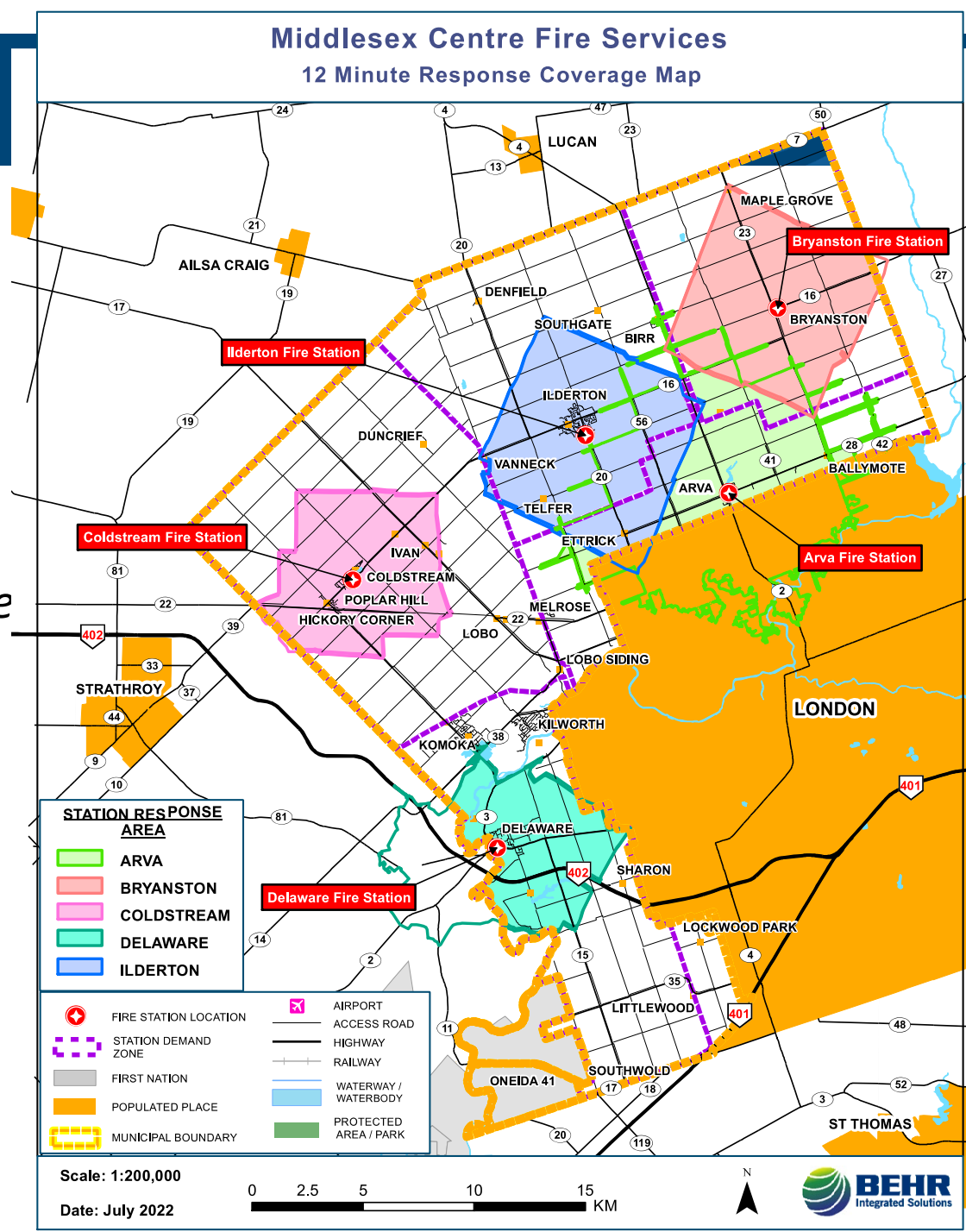
- Station response coverage is relatively limited as the potential travel time to achieve the 10-minute goal is between two and three minutes, except for Arva Station
- Arva and Ilderton Stations coverage overlaps slightly
- The Delaware Station 10-minute response coverage does not reach the Komoka-Kilworth regions



Response Time Maps

12-Minute Response Coverage Map

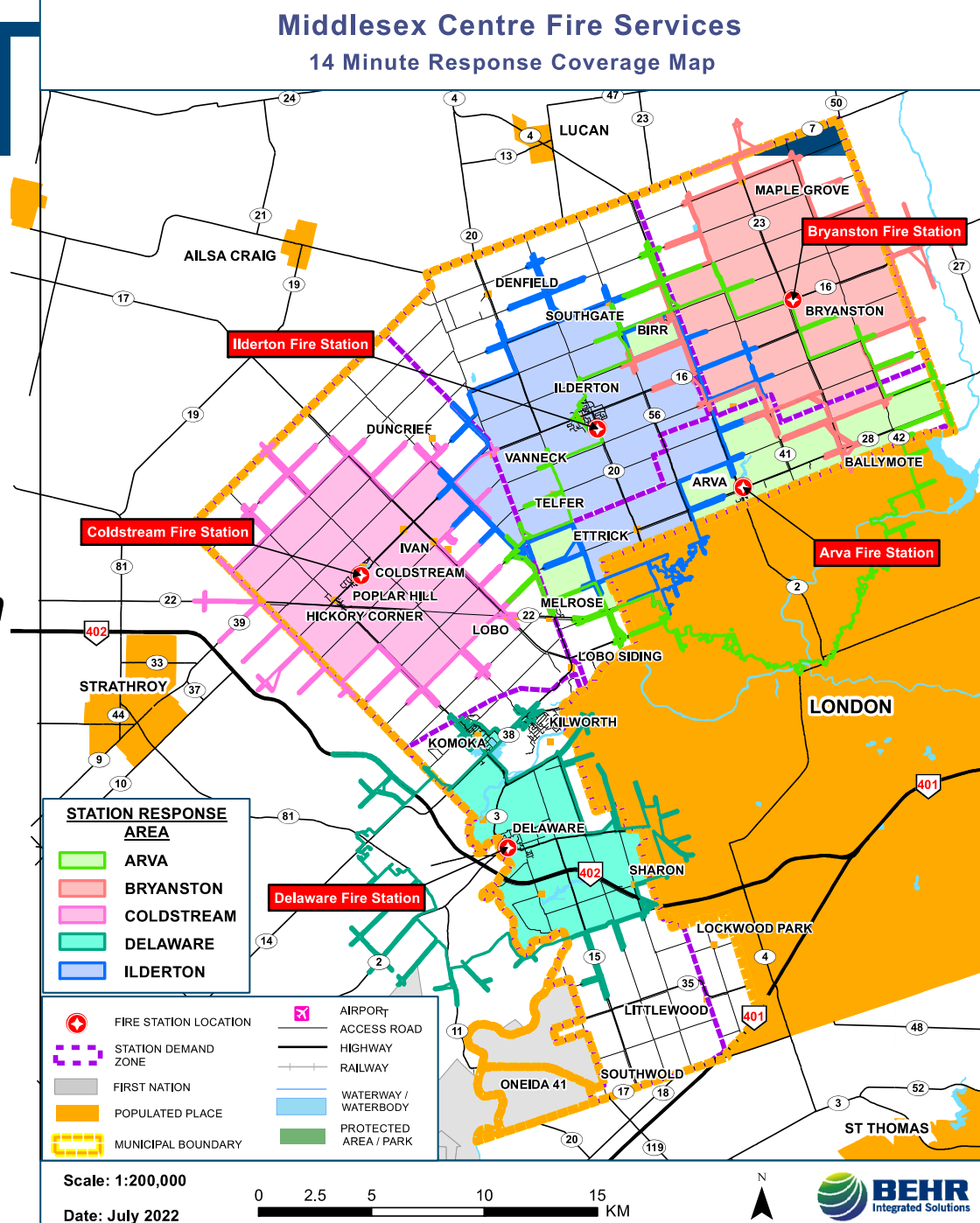
- Considerable improvement in the cross-coverage and overlap between Arva, Bryanston and Ilderton Stations' response coverage
- The Delaware Station response coverage will reach the fringe of Komoka within 12-minutes in most cases



Response Time Maps

14-Minute Response Coverage Map

- Considerable overlap in response areas between Arva, Bryanston and Ilderton Stations
- The 14-minute Arva Station response area typically reaches Bryanston and Ilderton
- The 14-minute Delaware Station response area extends to Komoka-Kilworth



Summary of Recommendations

| Critical | Short Term | Intermediate | Long Term |
|--------------|----------------|----------------|-----------------|
| 0 -12 months | 12 - 48 months | 48 - 60 months | 60 - 120 months |

- A colour code is applied to each recommendation according to prioritization and completion.
- A timeframe within 0 – 120 months (1 – 10 years) is assigned to each recommendation
- Most of the recommendations presented in this report are administrative requiring staff time to complete

Recommendation #1: Undertake the development of a standard of cover policy that includes the analysis and risk factors identified in the CRA

(Suggested completion: 48 - 60 months)

It is recommended that MCFS undertake the development of a standard of cover for all demand zones within the municipality. After completing this review, the results should be compiled into a single document and presented to council. Identified service concerns or policy gaps should be discussed with council and policy should clearly reflect the services and service levels provided by the MCFS. Further, the SOC should consider the unique risk factors in each of the five demands zones and the availability of firefighting water supplies.

To be successful, this process requires the support of all levels of senior municipality's leadership and municipal council, as well as adequate resourcing within the MCFS.

Recommendation #2a: Facilitate a team building workshop with senior MCFS administration

(Suggested completion: 3-6 months)

It is recommended that the fire service administration team undertake a team building workshop or planning session facilitated by a third party with the purpose of clarifying roles and responsibilities and developing a high performing team with clearly defined immediate and long-term goals.

Recommendation #2b: Establish an ‘alarm assignment response criteria’ for the fire chief (and deputy chief) and district chiefs

(Suggested completion: 6-9 months)

It is recommended that the fire chief, in consultation with the district chiefs develop an ‘alarm assignment response criteria’.

Recommendation #3: Develop and approve a full-time deputy fire chief position within the MCFS management team with the focus on adding managerial capacity to the MCFS

(Suggested completion: 6-12 months)

It is recommended that the MCFS managerial team be expanded to include a full-time deputy fire chief position. The overarching goal is to enhance a high-performing team that has a clear vision and understanding of MCFS direction and how the community and public will be well served.

Recommendation #4: The fire chief should continue to evaluate the ability to sustain a viable firefighting complement and develop retention strategies

(Suggested completion: 12-24 months)

It is recommended that the fire chief research leading retention strategies for POC volunteer's such as live- in, live-out, work experience programs, tax breaks, and benefits that enhance POC volunteer retention and operational effectiveness. Further it is recommended that the fire chief working with HR, to undertake a complete compensation and benefits analysis that includes roles and responsibilities and associated pay rates, step increases, benefits, recognition programs, and other incentives for POC volunteer firefighters. A comparative analysis with other similar services may provide benchmark references in this review.

The move to a composite fire department with full-time career firefighting staff would only be prudent if a sustainable complement of POC volunteer firefighters cannot be maintained in some of the MCFS fire stations.

Recommendation #5: Develop a unique health and wellness program tailored around the needs of the POC volunteer firefighters

(Suggested completion: 6-24 months)

It is recommended that MCFS continues to take advantage of programs available through the municipality and expand their program to offer additional services to their staff as outlined in the International Association of Firefighters Wellness-Fitness Initiative Manual.

Recommendation #6: Commence the design and tender process for the new aerial apparatus

(Suggested completion: 12 - 18 months)

It is recommended that an appropriate apparatus committee should be convened to evaluate the requirements to be used for the design, and tender of the anticipated new aerial apparatus.

Recommendation #7: Establish a pre-emergency planning program for Middlesex Centre

(Suggested completion: 24 – 36 months)

It is recommended that MCFS establishes a department-wide pre-emergency planning program. Pre-emergency plans amongst other criteria, include information regarding the construction type, occupancy, building status, emergency contacts, utility shutoffs, fire suppression and detection systems, exposure information, water supply availability, access problems, staging locations and any other hazards.

Recommendation #8: Establish a second fire prevention/training officer

(Suggested completion: 24 – 36 months)

It is recommended that a second fire prevention/training officer position be established. The present fire prevention/training officer is currently responsible for fire prevention, public education and fire investigation for Middlesex North, Thames Centre and Middlesex Centre, with no training obligations.

Recommendation #9: Undertake a complete condition assessment of all fire stations

(Suggested completion: 36-60 months)

It is recommended that the municipality undertakes a facilities condition assessment of the Arva, Bryanston, Delaware, and Ilderton fire stations to determine the long-term life cycle of these capital assets. These assessments focused on the building systems, structure, major components and building code compliance. Further, it is also recommended that this assessment includes functional and operational analysis to support MCFS's core services.

Recommendation #9 (continued): Undertake a complete condition assessment of all fire stations

(Suggested completion: 36-60 months)

Together with the future growth projections in each of the fire station response zones this fire station functional analysis typically focuses on the following:

- Sufficient apparatus bay to safely and effectively garage and maneuver emergency response vehicles and apparatus
- Firefighter staging and personal protective equipment storage
- Equipment storage, maintenance, and decontamination areas
- Training and fitness area
- Staff support areas such as workstations, offices, kitchen, rest areas, washrooms, and showers (non-gender or gender specific)

Recommendation #10: Develop a comprehensive reserve fund process to meet life cycle requirements

(Suggested completion: 12-18 months)

It is recommended that there is an annual review and update of fire equipment and emergency vehicle reserve fund to ensure sufficient funds will be available when replacements are necessary.

Further, the development of a comprehensive reserve fund process that accounts for necessary criteria to establish ideal replacement timelines for all fire apparatus and emergency vehicles. A yearly review of this plan should be undertaken to evaluate whether the schedule remains on track. Necessary adjustments to individual apparatus or emergency vehicles can be made at that time.

Recommendation #11: Investigate opportunities to reduce alarm processing time

(Suggested completion: 12-24 months)

It is recommended that the fire chief, working with the Strathroy-Caradoc Police Communications Bureau, should conduct a review of alarm processing and station notification processes and identify opportunities to reduce alarm processing time. Potential causes to consider may include fire department pre-alerting, rural addressing improvements and alarm processing/notification process improvements.

Recommendation #12: Establish service levels for emergency response

(Suggested completion: 36 months)

It is recommended that the fire chief and senior administration identify relevant performance reporting helpful in identifying current response performance with the aim of assisting Middlesex Centre council with establishing fire department response service levels. This may be achieved as an outcome of completing a standard of cover. A standard of cover is a systematic framework used to validate fire department resource concentration and distribution and confirm services and service levels.

Recommendation #13: Maintain status quo (Option 1) and initiate Option 2 as station performance decreases

(Suggested completion: 10 years)

It is recommended that the fire chief and senior Middlesex Centre administration monitors the operational performance of Bryanston Station. This would include an in-depth analysis of the current response model that includes the use of POC's personally own vehicles, effective response force (ERF) performance, and establishment of an appropriate demand zone as part of the Standards of Cover.

Working with this community, efforts should be made to retain the service. However, if the current response model is determined to be inadequate, or if failure to recruit/retain POC volunteer firefighters persists, the Bryanston Station should be closed.

Several options were considered to maintain efficient and effective service in the Bryanston, Ilderton and Arva Station demand zones. Each option present opportunities and challenges.

Recommendation #14: Complete critical task analyses for common incident types in response SOGs

(Suggested completion: 12-18 months)

It is recommended that MCFS completes a critical task analysis of common responses and embed them in their SOGs as a component of completing the standards of cover process. Additionally, tactical objectives in SOGs should be scaled to the resources available in the event there are not adequate firefighters available to complete all critical tasks.

Recommendation #15: Continue the implementation of a new RMS with the functional requirements to support automated data transfer and reporting

(Suggested completion: 12-24 months)

Fire departments have access to large amounts of data. However, the data only becomes useful if it can be developed into meaningful reports. Manual entry of data is both time consuming and prone to errors. Further, the correction of any errors compounds the inefficiency of this process. Contemporary CAD and fire department RMS systems can be integrated to streamline the data capture process. An RMS can typically be programmed to produce reports and queries to investigate specific topics or incidents.

THANK YOU

For more information contact:

Behr Integrated Solutions

Phone: 403-444-6940

www.behrintegrated.com