



BORDER DROPPING

**A Report to the Madison Mayor and City Council
by the Madison Fire Department
on the issue of Border Drops, which could facilitate the closest,
most appropriate resource being sent, regardless of the jurisdiction.**



March 1, 2015

The concept of reducing response time through border dropping was proposed by the Dane County Executive and other elected officials in response to discussions regarding increasing public safety as it relates to fire responses within Dane County. In response to these proposals, Fire Chief Steven Davis met with Mayor Paul Soglin to discuss this issue. Together they proposed the Madison Fire Department study border dropping internally to determine its feasibility, including if it would enhance the safety of the residents of Madison, and what changes within the current operating configurations between the City of Madison and neighboring departments would need to be identified to meet the goal of increasing public safety.

On the surface, the act of removing jurisdictional borders and sending the closest, most appropriate resource appears to be a straightforward task; yet when researched, it becomes much more complex.

This report focuses upon several aspects of the discussions between Mayor Soglin and Fire Chief Davis. It specifically covers the criteria of:

- Minimum staffing
- Response levels
- Training
- Technology challenges
- Use of automatic/mutual aid currently being employed in Dane County
- Other operational items specific to the City of Madison

Dane County Fire Departments: Operations and Deployment

Fire departments are classified as Career Departments, Combination Departments (paid personnel with volunteers), or Volunteer Departments. Based on the classification, a department is expected to meet the professional objectives outlined within National Fire Protection Association (NFPA) Standards. Career Departments operate under NFPA 1710. Combination and Volunteer Departments operate under NFPA 1720 standards.

The City of Madison and the Dane County Airport Fire Department are the only classified career fire departments in Dane County. All of the other 26 fire departments within the county are classified as either combination departments or volunteer departments, depending upon how they incorporate combinations of full-time staff, part-time staff, paid on-call staff, volunteers and/or interns. Based upon these classifications, the City of Madison is the only fire department operating under NFPA 1710 Standards. The National Fire Protection Association Standard 1720 is what is used by almost all of the surrounding departments. This standard states that departments that serve populations greater than 1,000 must respond with a minimum of 15 personnel with a response time of 9 minutes.

Operationally, the Madison Fire Department, in compliance with NFPA 1710 (5.2.4.2), has established a *minimum* deployment of 3 fire engines, 2 ladder trucks, 1 medic unit, and one

command vehicle (chief officer) as the initial assignment for a structure fire. Each vehicle deployed is considered to be an Operating Unit as defined by NFPA 1710 (5.2.3) with minimum staffing levels consisting of 4 personnel: a Lieutenant, an Apparatus Engineer, and 2 firefighters on each engine and ladder deployed; 2 firefighter/paramedics on a medic unit, and a Chief Officer and aide on the Command Vehicle. This initial response of 24 firefighters responding immediately upon notification meets the NFPA 1710 standards.

This initial full alarm deployment allows for:

1. Establishing Incident Command.
2. Establishing an uninterrupted water supply maintained by a pump operator at all times.
3. Establishing an effective and appropriate water flow (operated by a minimum of 2 people)
4. Personnel to provide support for each attack and backup line, hydrant connection, assist in locating hose lines, utility control, and forcible entry.
5. Minimum of 2 personnel for search and rescue of the premise.
6. Minimum of 2 personnel to raise ground ladders for rescue or access, and perform ventilation.
7. If an aerial device (ladder truck) is operated, one person to maintain primary control of aerial ladder at all times.

Daily Staffing

The MFD has 82 personnel on duty covering the City's 13 fire stations. These 82 Firefighters operate under one Standard Operating Guideline (SOG) manual and one Policy and Procedure Manual established for consistent operations of the fire department. The 82 firefighters on duty are trained to one Department standard based on a 2-year training plan.

Having other responding agencies may operate within the City of Madison in a way which may conflict with their own SOG manual or MFD.

Current trends in staffing Combination and Volunteer Departments, may not allow for neighboring departments to consistently meet staffing levels required by the Madison Fire Department and NFPA 1710. All of the fire departments within Dane County have a proud history of providing fire protection to their communities; however, they are not immune to issues with recruitment and retention of members. Many Dane County fire departments are actively employing several methods to recruit and maintain members, including the use of stipends, Madison College student interns to augment staffing, full-time firefighters, paid on premise (part time staff), and paid on-call members and volunteers. Since this is not the

model used by the City of Madison Fire Department, a study would need to be completed as to the successes and operational issues of the departments and how they compare to Madison.

If the City of Madison and Dane County communities would choose to establish a borderless system for response, there will be the potential for large financial commitments from the municipalities surrounding the City of Madison. Most of the financial commitment would come in the form of staffing response vehicles to the NFPA 1710 standards: a minimum of 4 fully trained responders per 1 fire apparatus. The differences in the NFPA 1710 and NFPA 1720 staffing models will create a challenge for all communities.

Auto-Aid, Mutual Aid, and MABAS

Automatic Aid is assistance that is dispatched automatically by a contractual agreement between two fire departments, communities, or fire districts. (This differs from Mutual Aid, which is assistance dispatched upon request by the responding fire department). The use of Auto-Aid in some models does not always mean “*closest and most appropriate*”. Currently, Auto-Aid is being used as a mechanism to assist the Authority Having Jurisdiction (AHJ) by augmenting a single department’s initial response of personnel. It also is used county-wide as a tool to establish a “depth of coverage” for a community. The “depth of coverage” allows a community experiencing an emergency to utilize another community’s resource, leaving local resources available for another emergency, if needed.

Mutual Aid is an agreement between all of the communities in Dane County. The document that was signed in the 1960s stands true to this day. The agreement basically allows any community to call for help with an emergency. The agreement does not allow for interagency billing, and a community, if requested, cannot take a “pass” on a response. With Automatic-Aid and the MABAS system, agencies are able to say they cannot respond due to unforeseen circumstances.

The **Mutual Aid Box Alarm System (MABAS)** is designed to deploy responses when the AHJ becomes overwhelmed or stricken by an incident. Minimum standards are set for responders training for this program. The system is designed to deplete resources in a more predictable fashion. Units are sent from further locations so that every community keeps a response resource locally and available to handle another emergency. Comparing this simple response with minimum standards to Auto-Aid or border-dropping is not a fair comparison. Several area fire departments have stringent response minimums before a member can respond out for a call. If a closer fire department does not hold the same standard, then the



original department's citizens are being served at a reduced level; lower than what the community and Fire Chief has adopted as their standard. The application of border drops should be set with the premise that the responding agencies are all at the same level of standards from the start, (as opposed to only once they are completely stricken, at which time MABAS would be deployed).

Current expectations would be that if a border drop takes place, all the responders would have the same training, the same staffing levels, and all would deliver the same service. This concept is a challenge for Dane County because of the large differences in recommended staffing models by the NFPA.

Training/Recruitment/Retention

Another area that will require an expense—of both money and time—is training. The State of Wisconsin requires a firefighter to receive only 60 hours of training. The use of MABAS increases that requirement to an additional 36 hours of training to meet the State Firefighter 1 certification. It should be noted that these certifications are the very *minimum* necessary to meet very broad standards, and additional training needs to take place for firefighter development.

Currently, the recruits who go through the Madison Fire Department Training Academy not only exceed the State requirements, but also meet the Firefighter 2 certification. Applicants to the Madison Fire Department participate in a rigorous hiring process prior to being recommended by the Fire Chief and approved by the Police and Fire Commission (PFC) to become a member of the MFD. Upon a conditional offer of employment, the successful applicant also will have passed a background check and a thorough physical exam before they start the recruit academy. MFD recruits then attend a challenging 17-week academy. Upon successful completion of the academy and prior to being placed in a fire station, the recruit will have successfully completed the rigorous standards set by the Department, standards set by the State to have passed Firefighter I and Firefighter II certification, and will be licensed as a State of WI licensed emergency medical technician (EMT). All personnel participate in ongoing training utilizing the 2-year training plan developed by the Training Division. All of these drills build upon the operations at various types of emergency situations. On average, company-level training exceeds 200 hours per firefighter.

The Dane County fire departments do participate in a Dane County Fire Training Officers organization. This organization could benefit all departments if we choose to look at a borderless dispatching model. This group could be tasked with developing ongoing training plans that could incorporate or augment the current MFD 2-year training plan. One of the barriers that would be needed to be addressed is the training time. The MFD (by contract) trains its firefighters during daytime regular work hours. Most other departments in Dane County host training at night when their members are available.

Annual requirements for personnel performance standards vary between departments. Annually, MFD personnel are required to participate in either personal performance standards or company standards. These standards are prescribed activities working either as part of a team (company standards) or on an individual basis (personal performance standards) that measure a minimum fitness and performance level. Individuals and/or companies who do not demonstrate proficiency are given additional training and fitness plans before retaking the standards. This annual testing ensures that crews are functionally able to initiate fire ground actions, as well as maintain a minimum physical fitness level.

The MFD has also adopted the IAFF/IAFC Firefighter Health and Wellness initiative. The initiative is designed for each individual to maintain a fitness level appropriate to maximize their performance. The Department has a staff of Peer Fitness Trainers who assist each individual with a personally designed health and wellness program. Working in conjunction with this group are additional certified trainers who are providing input and assistance in making an even healthier workforce within the MFD. Additionally, all of our recruits go through rigorous fitness testing with Exercise Physiology Staff from University of Milwaukee. The intent of this testing is to develop a fitness baseline for the recruit and use the information acquired to possibly forecast deficiencies in the recruit that can be used as predictors for future work place injury. Programs are then developed to help the recruit minimize injuries in the future. The MFD would encourage all participants in a borderless dispatch system to adopt the same standards.

Technology Challenges and Opportunities

Another issue that is faced with the current model and border drops is the interoperability of radio frequencies used. The City of Madison currently utilizes 800 MHz and the County agencies utilize VHF. The current model of using “patches” (linking the two systems) has created challenges and with the redesign of DANECOM, there is potential for a reduced ability to set up patching across different bands. Both systems would be required to use non-trunked talk group channels. The County system has only two tactical analog channel that will be allowed inside a structure when firefighting operations are involved. The interoperability challenges all departments may face in the future is unknown.

Pre-Alerting/Quick Dispatching

Response time includes alarm answer time, alarm process time, turnout time, travel time, and time to initiate action on scene. Alarm answer (amount of time to answer the call) and alarm process time (from time the phone call is answered until the information is transmitted to the responding agency/personnel) is wholly impacted by the Dane County Communications Center. Turnout time (the time of notification to the responders until the time travel begins to the scene), travel time, and the time it takes to initiate action is impacted by the fire and the supporting infrastructure of the community (water supply, roads, etc).

In 2013, The Dane County Fire Chiefs' Association formed a committee to study methods of receiving alarms/getting paged for alarms more quickly from the Dane County Communications Center. The majority of fire departments in Dane County rely on a paging system that alerts their members that there is an emergency in their jurisdiction in which they need to "muster for" and respond. The "pre-alerting" would occur immediately after the address and nature of the incident became known. Members would start making their way to the station while additional information was being gathered by the Dane County Communications Call taker. Pre-Alerting enables responders to begin turnout time sooner and reduce overall response time. The call taker is still able to get additional information while the responder is making their way to their station or the vehicle to begin traveling to the incident.

Since the vast majority of Dane County departments are staffed with volunteer or paid on-call staffs that respond from their homes, simply paging them will not guarantee a faster response. The best non-proven time for departments without in-house staff to begin response in a fire apparatus has been estimated at 4 minutes. While this time may not sound overly significant, it does add to the time for responders to get to the scene, resulting in a much longer time response. This concept explains why a geographically closer resource may not be the quickest resource to dispatch. The delay comes on the front end of the response time, as unstaffed stations need responders to respond to the station to staff a vehicle.

Center Line vs. Address Point Map Layers

In 2014, the problems of prolonged response times were discussed on many levels. Since implementation of the Tri-Tech CAD in April of 2013, the Madison Fire Department has noticed prolonged process times. One of the stated causes was the difficulty of the Dane County Communications Center to determine which agency should be responding for areas that were border areas. As implemented, the system relied on "center line" data layers to determine the jurisdiction in which an incident was occurring. Using center line layers, dispatchers often had to verify the recommendations being made from CAD, often causing delays or errors. If center line layers continued to be used, the ability to page the agency that was physically closest, regardless of jurisdiction, would minimize the delay of using center line layering.

With the help of the City of Madison Information Technology working with the County Land Information Office, address point layering has been implemented, greatly reducing delays and errors attributable to incidents occurring on the borders of multiple jurisdictions. This implementation has helped reduce the processing time of the dispatchers, allowing for quicker response overall.

The Next Steps:

Providing the City of Madison and surrounding communities with a border drop system could have potential in Dane County. With the purchase of the new Computer Aided Dispatch system utilized by the current Dane County 911 Center, the technology exists to have a border drop system in place. For a borderless system to function properly there are several things that all communities need to address:

- A geographically closer station or unit does not mean that it will be a faster response. We would need to study the exact response time differences between a fully staffed facility, and a partial or unstaffed facility. There may be times that the differences are staggering.
- With a large variety of fire department response times in Dane County, we need to establish a set of criteria for data collection. What defines a response time, and what is acceptable for each community?
- Consistent staffing models need to be agreed upon by all communities. The City of Madison has an established standard of 4 firefighters per fire apparatus. (NFPA 1710) It is reasonable for the City of Madison to expect the same response from outside agencies, as we currently provide under Auto-Aid, Mutual Aid, or MABAS.
- Each community will need to develop and implement an ongoing fitness program for each employee. These programs should include individual fitness plans and annual medical exams. Many departments in Dane County may already require these standards; we need to gather additional data.
- Agencies will need to develop personal and company performance standards to ensure responders are meeting a minimum standard that is agreed upon by all agencies.
- Dane County fire departments do currently have a training officer organization. The group meets every other month, and could/would develop a common core training program, standard operating guidelines, and policies for all Dane County fire departments to function seamlessly on an emergency scene.
- Dane County will need to address the DaneCom radio system to ensure that all Dane County Fire Departments can communicate. Radio interoperability will be a critical requirement for border dropping to occur.
- All fire departments in the County will need technology support from the Dane County 911 Center to ensure that all of the technology equipment is functioning properly such as vehicle AVL and CAD systems. The departments will also need support to ensure radio and alerting (paging) systems are functioning at full capacity.

- The equipment involved from various departments would require some outlay in startup cost as well. Minimally, adapters for hoses to be connected to different department apparatus would need to be purchased. The expected outlay of cost should not be considered to be excessive, but nonetheless, there will be a cost.
- The biggest obstacle for border dropping is State Statute. Home rule does not allow for “border dropping”, rather home rule allows for authorities having jurisdiction (AHJ) to enter into Intergovernmental Agreements (IGA’s) to achieve automatic aide if the communities can reach agreement on how resources should be deployed.

In the Meantime:

Of the 28 fire departments that respond to emergencies in and around Dane County, there are approximately 80 automatic aid agreements. Some of these agreements augment staffing levels, some provide for a “depth of coverage” for a community. Some of the agreements in place are due to the geographical location of one agency over another. The Dane County Fire Chiefs have met several times in recent months to discuss border dropping and automatic/mutual aid. The group is committed to continuously evaluating response planning and serving our communities. The majority of the Fire Chiefs represented feel very strongly that it is their responsibility to define and provide the very best service for their community needs. As needs to change response arise, the Dane County Fire Chiefs are committed to addressing the change need through the use of Intergovernmental Agreements. These IGA’s due take some time to develop, and the Dane County Fire Chiefs utilize the Mutual Aid agreement until the IGA’s can be legally developed. This report includes a legal opinion developed by City of Madison Attorney Michael May (Appendix A.)

Glossary

Auto-Aid—A contractual agreement between municipalities that defines a response. This may be for specific equipment and/ or personnel.

DANECOM—the trunked radio system currently being built out by Dane County. The area fire departments will utilize this as their radio communications.

Defensive Operations—Crews perform activities to limit spread of the fire, typically sacrificing the building on fire to save other buildings not yet involved.

Emergency Medical Technician—A person licensed to perform basic life support, advanced life support, or paramedic level care based on successful completion of coursework and testing.

Engine Company—A piece of Fire Apparatus that carries personnel and equipment to the scene; it also carries hose and has onboard pump. Primary function at a fire is extinguishment.

MABAS—Mutual Aid Box Alarm System. A system which assists departments with pre-planning for emergency situations by providing organized mutual aid within our County and throughout the Mid-West. In addition to incident response pre-planning (box alarm cards), the MABAS System provides standardized radio communications, personnel accountability, and contractual agreements between all members.

Ladder Company—A piece of fire apparatus that has an aerial device on the top. This may be a straight ladder or a platform. Primary function at a fire incident is ventilation, search and rescue.

NFPA—National Fire Protection Association. An international non-profit organization whose mission is to reduce fire and other hazards by providing and advocating consensus codes, standards, research, training, and education.

NFPA 1710—Standard for 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.

Offensive Operations—Crews take an aggressive strategy to attack the fire. This is when companies typically operate inside the building.

Paid-on-Call Firefighter—Member is compensated at a pre-determined wage. This may also include incentives as well as retirement plans.

Pre-Alert—The act of notifying agencies that an incident has been reported in their response area. Currently only 4 incident types are “pre-alerted”: structure fires, vehicle fires, outside fires, or significant rescue).

Structure Fire—A fire that occurs within or is part of a constructed property.

Volunteer Firefighter—Member with no or little compensation for serving as a firefighter or EMT.

**CITY OF MADISON
OFFICE OF THE CITY ATTORNEY
Room 401, CCB
266-4511**

Date: June 18, 2014

MEMORANDUM

TO: Chief Steven Davis

FROM: City Attorney Michael May
Assistant City Attorney Marci Paulsen

RE: Concerns over 911 Center & County's Authority

We were asked to review statements made by the County Executive's Office regarding the 911 Dispatch Center's ability to immediately dispatch the closest fire department on an emergency call, ignoring jurisdictional lines. Neither the 911 Center Board nor the County Executive have the authority to dispatch any fire department into the City of Madison without the City's consent.

Questions Presented

1. May the 911 Dispatch Center immediately start dispatching fire departments that are closest to the fire (irrelevant of jurisdictional lines)?

No, the 911 Dispatch Center can only dispatch fire departments within their jurisdictional lines.

Wis. Stat. § 62.12(5) outlines the doctrine of statutory home rule for cities:

“Except as elsewhere in the statutes specifically provided, the council shall have the management and control of the city property, finances, highways, navigable waters, and the public service, and shall have the power to act for the government and good order of the city, for its commercial benefit, and for the health, safety, and welfare of the public and may carry out its powers by license, regulation, suppression...and any other necessary or convenient means. The powers hereby conferred shall be in addition to all other grants, and shall be limited only by express language.”

Wis. Stat. § 62.13(8) provides that “the council may provide by ordinance for either a paid or a volunteer fire department and for the management and equipment of either insofar as not otherwise provide for by law.”

Based on these statutes, the City has determined that the Madison Fire Department should be responsible for all fire and other emergency calls within the City.

The Common Council has further determined what level of fire protection is appropriate for the citizen of Madison and has insured that the Madison Fire Department is meeting this level of service.

As you are aware, the City has signed a Mutual Aid Box Alarm System Agreement (MABAS) that provides “whenever an emergency occurs and conditions are such that the Chief Officer...determines it is advisable to request aid pursuant to this Agreement he shall notify the Aiding Unit of the nature and location of the emergency and the type and amount of equipment and personnel and/or services requested from the Aiding Unit.” Under this agreement you may determine if and when fire departments from outside the City should be dispatched. However, this is the only time that outside departments may be dispatched within the City.

Under Wis. Stat. § 66.03125(2)(a) “upon the request of a fire department, the personnel of any other fire department may assist the requestor within the requestor’s jurisdiction, notwithstanding any other jurisdictional provision.” If a request for service is made under this statute and there is no agreement in place then “the governmental unit that receives the assistance is responsible for the personnel or equipment costs incurred by the responding agency if the responding agency requests payment of those costs...” Therefore, besides having the MABAS agreement, MFD has the ability to request outside aid as it deems appropriate and would be responsible for paying for this outside aid. However, once again this is left to the discretion of the City, not the County or Center Board.

Wis. Stat. § 62.13(8)(b) establishes that a “city may enter into a contract for fire protection services with a village, a town , or another city.” Further, Wis. Stat. § 66.0301(2) provides that “any municipality may contract with other municipalities...for the receipt or furnishing of services or the joint exercise of any power or duty required or authorized by law...” Therefore, if the City is interesting in pursuing an agreement or agreements with fire departments outside of the City, there is statutory authority to establish such an agreement. This agreement would need to be authorized by the Common Council and reviewed by City personnel. The County would not be involved in the discussion.

2. Does the County Executive have the authority to implement changes to how departments are dispatched?

No, under Dane County Ordinance § 15.34(10) “the center board shall establish the operating practices of the department provided that any practices which have a major fiscal effect shall be subject to approval of the county executive. The center board’s authority shall not extent to personnel policies...” This is very similar to the lawsuit filed against the County in 2010 where Judge Colas stated that the “Center Board, not the Dane County Executive or the Dane County Public Safety Communications Director, has the authority to establish operating practices of the Dispatch Center for emergency and non-emergency calls requiring the dispatch of public safety agency personnel...”

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The issue at hand is not within the authority of either the County Executive or the 911Center Board. It is at the City's sole discretion to decide whether the City wants to contract for outside services as Milwaukee did, or whether the City believes its current MFD personnel, MABAS agreement and state statute are at such a level that all emergency dispatches within the City may be handled appropriately.

Please contact one of us directly if you have further questions on this issue.