

Running head: MANAGING CROWDS DURING SPECIAL EVENTS: CREATING

Managing crowds during special events: Creating a safer Delray Beach

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Certification Statement

I hereby certify that this paper constitutes my own product, that where the language of others is set forth, quotation marks so indicate, and that appropriate credit is given where I have used the language, ideas, expressions, or writing of another.

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Abstract

Crowd related injuries have consistently occurred during large mass gatherings and during what could be considered as small events. The safety and enjoyment of people visiting an event depends largely on the effective management of the crowd. Crowd management is a critical part of any event and can be sum totaled as providing a safe well-planned and organized event for patrons. Recently, the City of Delray Beach has become increasingly involved in special events. With the increase in number and complexity of events, the risk, propensity for injury, or tragedy has increased. The problem is that the City of Delray Beach does not have a Crowd Management Plan. The purpose of this applied research project is to develop a Crowd Management Plan as a component of an Event Management Plan for the City of Delray Beach. To achieve the stated goal of this research project, action research was utilized. The associated research questions were a) what is the purpose of crowd management initiatives? b) Who has responsibility in Delray Beach for managing crowds during special events? c) What methods for crowd management are utilized by public safety agencies? d) When should crowd management policies be utilized? e) How has private sector event coordinators managed crowds at events?

The procedure involved a literature review, a short questionnaire, personal communications with subject matter personnel, and crowd management policy reviews. The process also included the answering of the research questions. The results of the applied research project identified key points that will be utilized in creating the crowd management plan.

Recommendations included the following steps: seating a special event committee of all stake holders, early and often pre-planning meetings; performing risk-hazard analysis of City venues and event possibilities, special event operational considerations, contingency planning and finally plan development.

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Introduction

The City of Delray Beach (City) is settled on the southeastern shoreline of the State of Florida. With her beautiful sandy beaches, lofty palm trees, and warm blue ocean waters, Delray Beach is a little taste of paradise. Nestled between West Palm Beach to the north and Ft. Lauderdale to the south, Delray has become a popular destination for visitors looking to enjoy all that Florida has to offer. Likewise, the little village by the sea has become a mecca for special events during the months of March through December.

During special event season, the City issues on average 40 special events permits. Of these, 12 are major events attracting at least 10,000 visitors respectively. However, per Captain Timothy Garito, Fire Department Special Event Liaison (personal communications, July 2, 2013), some major events, such as Delray Affair, St. Patrick's Day Parade, and the Holiday Parade and Tree Lighting Event attract and exceed 100,000 visitors and patrons. With crowds reaching these numbers on a consistent basis throughout the special event season, the propensity for injury or death to patrons increases. As a matter of fact, a witch's brew of disaster management as well as emergency management challenges exists in these settings.

On April 11, 2001, Ellis Park South Africa, as stated by Dr. G. Keith Still (2013) in his article *Crowd Disasters*, at least 43 people was killed at a soccer match between rival South African teams. The charge began as visitors hurried into Ellis Park Stadium in Johannesburg to watch the match between the Kaiser Chiefs and the Orlando Pirates. According to the New Yorker (2011) on Thanksgiving Day, 2008; shoppers at a Wal-Mart in Valley Stream, Long Island begin to line up in anticipation of the Black Friday sales. The crowd estimated at 2,000 just prior to store opening caused the death of a worker. At five o'clock that morning, the doors were opened

and the throng pressed forward pinning an employee underneath a fallen sliding glass door causing his asphyxiation.

Still (2013) also describes an incident in Cambodia on November 22, 2010 in which a stampede killed at least 375 people on a suspension bridge prior to the Love Festival. He tells of survivors being wedge between the living, the dead and the dying. Still continued to describe in detail horrifying event after event in which lives were lost due to the uncontrollable dynamics of a crowd. Still (2013) purports that crowd forces can exceed levels well above those required to maintain crowd control and that virtually all crowd deaths are contributed to compression injuries and not trauma type injuries indicative of trampling.

Hallie Ephron Touger (2002, p. 40) states in the article *Safety in Numbers*, “Managing a crowd in a single space, no matter what occupancy isn’t an easy task, in part because no single element ensures crowd safety.” Chip Carson stated (2002) in his article, *Managing Life Safety in Crowds*, NFPA 101, *Life Safety Code*, requires three (3) things to manage emergencies in assembly occupancies, crowd managers, a life safety evaluation, and emergency egress and relocation drills.

According to Jeff Collins, (personal communications, September 25, 2013) Fire Chief of the Palm Beach County Fire-Rescue Department and the Chair of the Technical Committee on NFPA 1, *Uniform Fire Code*, crowd management is essential. Collins (2013) stated that the crowd management requirement came out of the life safety code and had been born out of the Warwick, Rhode Island tragedy. He continued by stating that after the fire at the Station Night Club that claimed 100 lives, a focus was made on sprinkler thresholds and crowd managers to prevent like tragedies. Chief Collins also purported that based on research conducted after the

Station Club fire, it could be deduced that if the night club employed responsible crowd managers, had them in place, and had the building been sprinklered prior to the fire, the sprinklers would have controlled the fire and along with the other elements mentioned would have substantially reduced the loss of life. Chief Collins stated that an applied research project on crowd management is warranted and believed that it would yield excellent data.

As previously stated, the City has become a mecca for outdoor special events. With the increase in number and complexity of events, the increase in the number of vendors and patrons attending, the risk and propensity for injury, mishap, or tragedy likewise increases. Nonetheless, the City, while approving these outside venue events, does not provide a wealth of direction for crowd management and safety. As a matter of fact, when considering the management of crowds in an outdoor venue, there is little direction afforded to promoters, public safety representatives, event coordinators, or event organizers. The problem is that the City of Delray Beach does not have a Crowd Management Plan. The purpose of this applied research project is to develop a Crowd Management Plan as a component of an Event Management Plan for the City of Delray Beach.

In order to achieve the stated goal of this research project, the action research method was utilized. The research involved a literature review, personal communications with subject matter professionals, and crowd management policy review. The process also included the answering of the following five associated research questions a) what is the purpose of crowd management initiatives? b) Who has responsibility in Delray Beach for managing crowds during special events? c) What methods for crowd management are utilized by public safety agencies? d) When should crowd management policies be utilized? e) How has private sector event coordinators managed crowds at events?

Background and Significance

The City of Delray Beach is a beautiful small city located in South Eastern Florida. A village by the sea that began as an agricultural community in 1895, Delray Beach has become one of Florida's most popular destinations for visitors. Delray Beach offers city life through the prism of a small quaint seaside community engrained with the freedom to work, relax, and play in a safe environment. Delray Beach is a two time recipient of the All-America City designation (1993 and 2001) and is steeped in the aesthetics of paradise which adds to the irresistible draw placed on visitors to unite themselves with the community and its way of life.

The Delray Beach Fire-Rescue Department (DBFR) provides fire and life safety protection to the incorporated city limits and surrounding communities. The DBFR is a professional multi-disciplined organization consisting of 150 uniformed personnel, an Administrative Officer, an Executive Administrative Assistant, four administrative staff assistants, two EMS billing specialist, and one civilian plans reviewer that offers diverse services to the citizens, the work force, and visitors of Delray Beach. Personnel are divided among operations three battalions or shifts, administrative division, fire safety division, training division, and the EMS division. Each shift is supervised by a Battalion Chief with the assistance of an EMS Shift Captain for supervision during high level medical emergencies and highly involved responses [e.g. structure fires, special operation responses, target hazard emergencies].

Currently, the fire department operates six fire stations serving Delray Beach, Highland Beach, and the Town of Gulfstream. Each fire station has the capability to respond a fire engine or an aerial ladder truck along with an ALS medic response vehicle. The suppression units at the stations are staffed by three uniformed personnel; all of the department's fire suppression units

are advanced life support (ALS) capable. All medic apparatus are staffed with two uniformed paramedics. The fire department responds to an average of 12,000 requests for service per year.

The emergency response services offered by the fire department include emergency medical response (ALS/BLS), structural and vehicle firefighting, hazardous materials mitigation, technical rescue, and surface water and dive rescue. Additionally, the fire department also renders the following non-emergency services: emergency management, fire safety inspections, plan review, Public Education programs [such as first-aid, CPR/AED training, smoke detector assistance program]; Fire Prevention, a Youth Fire Explorer Program, and a Youth Fire Starter Program.

According to estimates from the United States Census Bureau (2012), the City of Delray Beach has 62,357 residents filling its 15.1 square mile area. The City also has 10,000 part-time residents during the winter months drawn to the beautiful winter climate of South Florida. The entire community, as stated by the Downtown Development Authority (2012) is known as a Sociable City and was recently awarded "Best of the Road - Most Fun Small Town in America" by Rand McNally & USA Today. Because of its location, Delray Beach consistently attracts promoters, event coordinators, and enterprisers seeking to take full advantage of the area's charm. It is this charm that consistently draws new residents, visitors, businesses, and event coordinators to the City.

Our little village by the sea has become a mecca for special events during the months of March through December. During special event season, the City issues on average 40 special events permits. Of the 40 special events permits issued, 12 are major events attracting at least 10,000 visitors. However, per Captain Timothy Garito, Fire Department Special Event Liaison

(personal communications, July 2, 2013), some major events, such as Delray Affair, St. Patrick's Day Parade, the Chris Everett/Raymond James Pro-Celebrity Tennis Classic, and the Holiday Parade and Tree Lighting Event attract tens of thousands and may exceed 100,000 patrons.

Robert Barcinski, Assistant City Manager (personal communication, August 6, 2013) stated that special events in Delray began to promote economic development, cultural diversity, and promote a fun safe family environment for residents and visitors. The events began in the 1950s with the Holiday Parade Celebration and the Delray Affair event. In the 1970s, the Roots Cultural Festival made its debut celebrating the customs and culture of African Americans. However, in 1984 with the inception of the Independence Day Celebration and the St. Patrick's Day Parade, special events occurrences grew. Barcinski continued by stating that in 1993, when Marjorie Ferrier was hired, the push came to market, promote, and help economic development. Over the years, the footprint of some of the events such as the Garlic Festival, Delray Affair and the St. Patrick's Day Parade grew exponentially. The challenges in these settings led to the problem facing Delray Beach, the lack of a Crowd Management Plan.

The applied research project, *Managing Crowds during Special Events: Creating a Safer Delray Beach* aligns with the United States Fire Administration's strategic goals and the Executive Fire Officer Program's Executive Analysis of Community Risk Reduction Course. This applied research project discusses and brings to the forefront two of the USFA's strategic goals, reducing risk at the local level through prevention and mitigation and improving local planning and preparedness. These strategic goals are emphasized through emergency management planning and preparation. It also brings to bear the overall theme of the Executive Analysis of Community Risk Reduction course that stresses the importance of risk analysis, risk identification, and finally risk mitigation and/or risk alleviation.

Literature Review

Throughout the United States, as stated in the Special Events Contingency Planning Manual (2005) from the Federal Emergency Management Agency (FEMA), at any given time of year, time of season, on any given day of the week for that matter, there are festivals, concerts, fairs, sporting events, and many other large and small events. These events gather or have the potential to gather large crowds. Webster's New College Dictionary (2007) defines a crowd as a large number of people. Norazlina Rahmat, Kamaruzaman Jusoff, Norzaidah Ngali, Noorrazlin Ramli, Zetti Madina Md Zaini, Azlina Samsudin, Fatimah Abd Ghani, and Munirah Hamid (2011, p. 47) in the *World Applied Sciences Journal* article, *Crowd Management Strategies and Safety Performance among Sports Tourism Event Venue Organizers* stated "With the increased popularity of sports tourism events has led to larger and more diverse attendees, making safety and crowd management a necessary and integral part of the planning process for any event." Under usual circumstances, these events proceed with few or no problems. However, when things go awry, either as a result of a natural hazard or a manmade hazard, the outcomes are devastatingly tragic.

As stated by Je'Anna Abbott and Morgan Geddie in their *Event Management* magazine article entitled, *Event and Venue Management: Minimizing Liability through Effective Crowd Management Techniques*, "Crowd management and crowd control are two distinct but interrelated concepts" (p.259). Abbott and Geddie (2001) continued in this vein by stating that crowd management involves facilitation, employment, and movement of crowds. Likewise, crowd management procedures involve event planning, employee preparation, collecting data, and forming scenarios for training and response purposes. Events Industry Forum (2013) stated that crowd management is a complete system that includes legislation and guidance, planning,

management structure, performer or participant and audience profile, risk assessment, the competency levels of those responsible for managing the crowd, and the role of other agencies. On the other hand and in contrast, crowd control comprises of steps utilized to regain order after a crowd has begun to behave in a disorderly fashion.

On an annual basis, hundreds of thousands of events are held locally, regionally, and nationally. This is because people gather where there is a happening or an extraordinary event (Smelser, 1971). For the most part, a very minute percentage of these events have experienced problems. Scott Berinato (2007) in his article, *Modern Crowd Control Lessons from Ancient Pompeii* quoted G. Keith Still explaining that modern society have forsaken ancient lessons of safety. Still a world leading expert on crowd management expertly opined in Berinato's article stating that modern facilities are looking at economic payback and long-term sustainability in facilities that are designed to maximize profits at the expense of creating safe crowd conditions. Therefore it is understandable to react with a sense of commonality when reviewing recent events which has led to crowd management becoming a mainstay not only in the fire and life safety discussion, but also in the everyday lexicon of the nation.

There is a crowd management industry mantra that brings to bear an ideology of biblical proportions. In biblical tones, you reap what you sew is translated into crowd management speak "To ignore the danger is to deserve the disaster" (Still, 2013). Incidents such as the crowd crush at the E2 Night Club that claimed 21 lives in Chicago on February 17, 2003 and the blazing inferno at The Station Night Club on February 20, 2003 that claimed another 100 lives in West Warwick, Rhode Island, caused new stricter code provisions by NFPA to better manage crowds in assembly venues. According to 2009 edition of NFPA 1, *Uniform Fire Code*, 20.1.4.6, Crowd Managers, 20.1.4.6.1 states:

Assembly occupancies shall be provided with a minimum of one trained crowd manager or crowd manager supervisor. Where the occupant load exceeds 250, additional trained crowd managers or crowd manager supervisors shall be provided at a ratio of one crowd manager or crowd manager supervisor for every 250 occupants.

Collins stated (personal communications, September 25, 2013) that crowd managers were first introduced in the 1994 edition of NFPA 101, *Life Safety Code*. The code seemingly remained in its original verbiage until 2003. After the tragedies of Chicago and West Warwick, NFPA Technical Committee on Assembly Occupancies members proposed emergency amendments known as Temporary Interim Amendments to two integral safety codes. Later in 2003, the TIAs were accepted and became a permanent code revision in NFPA 101 *Life Safety Code* and NFPA 5000 *Building Construction and Safety Code*. The changes included fire sprinklers in new night clubs and similar assembly occupancies, one trained crowd manager for every 250 occupants in occupancies exceeding 1000 except in places of worship, building owners to inspect ingress and egress prior to opening for business, and festival seating prohibition for crowds of 250 with the exception of completing a life safety evaluation.

As previously stated by Touger (2002), managing a crowd is not an easy task. Even with a well-designed building that conforms to fire and building codes, when it comes to crowd management, the building or venue is only a part of a larger equation. Equally important is the nature of the event, the mood and dynamics of the crowd as well as the skill or lack thereof of the management staff which all contribute to a crowd's response in an emergent situation. In other words, crowd management is an integral part of life safety in that when crowd management fails, lives may and usually are lost.

William Butler and David Gesner believed that when considering crowd management you should view mass events differently, and for good cause. In their article, *Crowded Venues: Avoid an EMS Quagmire by Preparing for Mass Gatherings*, Butler and Gesner (1999) stated that in some EMS circles, mass events are not thought of as definable situations, but as gatherings of potential patients. The authors go on to say that many regard mass events, whether they are concerts, rallies, athletic games or competitions as a repositioning of their normal patient population into a centralized location. Butler and Gesner (1999) purported that the reasoning behind this thought process is the potential strain on public safety resources during emergent situations at mass events.

James Hanna (1994) stated in the report entitled, *Emergency Preparedness Guidelines for Mass, Crowd-Intensive Events*, the greatest task is the ability to manage the crowd effectively, and prevent an unmanageable mass over which control is lost or abdicated. John Fruin (1981) said in *Causes and Prevention of Crowd Disasters*, effective crowd management requires understanding of crowd behavior and a coordinated effort to plan safe environments to accommodate all kinds of audiences at all kinds of events. Fruin also spoke highly of gaining an understanding of crowd density and its effects on the crowd. Fruin (1981) identified "critical crowd densities" as a common characteristic of crowd disasters. Per Fruin, critical crowd densities are approached when the floor space per standing person is reduced to about 1.5 square feet. This is critical because below 2 square feet per person, potentially dangerous crowd forces and psychological pressures begin to develop.

Abbott and Geddie (2001) purported that crowd management is concerned with effectively organizing the movement of the numbers of people associated with the crowd and stated that it is important to recognize that no two crowds are alike. Thus, it is important to ensure that crowd

management plans are flexible to meet the needs of the event as well as the potential crowd.

Abbott and Geddie (2001) cited Berlonghi's (1994) work that stated that a crowd management plan should involve consideration of some key matters. Such matters include, reviewing potential crowd's sociological behavior, seating arrangements, demographics, as well as time of event, size of the venue and/or the event, and number of concession stands as well as their locations throughout the venue.

There was a recurring theme throughout the literature review. The consummate theme brought to bear was that the pre-planning of these events is paramount. Ronald Siarnicki (1999), author of *Safety Calls the Plays*; stated that pre-planning is the best defense. Siarnicki purported that pre-event planning and inspections should be considered key elements to event safety and success. According to Siarnicki (1999) pre-event planning and inspections to include fire prevention, code enforcement, and EMS preparatory functions should be accomplished prior to the arrival of the first attendee. In other words, planning should take place months prior to the event. Butler and Gesner (1999) stated that pre-planning and the appropriate deployment of personnel and resources throughout a crowded venue are the keys to managing a successful mass event. Simply put; event planners, AHJ, event coordinators, and public safety officials that fail to plan, are planning to fail and these failures will be catastrophic in nature.

What is the purpose of crowd management initiatives?

The Report of the Task Force on Crowd Control and Safety (1980) stated that crowd management planning and implementation is the key to providing safe events. C. B. Berlonghi (1993) stated that crowd management includes all measures taken in the normal process of facilitating the movement and enjoyment of people. People attend an event for some purpose which can include being entertained, educated or to celebrate something. Berlonghi (1993) stated that the primary aim of crowd management and safety therefore is to control crowd

density. The purpose of crowd management as deduced by Berlonghi is that it assures people that they will get what they paid for and go home safely.

The Journal of Higher Education Safety (2013) purports that crowd management is providing for your patrons a safe, organized, and secure setting while in your venue. Furthermore, the writer continues by stating, “It is crucial that public assembly venues understand their legal obligations to protect guests and ensure they have an effective crowd management program in place.” The article identified certain ways to enhance guest safety and security. Identified in the article are advanced training and planning that was stated as key to successful crowd management. There were a few other keys to success identified in the article.

Also identified were, knowing the expected crowd demographics because this will provide valuable insight in creating your plan. Increase public awareness so that the public can play a vital role in their safety, and ensure that you provide a well-trained staff because a well-trained staff is a safe staff. The authors continued by stating that above all, a well-trained staff is of paramount importance when you open the doors to your event. Simplified, effective crowd management plans and training programs protect guests. Carson (2002) stated that crowd management is provided to assist in mitigating emergencies in assembly occupancies. Carson specified that crowd management through crowd managers are required to manage the crowd, keep egress paths clear, and assist in rapid evacuation of the occupancy during a developing situation or an actual emergency.

As purported by the Oakland Police Department (2011) crowd management is defined as techniques used to manage lawful public assemblies before, during, and after an event for the purpose of maintaining the event’s lawful status. The purpose of the Oakland Police Department

crowd management policy initiatives is to apply the appropriate level of direction and control to protect life, property, and vital facilities. The Crowd Management Plan for the University of California Police Department, Berkley (2013) stated that their philosophy associated with crowd management is to protect the lives, property, and rights of all people and to enforce the law. Ammon, Southall, and Blair (2004, p.144) opined that the purpose of crowd management initiatives is to invite “pleasant environments free of non-inherent risks” and that this should be a goal for public assembly managers.

As purported by the Special Events Contingency Planning Manual (2005) from FEMA, the purpose of the special events manual is the prevention of injury, suffering, or death that may occur as a result of poor planning or preventable incidents at public events. The researchers and writers continued by stating that the FEMA manual is intended to provide guidance for the management of risks associated with conducting events that involve mass gatherings of people and assist planners and organizers in making such events safe and successful. Furthermore, as delineated by FEMA, the manual is intended to enable its users to ensure that adequate measures and systems are in place to prevent, reduce, and provide care for injuries, illness, and suffering that may occur.

Who has responsibility in Delray Beach for managing crowds during special events?

Managing visitors that frequent special events in Delray Beach has recently garnered concern from City leaders. The concern is driven by a lack of a line of demarcation establishing crowd management and crowd safety responsibility. Does the City ultimately have responsibility or does the responsibility rest with the event coordinators? City ordinance, policies, and regulations were reviewed seeking identification of the titled position or individual having responsibility for crowd management during special events.

According to the City of Delray Beach Comprehensive Emergency Management Plan (CEMP), the Emergency Manager by default is ultimately responsible. This is simply because during an emergency whether manmade or of natural origin, a special event or a frequent common occurrence, in the time of disaster, the Emergency Manager has authority and responsibility to lead and direct the City through response, mitigation, and recovery. Following review of the CEMP, the City of Delray Beach Special Event Application, information packet, and policy was referenced to identify who has responsibility of managing crowds during special events without discovering any meaningful answers to the research inquiry. However, the reviewed literature provided some direction.

The Task Force on Crowd Control and Safety (1980) stated that the local government has responsibility for crowd management. According to the Task Force, through the promulgation of laws as well as their consistent enforcement, local governments influence the character of event management. The local government dictated and impressed its will of crowd management and crowd safety by establishing safety codes, determining occupancy loads, types of seating arrangements, and further influence events by the manner in which it provides such services as police and security details, trash and debris collections, fire inspections, and traffic control. However, the Task Force also elucidated that the facility operator, facility management, as well as the event promoter has a role to play.

According to the Task Force (1980) closely aligned with the local government at a slightly lesser degree, the facility management possess major influence on crowd safety. Incidentally, the Task Force stated that facility management has primary responsibility for assuring safe conditions and compliance with applicable codes and standards. Therefore, regardless of contractual language and/or agreements, facility management still bears ownership of and has an

obligation for the safety of the community it serves. Finally, the Task Force stated that established house rules and the strict enforcement of those rules along with local laws determine how the patrons, promoters, and entertainers will behave thereby reducing the chance of incidents taking place prior to, during, or after the event.

The Journal of Higher Education also weighed in on the question of ultimate responsibility for crowd management and safety. The Journal of Higher Education (2013, p. 1) stated that “It is crucial that public assembly venues understand their legal obligations to protect guests and ensure they have an effective crowd management plan and training program in place.” Likewise, the Journal also identifies the local government’s role and responsibility in ensuring crowd safety. According to the Journal of Higher Education (2013) fire chiefs, fire marshals, and inspectors must require trained crowd managers to comply with the *International Fire Code*, *NFPA 101 Life Safety Code*, *NFPA 1 Uniform Fire Code*, and other local ordinances, regulations, and codes that address safety in assembly occupancies. Lastly, municipal representatives should provide counsel and cooperation to ensure that an adequate crowd management and security plan are implemented.

Special Events Contingency Planning Manual (2005) identifies spectator (crowd) management as an important function of both the event management and local government. Event organizers are responsible for spectator management and crowd control; however, this function passes to local authorities, such as police, fire, and emergency medical services, when the situation is beyond the resources and capability of the organizers. Therefore, the responsibility of crowd management is shared among all entities, whether private or public, with a stake in the special event being provided.

What methods for crowd management are utilized by public safety agencies?

To answer the research question in this section, senior officers of the Delray Beach Police Department were solicited in an attempt to provide insight into the varied techniques utilized. The research question was posed to Lieutenant John Crane-Baker and Captain Thomas Mitchell. Captain Mitchell (personal communication, August 30, 2013) began by stating that there really is not a concrete answer to the question. Nonetheless, he continued and stated that the answer is determined upon the type of event, the demographics of those in attendance, and the number of patrons. Also, determining factors for crowd management techniques included the size and location of the venue, performers, time of day and time of year, and whether alcoholic beverages are being served.

There are however a few strategies that are constant for each event and venue. The first and probably the most important strategy stated Mitchell (personal communication, August 30, 2013) is the pre-planning and developmental meetings prior to the event. During these initial meetings stakeholders and shareholders meet to review event plans to receive an historical perspective on the event's previous locations. The California Peace Officers Association concurs. In the article *Crowd Management*, the California Peace Officers (2012, p. 2) stated that "the successful management of large scale events requires strong leadership." This vital leadership, as purported by the California Peace Officers begins at the outset during event pre-planning. Likewise during the meeting, fire and life safety as well as security concerns are discussed.

After the initial meeting, Mitchell stated (personal communication, August 30, 2013) ingress and egress and the containment area become prominent. The containment area is first. Where will the crowd form is discussed. Will barricades be utilized? If so, how will they be used? Barricades should be used to create an inner and outer perimeter. Will police cruisers be

employed to assist with designating containment area? These questions must be addressed and answers determined. Following these determinations, Mitchell stated that there must be clearly defined ingress and egress points. It is important to be mindful that in designating the site area, at least two points of entry and exit should be identified. Author Mike Masterson in his article, *Adopting a New Paradigm*, identified the “Madison Method” as an effective crowd management technique.

Masterson (2012) stated that the Madison Method of Handling People in Crowds and Demonstrations began in the 1970s in Madison, Wisconsin. The Madison Method simply states that the approach begins with defining the mission and safeguarding the fundamental rights of people to gather, voicing their first amendment right. Also, stated Masterson, police and organizers should coordinate prior to the event. This he stated, “Reinforces law enforcement’s role as a facilitator rather than confronter,” (p. 3). The California Peace Officers (2012) believes that establishing and communicating a clear mission are proven crowd management techniques and are paramount to success and are the responsibility of leaders in the organization.

According to the University of California at Berkeley Crowd Management Policy (2013), crowd management strategies may have a positive or negative affect on the crowd. For example, the policy stated that during an event, the crowd management policy of a strong show of force for law enforcement may calm and reassure a crowd, disperse an unruly crowd or incite the crowd further in to continuing unlawful behavior. The latter as purported by the California Berkeley Crowd Management Policy may eventually cause the crowd to transcend into a riotous or mob-like mentality. Furthermore, the policy stated that strategies utilized will depend upon available resources and the totality of the circumstances. Crowd management strategies listed included leadership, a strong show of force, containment, command and control, communication,

tactical information, coordination and emergency response when situational awareness warrants such a response. Finally, the policy stated that planning for crowd management during large mass events should consider contingencies to all strategies to be utilized for managing the crowd.

According to Nicholson (2002), on the fire service side of public safety, crowd management techniques since 1979 are really an increased emphasis on pre-planning and better communications to keep abreast of potential problems. He continued by stating that police and hired security along with promoters and other stake holders are briefed on crowd behavior at previous shows, presentations, or event gatherings. Another crowd management technique widely utilized by the fire service side of public safety is legislative action.

Legislative action has left an indelible mark on the fire service. Unfortunately, as opined by Glenn Corbett and Ronald Farr (2003, p. 1041) in the *Fire Chief's Handbook*, 6th Ed., Chapter 25, Fire Prevention and Code Enforcement Organization, "The formulation and actual adoption of fire safety code requirements have in many cases come only after the occurrence of tragic fires." Arthur Cote and Casey Grant (2013) in *Safety in the Built Environment*, in Chapter 3 entitled, Codes and Standards for the Built Environment, stated that throughout history there have been regulations for preventing fires and confining its spread. Over the years these regulations have morphed into codes and standards that have been utilized to increase public safety. Most often codes and standards that have dealt with some of the more hazardous situations that caused tragic loss of life have become law to alleviate repeat occurrences. For example as noted by Cote (2013), early building laws focused on collapse prevention because building collapse due to structural failure was frequent therefore laws were passed to restrict building heights.

Later as officials focused more on restricting fire spread, Cote (2013), London during the fourteenth century issued an ordinance requiring chimneys be built of tile, stone, or plaster. The ordinance strictly prohibited the use of wood for this purpose. Boston enacted ordinances requiring dwellings be constructed of brick or stone and roofed with slate to prevent a conflagration. To help induce compliance, a fine of 10 shillings (about 70 cents in today's currency) was imposed on any households or businesses that experienced chimney fires. Therefore, as purported by Cote (2013) the first fire code in the United States was established and enforced.

In colonial America, the need for laws that offered fire protection continued to grow exponentially with the growth of the newfound settlement. According to Cote (2013) the laws outlined fire protection responsibilities of both the homeowners and authorities. Regardless of such precautions, fires remained an everyday occurrence in emerging communities. Therefore, as opined by Cote, it became necessary to enact more laws to govern building construction and fire protection. As could be expected, there emerged a growing body of rules and regulations concerning fire prevention, fire protection, and fire control.

As purported by Corbett and Farr (2003, p. 1038) "Fire prevention activities actually predated the creation of organized fire departments in the United States." The 1911 Triangle Shirtwaist Factory tragedy in New York City that killed 146 individuals set the stage and began work on improving building, fire, and life safety codes in the United States. Corbett (2003) also stated that the circumstances and events surrounding the tragic developments at the Triangle Shirtwaist Factory led the NFPA to form a committee on safety to life that eventually developed what became NFPA 101 *Safety to Life from Fire in Buildings and Structures*, precursor to NFPA 101 *Life Safety Code*.

Jake Pauls an independent consultant on crowd management (Touger, 2002), stated that historically NFPA 101, *Life Safety Code* managed crowds passively. Ron Cote (2013), NFPA's principal life safety engineer stated that crowds had been managed through expected behavior primarily, then through engineering buildings with systems that mitigate adverse impact on occupants. As a result (Touger, 2002), many of the Life Safety Code requirements have been wrought out of post-incident investigations and behavior research. One prominent example of this is that safety experts believed that ordinary people would panic if informed of a pending emergency or dangerous situation. However, research has suggested that this is not the case.

Likewise another myth is that people will not move through smoke. This theory has proven false as demonstrated at the World Trade Center on September 11, 2001. People will indeed move through smoke if they know where they are going says Dr. John Bryan, Ph.D., former professor and researcher at the University of Maryland (Touger, 2002). Finally, Cote (2013) stated that from these humble beginnings, the fire codes, regulations, standards, and laws for this country emerged. In like manner, after tragedy, crowd managers became a requirement within fire and life safety codes.

Two incidents left an indelible mark on the National Fire Protection Association which subsequently led to amendments to NFPA 101 *Life Safety Code* and NFPA 5000 *Building Construction and Safety Code*. Fred Durso, Jr., in his article *Manning the Masses*, featured in the May/June 2010 edition of *NFPA Journal*, reasoned that the bodies left in the wake of The Station and the E2 night club tragedies were the catalyst that brought the NFPA to issue interim amendments to the codes. Durso (2010) stated that the amendments focused on egress width, automatic fire sprinklers in certain assembly occupancies, and limitations on festival seating. The amendments likewise touted a somewhat new concept of employing crowd managers to

manage and direct individuals patronizing the venue because overcrowding and other code violations were of constant concern.

NFPA Case Studies on Nightclub Fires (2006) reported the late evening hour's fire of February 20, 2003. As reported, a fast-moving fire spread through The Station nightclub in West Warwick, Rhode Island. At the time that the fire began, there were reportedly over 440 occupants in the club. The fire completely destroyed the building and resulted in 100 fatalities and over 200 injuries. NFPA Case Studies (2006) concluded that following several months of study and analysis, several changes to key NFPA codes were completed. These amendments ratified in 2003 addressed assembly occupancy main entrance egress width, sprinklers in certain assembly occupancies, and limitation on festival seating. The amendments required the presence of trained crowd managers.

In the article, *Managing Life Safety in Crowds*, Carson (2002) stated that to manage an emergency in assembly occupancies, NFPA 101 *Life Safety Code* requires three things; crowd managers, a life safety evaluation, and emergency egress and relocation drills. As stated by Carson, crowd managers are required for controlling the crowd, keeping egress paths clear, and assisting in rapid evacuation. The second necessity, the life safety evaluation requires an examination of the facility management's ability to plan an emergency response, train staff to handle the crisis, conduct drills, coordinate with emergency responders, then reevaluate and update the plan.. Finally, Carson (2002) inculcated that the *Life Safety Code* requires that employees staffing assembly occupancies be skilled in evacuating the facility in an orderly manner and possess the technical capabilities in the proper use of fire protection equipment during an emergency. This enhances the life safety of patrons, organizers, performers, participants, as well as the life safety of management and staff.

When should crowd management policies be utilized?

The Events Industry Forum (2013) stated that the safety and enjoyment of people attending an event depends largely on the effective management of the crowd and that the preparation of a crowd management plan is an essential part of the event management plan. The authors continued by stating that the crowd management plan is concerned with prevention. Prevention through identifying, eliminating, and controlling hazards and risk associated to the task undertaken by stewards or managers. To answer the research question, When should crowd management policies be utilized, The Events Industry Forum (2013) stated that crowd management should be considered as an essential element at the start of the event planning process. The inclusion of crowd management consideration ensures a safer event for patrons, management, and promoters because it addresses design and layout, visitor's arrival, ingress, event duration, egress and scenarios for contingency and emergency planning.

The University of California at Berkeley Police Department Crowd Management Policy (2013) stated that crowd management should begin during the pre-event management planning session. Pre-event management planning sessions should include strategies that can be employed to assist in managing an event. California Commission Peace Officers Standards and Training (2012) Post guidelines: Crowd Management, Interventions and Control reiterated that planning and preparation are essential elements of effective crowd management. The planning process establishes a foundation for informed decision making and accountability. For pre-noticed events, agencies have the opportunity to develop in-depth operational plans to address risks and their alleviation or mitigation.

In the *Fire Engineering* article, EMS Preplanning for Large Events, author Dennis Krebs (2001, p. 16) stated that "Planning is beneficial for any type of unusual or special event and

should begin as soon as your agency is notified.” The Journal of Higher Education Safety (2013) opined that advanced training and safety are key components to a safe event. According to the authors, “Pre-event homework pays off; planning should occur weeks, if not months prior to the date of any event.” The Occupational Safety and Health Administration’s Crowd Management Safety Guidelines (2012) stated crowd management planning should begin in advance of events that are likely to draw large crowds, and crowd management, pre-event setup, and emergency situation management should be a part of event management planning.

How has private sector event coordinators managed crowds at events?

Facility management has the most influence on crowd safety. According to the Task Force on Crowd Control and Safety (1980) it does not matter what verbiage is utilized in the contract between a facility and promoter, facility management are bound by moral and ethical responsibility to acknowledge and accept its obligation for the safety of the patrons frequenting their venue. One way the private sector has managed crowds during events is through the establishment of house rules and the strict enforcement of those rules and local laws. The Task Force on Crowd Control and Safety (1980) also purports training their crowd management personnel and providing orientation manuals for staff and security. These manuals can help in managing crowds during events by increasing awareness of audience physiognomies (e.g. characteristics), areas of concern, responsibilities of management and staff, house rules, and emergency plans and facility layouts. As stated by the Task Force (1980) the use of such manuals underscores the notion that the best crowd management results are obtained when there is active cooperation between facility management and personnel, promoters, and public agencies.

Another process that the private sector uses along with the public sector is conducting a hazard analysis of the event during the planning stages. The Special Events Contingency Planning Manual (2005) states that hazard analysis and contingency planning provides planners with information about the kinds of emergencies that may occur and their potential consequences. Hazard analysis and contingency planning assists planners in deciding what steps to take to prevent possible emergencies and how to respond if an incident occurs. A hazard analysis is simply a list of the possible risk present within the community, the venue, and risk corresponding to the event itself. Contingency planning is simply rehearsing possible scenarios and ensuring that the necessary resources are identified and available for mitigation.

The private sector has also managed crowds during events by preventing the build-up of large accumulations of patrons within confined spaces in short durations. A study by Fruin (1981) *Causes and Prevention of Crowd Disasters* identifies critical crowd densities as a common characteristic of crowd disasters. Critical crowd densities are approached when the floor space per standing person is reduced to about 5.38 square feet. According to Fruin (1981) at approximately 3 square feet per person, involuntary contact and brushing against others occurs. This is a behavioral threshold generally avoided by the public, except in crowded elevators and buses. Below 2 square feet per person, potentially dangerous crowd forces and psychological pressures begin to develop. Fruin (1981) contends that the combined pressure of amassed crowds and shock-waves that runs through at critical density levels produce forces which are impossible for individuals, even small groups of individuals, to resist.

Other means of crowd management identified by the Special Events Contingency Planning Manual (2005) are ticketing, barriers, defusing crowd tension, restricted viewing locations, and video screens. Ticketing is the first means of achieving crowd management. Preferably,

advanced ticket purchase is idealistic because it allows for an educated estimation of the number of guests expected and grants additional time for event coordinators to plan accordingly.

Ticketing also provides the opportunity to assign entry times with ticket purchases to reduce congestion or critical crowd densities at entrances. Barriers also have its place in effective crowd management. Effective use of barriers can prevent many problems, including congestion in thoroughfares and walkways. The Health and Safety Executive (2013) article entitled *Event Safety: Crowd Management*, barriers are an aid to managing and influencing the behavior of the audience. Barriers also line routes and prevent the spectators from climbing structures putting themselves at risk. Barriers are utilized to relieve and prevent overcrowding and prevent the build-up of audience pressure. Lastly, barriers provide physical security by shielding hazards from people which support crowd management and safety.

Defusing crowd tension is an initiative utilized by the private sector for crowd management. Often, extended waiting on line times for admission or for tickets can be a precursor to crowd management problems. The Special Events Contingency Planning Manual (2005) states that up-tempo music (of a type consistent with the age group of the crowd) played over the public address system, humorous animal-costumed individuals or mascots walking up and down the line giving handshakes, pats, and waves, spectator involved activities such as a beach ball being lobbed back and forth by spectators, or a cheerful security staff passing up and down the line talking to people may potentially calm an agitated crowd.

Likewise unrestricted viewing assist with crowd management by providing clear lines of vision for spectators and are important to reduce the likelihood that crowds will move to get a better view of the stage. Finally opined by the Special Events Contingency Planning Model (2005) video or projection screens aid in crowd management because they can provide

entertainment before and between acts, information concerning facilities and important messages including public safety and traffic messages for both inside and outside the venue, and close-up vision of on-stage action for spectators as a means of reducing crowd movement toward the stage.

The Journal of Higher Education Safety (2013) identifies public awareness, a well-trained staff, and required fire and life safety codes as private sector crowd management methods. As stated by the Journal of Higher Education (2013), public awareness as well as the public in general plays a vital role in crowd management. The writer continued by alleging that increasing public awareness through educating the public will allow them to understand the key role they play and etch into their psyche how their actions may impact their safety. Staff should be trained to serve as the eyes and ears throughout the event. Staff should be intimately knowledgeable of the venue's crowd management plan and the overall security policies and procedures.

The Events Industry Forum (2013) mentioned audience, performer, and participant profiles as crowd management tools. As stated by the authors, audience, performers, and participants can have both a positive or negative influence on crowd behavior. Because of this, organizers' abilities to manage the crowd as planned can be compromised. According to the article writers, if a profile discloses crowd-related issues, prepare in advance public announcement protocols and outline passages that can assist event organizers and performers in crowd management.

In the article "Looking Back", featured in the *NFPA Journal* January/February edition of 2002, John Nicholson stated that following its tragedy the City of Cincinnati formed the Task Force on Crowd Control and Safety to develop guidelines for concert safety. The report, *Crowd Management: The Report of the Task Force on Crowd Control and Safety* was completed and

submitted to city management in 1980. The report soon garnered attention in the legislative halls of Congress and became the basis of legislation and public assembly planning in the United States. Among changes identified in crowd management techniques used in the private sector over time has been an increased emphasis on event pre-planning and better communication among venues to identify potential problems. Likewise, security staffs are briefed on crowd behavior and crowd incidents taken place at previous tour locations and tour events. The report also had other recommendations for crowd safety and management.

As previously stated, after the tragic occurrence prior to the Who concert in 1979 at Riverfront Coliseum, in Cincinnati, Ohio; City Manager Sylvester Murray, commissioned a study on crowd management. In the subsequent 1980 document stemming from the study, *Crowd Management: Report of the Task Force on Crowd Control and Safety*, the task force determined that the primary factors in assuring a safe and comfortable environment for large crowds is the planning for their management and effective communication. The report also elucidated that crowd management must take into account all the elements of an event especially the type of event, characteristics of the facility, size and demeanor of the crowd, methods of entrance, and crowd management. The Report of the Task Force on Crowd Control (1980) continued by stating that to have an effective plan, facilitators must be aware of the characteristics of the audience, employ the media to increase public education and knowledge relating to crowd safety at the venue, identify the public's role in ensuring safety during the event, and process patrons into the venue in an organized, orderly, and disciplined fashion.

Abbott (2001) stated that an element of an effective crowd management plan entails adequate communication among employees, guest, and between management and guest. Abbott continued and stated that effective communication should lead to successful event coordination. California

Peace Officers (2012) expressed that communication is a key strategy in pre-planning and event operations. Throughout the pre-planning phase, the event, and the demobilization, ongoing communications with organizers, liaisons, and participants is vitally important. Communications with the community is equally paramount. Informing the community about the event, along with potential impacts to neighborhoods and traffic patterns will enhance public safety and public trust. Communications can be accomplished through sign boards, amplified voice announcements, and/or through media outlets. Likewise modern technology can be employed to reach younger audiences through social media sites such as Facebook, Twitter, and Instagram.

Events Industry Forum (2013) inferred that communication in relation to crowd management operation can take many forms and is vital for the exchange of information between individual members of staff and between staff and the audience. The authors continue by stating that all methods of communication should be considered. Events Industry identified two-way radio systems as commonly used for crowd management communications at events. Other suitable methods of communications proposed was face-to-face between the audience and staff, handouts such as those for providing staff with certain information, and information signs that direct or display general conditions for access. Also noted were public broadcast systems, electronic displays, websites, text messaging, and social networking outlets.

Fruin (1984) in the article *Crowd Dynamics and Auditorium Management* published in *Auditorium News* stated that the availability and reliability of communications equipment and the means of its use are crowd management considerations. Crowd management communication should not only involve the use of all types of media, but also the development of a well-planned communication network involving the manager, staff, patrons, and local police and emergency services. Immediate communication with patrons is a good way of quickly defusing a potentially

dangerous crowd situation, but the form and wording of the message must be chosen carefully. Fruin concluded by stating that recommended communication techniques and typical messages to be used in handling emergency situations should be included in the crowd management plan and covered in staff training sessions.

How has private sector event coordinators managed crowds at events? The last method for consideration in this section is through employing a crowd manager. Events Industry Forum (2013) proposed that organizers should employ stewards. The authors stated that organizers should consider appointing a crowd manager to be responsible for the management and coordination of all crowd management and safety for the event. The crowd manager should ensure that the stewards receive a written statement of their duties, a checklist, and a plan delineating key information and features. The crowd manager should ensure that the assistant crowd managers (e.g. ushers, attendants, stewards, etc.) understand that they should not leave their post without permission, should remain calm and be courteous to all members of the public, and be prepared to accommodate the different needs of the audience.

Abbott (2001) positioned ushers to the fore as appropriate for use in a crowd management role during an event. Abbott continued this thought by stating that ushers (today's crowd managers) could communicate information and assist guests to their seats. Likewise Abbott stated that ushers can reduce disputes among spectators, monitor guest behavior, report any accidents or safety hazards, alert security of any potential problems, assist those needing emergency attention or help with evacuation. Carson (2002) stated that crowd managers are required to manage the crowd, keep egress paths open, and assist in rapid evacuation. The Journal of Higher Education (2013) introduced crowd management as required by the fire and life safety code.

The Journal of Higher Education (2013) stated that competent staff with minimal crowd management training is required to identify and correct egress hazards. Likewise these staff members are trained to provide appropriate direction and assistance in case of an emergency. The author concluded by stating that the crowd manager training program is aimed at making public gatherings safer by teaching event staff how to be better crowd managers.

In the Campus Fire Safety Newzone (2012) article “Averting the Disaster: How Trained Crowd Managers Can Make the Difference,” the author orated that case studies of past disasters in public assembly occupancies indicated that there was no single hazard or impediment that caused the tragedy. Instead, multiple hazards and a series of events combined to create conditions that resulted in major loss of life. However, the author contended that a competent person with minimal training would have been able to identify and mitigate those hazards. Had that knowledgeable person been present, as proposed by the author, many lives would have undoubtedly been saved. This vein of thinking is what spawned the criteria, curriculum, and the acceptance of the new position of crowd manager.

Procedures

The purpose of this applied research project was to develop a Crowd Management Plan as a component of the Event Management Plan for the City of Delray Beach. In order to achieve the stated goal of this research project, the action research method was utilized. The research involved a literature review, personal communications with subject matter professionals, and crowd management policy review. The process also included the answering of the following five associated research questions a) what is the purpose of crowd management initiatives? b) Who has responsibility in Delray Beach for managing crowds during special events? c) What

methods for crowd management are utilized by public safety agencies? d) When should crowd management policies be utilized? e) How has private sector event coordinators managed crowds at events?

Initial research began in June 2013 utilizing the Learning Resource Center at the National Fire Academy in Emmitsburg, Maryland, searching the vast amount of information contained in the form of applied research projects and articles. The author also used the City of Delray Beach Public Library and the Delray Beach Fire-Rescue Department Library as well as unlimited access to other resources via the worldwide web. The internet was used to obtain access to journals, articles, and periodicals containing the subject matter. Personal communications were conducted with subject matter personnel from the public and private sector to glean insight on crowd management.

Also during the research phase of the applied research project, the author performed personal communications with a Delray Beach Fire-Rescue Captain assigned special events, a Delray Beach Police Department Captain with same responsibilities for the police department, and one of the Assistant City Managers assigned as liaison to special event promoters and organizers. Personal communications also took place between the author and Jeff Collins, Fire Chief of Palm Beach County Fire-Rescue. The subject matter centered on an historical perspective of NFPA's move to require crowd managers in assembly occupancies. The author attempted to contact Anthony Apfelbeck, Fire Marshal/Building Official for the City of Altamonte Springs, Florida as well as subject matter expert Dr. G. Keith Still to garner skilled insight to crowd management.

On August 22, 2013, a six question survey was created to assist the author in obtaining data on crowd management plans/policies. The purpose of the survey first and foremost, was to

capture data on fire service preparation for crowd management. Second, the author wanted to compare crowd management plans from public and private sectors. Next, the author hoped to identify plans that could be utilized as a framework to help his City develop its own crowd management plan. Finally, the author wanted to identify any obstacles or pitfalls that could hinder the final outcome of making the City of Delray Beach a safer community for all to enjoy.

The survey was circulated and dispersed among an email group within the Palm Beach County Fire Chief's Association, the State of Florida Fire Marshals and Fire Inspectors Association, and within the State of Florida Fire Chief's Association. The survey was also disseminated nationally through the National Society of Executive Fire Officers (NSEFO) on August 22, 2013. It is believed that the survey reached well over 800 possible respondents. However, the researcher received 128 responses to the survey from various respondent organizations. Of the 128 respondents, twenty (20) of the departments stated that their organizations had a crowd management plan/policy. Of the twenty respondents answering in the affirmative, eleven (11) agreed to share their organization's crowd management plan/policy with the author of the research for data review. However, the researcher did not receive any plans/policies for review. Because of this, the author of the research believes that there are limitations to the research.

The author of the research believes that because the subject matter is a relatively new enforced requirement through NFPA 101 *Life Safety Code* and NFPA 5000 *Building Construction and Safety Code*, many municipalities, agencies, and organizations are still attempting to find resolve in meeting the requirement. Another limitation to the research was the overly protective nature of the public and private sector entities. The researcher extended the invitation to participate to major fire service organizations like Phoenix, Prince Georges County,

Chicago, Fairfax County, Dallas as well as Austin in the State of Texas. The researcher also attempted to garner participation from organizations within the State of Florida such as Jacksonville, West Palm Beach, Miami Dade and other public safety agencies here in the local area. The City of Phoenix responded by forwarding a copy of their Police Department's Crowd Control Policy, the other agencies did not respond to the request.

A few organizations within the State of Florida did respond to the researcher's request. The City of Jacksonville, Florida Fire-Rescue representative Division Chief Ivan Mote (personal communication, November 18, 2013) advised that the City of Jacksonville solely depended upon local law enforcement to handle crowd management and crowd control during special events. Chief Mote continued by stating that his organization had only a civil unrest policy that dictated fire department response during times of civil disturbance. Chief Mote stated that the fire department waited until called upon to assist with managing or mitigating the issue. This identified to the author a major limitation on the research.

The author discovered that many organizations within the public safety arena lacked an in-depth understanding of crowd management. There was a consistent misconception that crowd management and crowd control were interchangeable or synonymous. Repeatedly, the fire service wing of public safety organizations referred to crowd management in the context of crowd control. Often times those advising or contemplating crowd management initiatives use interchangeably both crowd control and crowd management. The author believes that this fallacy undermines the importance of crowd management's ingress and egress provisions, planning and training necessities, and facilitation of crowd movement. Furthermore, if crowd management is really crowd control, the incomprehensible lack of clarity renders fire codes and fire inspections required for special event functions null-in-void, and the forming contingency

planning through scenarios exercises and of collecting data an unnecessary exercise in futility.

Former Fire-Rescue Chief David James, Retired, also believed that the two interrelated concepts were one and the same.

Chief James (personal communication, November 22, 2013) who retired from Miami Dade Fire-Rescue and served as Fire-Rescue Chief of Delray Beach from 2007 through 2011 pondered why the fire service would want to venture into an area predominately believed to be in the purview of law enforcement. Chief James advised that Miami Dade gives the responsibility of crowd management to the law enforcement arm of the county. Chief James in his consultation with the author advised the author not to tread so closely to the things belonging to law enforcement. He asked why would we want to get into what would normally be a police function? Again this exposes the confusion concerning crowd management versus crowd control. Abbott (2001) stated that crowd management and crowd control are two distinct but interrelated concepts. Crowd management, she purported includes facilitation, employment, and the safe movement of crowds while crowd control comprises of steps utilized to regain control after a crowd or a segment of it has lost semblance of law and order.

Likewise private sector organizations like Disney World and places of higher learning such as Florida Atlantic University responses to the invitation for participation in the research were non-existent. The researcher attempted to correspond and interact with persons responsible for crowd management at the Florida Atlantic University new football stadium. This turned out to be an exercise in futility as well.

Similarly, another limitation is that the researcher had to operate under certain assumptions. The first assumption was that the respondents would honestly and truthfully answer the survey

questions. Second, the author assumed that the data collected from the respondents to the survey would be an accurate representation of the national fire service crowd management plans/policies. Third, the author had to operate under the assumption that the respondents would honor their commitment and forward the policy data outlined in the survey/questionnaire. Another limitation that severely hindered the research was the sheer lack of the researcher's ability to obtain scholarly referred articles or journal material on crowd management, therefore subject matter expert analysis is insufficient. Finally, there may have been some very outstanding plans and policies not received, reviewed or utilized in the development of the crowd management plan constructed by the researcher due to misconceptions of crowd management and crowd control and private and public sector organization proprietary paranoia.

Results

The results of this applied research project are delineated from a short six question survey/questionnaire, personal communications with DBFR and DBPD employees, an Assistant City Manager, the Chair of the Technical Committee on NFPA 1, as well as pertinent and relative literature reviewed during the research process in order to answer the five research questions. Results also delineate from several crowd management plans including the Oakland Police Department's Crowd Management/ Crowd Control Policy, Phoenix Police Department Crowd Control Response Plan, and the University of California Berkeley Police Department Crowd Demonstration and Management Policy. Also reviewed were the Crowd Management, Intervention, and Control Guidelines for the California Commission on Peace Officer Standards and Training, Special Events Contingency Planning Manual authored by FEMA and Canada's Emergency Preparedness Guidelines for Mass Crowd-Intensive Events.

An online fire service crowd management survey was completed. The survey was employed to identify similarities and differences in the approach various fire service organizations, municipalities, or counties employed to provide crowd management measures. Likewise the survey was also utilized to identify data to assist the researcher in the development of a plan for his organization, to identify obstacles and hindrances to creating a comprehensive crowd management plan, and identify solutions that will resolve any roadblocks to plan fruition. The researcher received twenty responses in the affirmative to survey question of does your organization have a crowd management plan with eleven respondents agreeing to forward copies of their plans to the researcher for an in-depth review.

There were 128 respondents to the survey. The fire organizations represented as respondents in the survey range in sizes from small volunteer organizations to larger combination and career organizations. The smallest organization employed three personnel with the largest organization employing over 2,400 uniformed personnel. The fire organizations in the survey ranged in manning one fire station to a larger organization with 2,300 uniformed personnel manning 65 stations and an organization with over 2,400 personnel manning 56 stations respectively.

Organizations responding to the survey were broken down into four groups. Group one (1) consisted of organizations with uniformed personnel ranging from three (3) to one hundred (100). Group two (2) consisted of organizations with uniformed personnel ranging from 101 to 300. Group three (3) consisted of organizations with uniformed personnel ranging from 301 to 1,000. Finally, group four (4) consisted of organizations with uniformed personnel ranging from 1,001 and greater. The following, questions three through five, were more pertinent to identifying crowd management responsibilities and plan existence. The following are the results of questions three through five of the fire service crowd management survey.

Does your department, city or county host special events?

Group one constituted the largest group within the sample. There were 70 respondent organizations in Group one that actually equates to 55% of the total sample population. Group two had 32 respondent organizations and represented 25% of the total sample population. Group three had 15 respondent organizations and represented 12% of the total sample population. Finally, group four had 11 respondent organizations that represented 8% of the total sample population.

Within group one, 62 (93%) respondents answered in the affirmative and 5 (7%) answered in the negative to the research question, does your department, city or county host special events? Within group two, all 35 (100%) respondent organizations answered in the affirmative to the research question. Group three had a 100% response (all 15 organizations) in the affirmative to the research question. Likewise, all 11 respondent organizations within group four also answered in the affirmative. Of the total survey sample, 96% of the participating organizations answered in the affirmative to the research question stating that their department, city, town, or county host special events.

Who is responsible for event crowd management?

The 67 respondent organizations in group one had several responses to the posed research question. The group receiving the lion's share of respondents' identified responsibility for event crowd management was local law enforcement. Law enforcement was identified by thirty (45%) of the group respondents. Thirteen of respondent organizations (19%) within group one identified law enforcement and fire-rescue as equally responsible for event crowd management.

Eight respondent organizations (12%) identified event organizers as responsible for event crowd management.

Three participating organizations in group one or 12% of respondents identified the fire department as having sole responsibility for event crowd management or a unified command structure featuring fire, police, public works, and emergency management as responsible for managing crowds during special events. Two respondent organizations (9%) identified either the Deputy Chief of Operations, the Fire Marshal, or county emergency management as responsible to manage crowds during events. Finally, one respondent (2%) stated that an interagency coordinating group was responsible for crowd management during special events.

In group two, thirteen of the respondents (41%) identified law enforcement as the agency or entity responsible for crowd management during special events. Four respondents (12%) placed responsibility for crowd management for special events on the event organizer. Four respondents (12%) identified both law enforcement and fire-rescue as responsible for event crowd management. Two respondents (6%) identified law enforcement, fire-rescue, and emergency management. Two respondents (12%) identified law enforcement and the event coordinator as responsible while another two respondents identify fire-rescue as responsible for crowd management for special events. Finally, the remaining seven respondents lacked congruency on identifying responsibility for crowd management during events hosting by their respective organizations, municipalities, or counties. Of the final seven respondents (17%) one organization listed the parks and recreation department along with the law enforcement and fire-rescue as responsible for crowd management. Other agencies identified were event coordinator and fire-rescue, the policy department and the fire marshal, the event organizer along with law enforcement and fire-rescue, emergency management, emergency management with assistance

from law enforcement, and finally one organization that did not identify responsibility for crowd management during special events thereby not answering the research question.

In group three, most respondents assigned law enforcement the responsibility of special event crowd management. Six respondents or 40% of those within this group surveyed identified law enforcement as such. Four respondents or 27% identified law enforcement and fire-rescue as the responsible parties for crowd management. Two respondents (13%) identified the organizer and law enforcement as responsible for crowd management at special events. The remaining three respondents (20%) in group three identified various entities as responsible for crowd management during events. Miscellaneous groups identified were private firms contracted by the venue, emergency management department, or fire prevention division/fire marshal.

The final group, group four, which constitutes the larger organizations had the following results to the research question. Six respondents (55%) identified law enforcement as the agency having responsibility for crowd management during special events. Two respondents (18%) in group four's survey population identified law enforcement and fire-rescue services as responsible for their special events crowd management. One respondent (9%) identified a combination of law enforcement, fire-rescue, and emergency management. Another respondent (9%) identified fire-rescue, law enforcement, along with a special events committee. The final respondent (9%) stated that multiple agencies are responsible for crowd management in the jurisdiction during special events.

Of the total survey sample, fifty-four respondents or 42% of the participating organizations identified their law enforcement department as having responsibility for special events crowd management. Also within the total survey sample, twenty-one respondents or 16% identified law

enforcement and fire-rescue as responsible parties for special event crowd management. Fourteen respondents (11%) identified the special event organizer as responsible for crowd management planning. Finally, six respondents (5%) surveyed identified fire-rescue as responsible for crowd management during special events held within their jurisdiction.

Does your department, city or county have a crowd management policy or plan?

The researcher sought to ascertain if there were fire service crowd management plans being utilized by agencies during special events. In an effort to obtain data, the research question, does your department, city, or county have a crowd management policy or plan? Of the sixty-seven respondents in group one, only seven (10%) answered in the affirmative to the author's research question of having a crowd management policy/plan. So then, fifty-five (90%) of the respondents in group one do not utilize a crowd management plan during special events.

In group two six (17%) of the respondents organizations answered in the affirmative to the research question. Nonetheless, twenty-nine respondents (83%) answered in the negative to the research question. In group three, only one respondent (7%) answered in the affirmative. Therefore, 93% of the respondents within this group do not utilize a crowd management plan for special events. Lastly, in group four, six respondents (55%) answered in the affirmative to the posed research question. Five respondents (45%) answered in the negative signifying that their organizations do not utilize a crowd management plan or policy. Therefore, within the total survey sample only twenty respondent organizations (16%) utilize crowd management plans or policies for special events. Of the twenty respondent organizations answering in the affirmative to the former research question a follow-up research question was posed, if yes, to the previous question, will you provide a copy of your plan for review? Of the twenty respondents, eleven

(55%) answered the aforementioned question in the affirmative. However, the researcher and author of the project did not receive a plan for review from any respondent organization. For complete survey results, please see Appendix C.

Discussion

One of the major themes held within the research and literature was the utilization of planning within the crowd management process. Crowd Management Report of the Task Force (1980) stated that it became crystal clear that the primary factor in ensuring a safe environment for large gatherings is the planning for their management. California Commission Peace Officers (2012) identified planning as a necessity for successful crowd management. Throughout the research there was an emphasis placed on the planning aspect for crowd management.

Eric Connors (2007) in *Planning and Managing Security for Major Special Events* concurred with the other authors stating in the article that pre-event planning should begin, if possible, twelve to eighteen months before the date of the event. Pre-planning meetings should involve all stakeholders. Connors stated that key partners or stakeholders include organizers, police, fire, emergency medical services (EMS), transportation, public works, health, and other public agencies and the private sector or businesses affected by the event, as well as private security. Connors (2007) continued and stated that in planning and managing major special events, organizers, AHJs, promoters, and all other stakeholders must plan for worst case scenarios, perform a cost/benefit analysis with security measures against the jurisdiction's desire to produce events that are enjoyable, well attended, and profitable. The University of California at Berkeley Crowd Management Policy (2013) stated that planning and preparation are essential elements of effective crowd management. The planning process establishes a foundation for informed decision-making and accountability.

As stated in the University of California at Berkeley Crowd Management Policy (2013), organizers ideally will allow sufficient time and cooperation so that there can be thorough and effective pre-planning for significant crowd events. The Event Industry Forum (2013) stated that crowd management should be considered as essential and planned for during the initial event planning process. The Journal for Higher Education (2013) purported that pre-event planning should take place months in advance because advanced training and planning are key strategies for success. Another principle finding congruency within the research and literature was clear lines of authority and strong leadership.

As inculcated by the University of California at Berkeley Crowd Management Policy (2013), a key component to the success of any crowd management event is that all personnel demonstrate competent leadership, regardless of position or title. California Berkeley's Crowd Management Policy continued by stressing that effective leaders are accountable, organized, and decisive; they delegate appropriately, provide clear direction, and lead by example. California Commission Peace Officers (2012) stated that effective response to crowd management events necessitates adherence to a certain foundational principle of leadership.

Because successful management of large scale crowd management events requires strong leadership, the Incident Command System (ICS) is considered the model for managing the response to critical incidents involving crowd management. California Commission Peace Officers continued by stating that leadership starts with event pre-planning and preparation. Leaders overseeing these events must establish the mission objectives and ensure that personnel have participated in practical exercises and are properly prepared for said event.

Stakeholder involvement is critical for effective crowd management during special events as purported by the University of California at Berkeley Crowd Management Policy (2013). Most of the literature reviewed also listed stakeholder and community involvement as a paramount strategy to ensure effective crowd management during special events. The California Commission Peace Officers Standards and Training (2012) indicated that establishing procedures to identify and liaise with community stakeholders for the purpose of developing relationships, receiving input, and engaging in collaborative discussion enhances the decision making process as it relates to crowd management initiatives.

Staff training and preparation was equally mentioned throughout the research and the literature review. The California Commission Peace Officers Standards and Training (2012) stated that it is important to prepare for incidents through recurring training and simulation exercises. Command personnel need to understand resources, operational strategies, capabilities, force options, and limitations of field resources as well as the law and policies. Officer discipline and restraint is an essential component in successfully managing crowds. Discipline is achieved through regular training in the areas of tactical fundamentals. Training should be an ongoing process and should be relevant and realistic. On the fire service side of public safety, training also has an equally important role.

Fire service professionals view training from the vantage point of instructing individuals in the science of crowd managing. Leaders in the fire service recognized that in order to prevent recurring disasters like the Station Night Club, staff members of facilities should have at least minimum training in identifying common fire and life safety hazards. Chris Dubay (Durso, 2010), Vice-President of Codes and Standards at NFPA stated that while NFPA does not endorse a specific crowd management training program, it nevertheless supports such training through

specific code revisions. Dubai continued by stating that crowd managers are a necessary part of the overall life-safety protection package for assembly occupancies. Dubai completed his thought by stating “Training and certification of crowd managers plays an important role to help ensure that the required crowd managers are trained and well prepared.

The Center for Campus Fire Safety (2012) stated that the ideology behind this paradigm shift of crowd management training goes a step further in also instructing these individuals on taking corrective actions in providing directions and assistance during emergencies. The Journal of Higher Education Safety (2013) pointed out that competent staff with minimal training is required to identify and mitigate egress hazards. The authors concluded that Crowd Manager Training Programs are aimed at making public gatherings safer by teaching event staff how to be better crowd managers.

Also defined in the purview of training was the fire and emergency drill walkthrough. For crowd management situations, the Journal for Higher Education Safety (2013) stated that in situations involving fires, nothing can be more lifesaving than a well-established fire drill policy that has been exercised and tested. Performing a fire drill walkthrough will help identify potential hazards and problem areas. Another area of training identified was training with mutual aid partners. If mutual aid agreements are in place, training with responding mutual aid agencies will ensure smooth operations during emergency response when necessitated. Training with mutual aid partners will also identify any communication deficiencies or technological compatibility issues which lead to ineffectiveness and inefficiencies. This is a perfect segue into the final topic in the discussion section of the research project, communication.

It is readily apparent that communications can impede or enhance operations during a crisis or an emergency. In the aftermath of the September 11, 2001 terrorist attack on the World Trade Center, communication interoperability became an often and heated debate at all levels of government, public safety, and in the private sector. Radio interoperability for special events, are a necessity. One way to ensure interoperability is by having the lead agency disseminate radios on the same frequencies to all personnel involved in security, crowd management, and public safety.

The California Commission Peace Officers Standards and Training (2012) stated that communication is a key strategy in crowd management pre-planning and event operations. In pre-planning, meeting with organizers, stakeholders, and liaisons will assist in overall event preparations and bring clarity of roles and responsibilities as well as to event objectives. Pre-planning communications allows the exchange of relevant information about the event and its history with all concerned parties. Communication of impacts from past events and group dynamics helps to determine resource needs and crowd management strategies. Likewise, communications with the community about the event and its potential impacts allows for feedback from concerned citizens, business and civic leaders.

On-going communication throughout the event is also essentially important. It was once said that an informed crowd is a cooperative crowd. The Emergency Preparedness Guidelines for Mass, Crowd-Intensive Events (1994) proposed that communicating with the crowd during an event is essential. Abbott (2001) stated that an effective crowd management plan entails adequate communication among management, employees, and guest. Abbott follows her line of thinking with a summation that effective communication would lead to successful event coordination. Of the five methods of communications identified, verbal, non-verbal, written,

visual, and electronic, Abbott inferred that electronic communication is considered the most effective in recent times. Electronic communications brings enormous benefits because most events are held in large arenas where written or verbal communication would prove difficult at best and unsuccessful in worse case scenarios.

Finally, The Event Industry Forum (2013) stated that communication is vital for the exchange of information between staff and audience. In relation to the crowd management operation during the event, communication can take many forms. Because of this, it is instrumentally important to consider all communication methods to ensure message delivery and receipt. The Event Industry Forum (2013) identified the following methods for use in managing crowds during events: two-way radio systems, handouts, information signage that direct people, public broadcast system, electronic displays, websites, text messaging, and social networking.

In conclusion, the Event Industry Forum proposed that a unified integrated communications command is warranted for large scale events. One of the most important components in planning security for major special events stated the authors, is to develop an integrated communications command center. The integrated communications command center brings together key leaders and actors from all the agencies and jurisdictions involved in the event.

Recommendations

Rahmat et.al (2011) stated that one of the major strategies to ensure event attendees safety is by practicing effective crowd management strategies. Venues are large complicated spaces; the management of crowds within them requires excellent teamwork, coordination and communication. As a result of the research data and the literature review, and an understanding

of the importance of crowd management strategies for the safety of visitors frequenting City sanctioned special events, the author has compiled the following recommendations.

Recommendation One

Recommendation one is to seat a special event committee of all stakeholders for every major or unusual special event. The committee will comprise of City of Delray Beach leadership representing the departments within the City, affected business owners, event organizers, and civic organizations. The aim of the committee will be to give voice to every stakeholder segment while working in a unified manner to create a win/win for all parties involved.

Recommendation Two

Recommendation two goes hand in hand with recommendation one and simply put is to utilize early and often pre-planning meetings to ensure cohesiveness and clarity in direction and purpose. Pre-planning affords time to identify issues to successful event presentation, time to prepare for and provide contingencies to overcome said issues, and time to garner support for the special event to enhance chances for success.

Recommendation Three

Recommendation three requires performing risk-hazard analysis of City venues and event location possibilities as well as taking into account performance history, event demographics, and performer, participant, and audience profiles to assist with crowd management plan design.

Recommendation Four

Recommendation four is to enhance special event operational considerations. Because special events are usually outside of the proverbial run-of-the-mill type events, they will have an

impact on community emergency service and business operations. Therefore due diligence should be given that operational action plans be developed and utilized.

Recommendation Five

Recommendation five is to provide contingency planning for every substantial special event authorized and sanctioned by the City of Delray Beach. Simply put, evaluate the risk assessment/analysis, bring into focus what could possibly go wrong, and then prepare contingencies to alleviate at best or contain and mitigate at the very least.

Recommendation Six

The last recommendation is to develop and adopt a crowd management plan to be implemented and utilized for City sanctioned special events. The plan will seek to educate stakeholders in a working definition of crowd management, educate event management and the public on crowd dynamics and crowd manager requirements, and enhance overall safety of authorized special events.

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Appendix A

August 21, 2013

EFOP Alumni

National Fire Academy

16825 South Seton Avenue

Emmitsburg, MD 21727

Dear Fellow Alumnus,

Good afternoon. I'm writing this letter because I need your help. I am a second year student of the National Fire Academy's Executive Fire Officer Program (EFOP) in Emmitsburg, Maryland. I have completed the Executive Analysis of Community Risk Reduction. For this Applied Research Project (ARP) I have chosen the topic, Managing Crowds during Special Events: Creating a Safer Delray Beach. My focus is on creating a crowd management plan/policy.

I have developed an assessment tool in the form of a questionnaire/survey. I ask that you please take a moment to complete the questionnaire/survey and also forward the link to any additional organizations that may have a plan and are willing to share information. I know that you are busy fulfilling your roles and responsibilities. I am not insensitive to our plights as leaders within our organizations. But if you could complete the short assessment tool it would be appreciated.

Thank you in advance for your understanding and assistance in this endeavor.

Sincerely,

Victor B. Williams
Assistant Fire Chief

Appendix B

Fire Service Crowd Management Survey

1. What is the size of your organization?

_____ Uniformed Personnel

_____ Number of stations

_____ Coverage area in square miles

2. What is the population size of your city or county?

3. Does your department, city or county host special events?

_____ Yes

_____ No

4. If yes, who is responsible for event crowd management?

5. Does your department, city or county have a crowd management policy or plan?

_____ Yes

_____ No

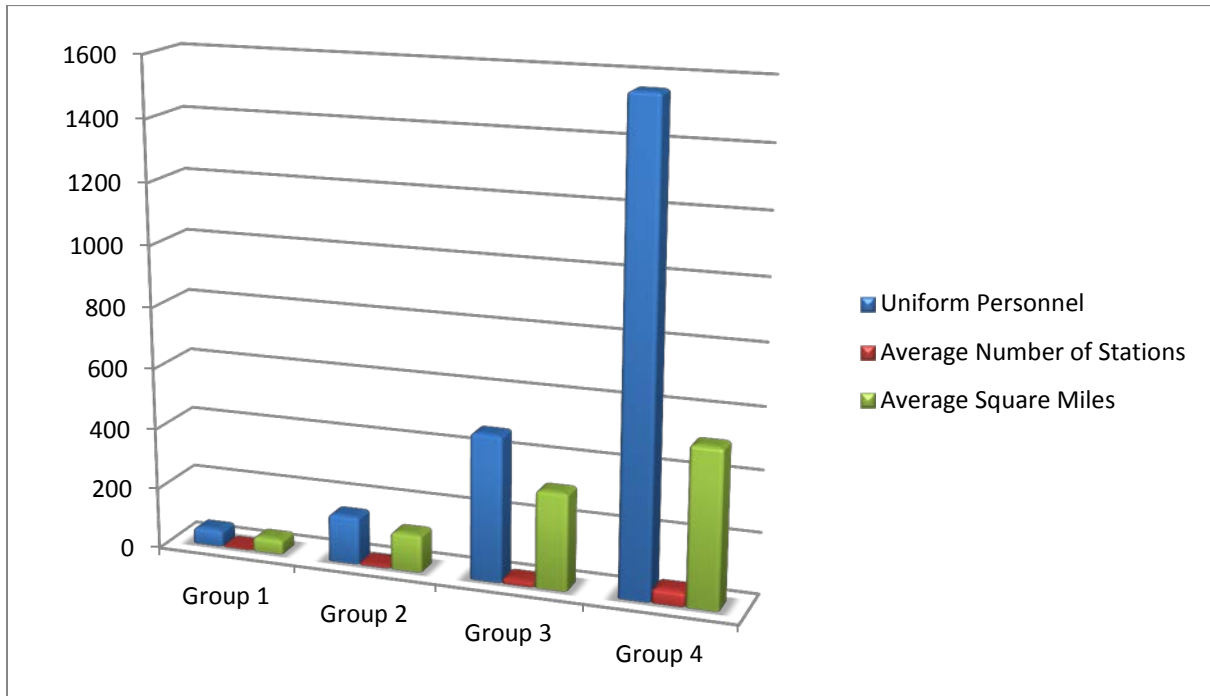
6. If yes, will you please provide a copy of your crowd management policy/plan for review to williamsv@mydelraybeach.com.

_____ Yes

_____ No

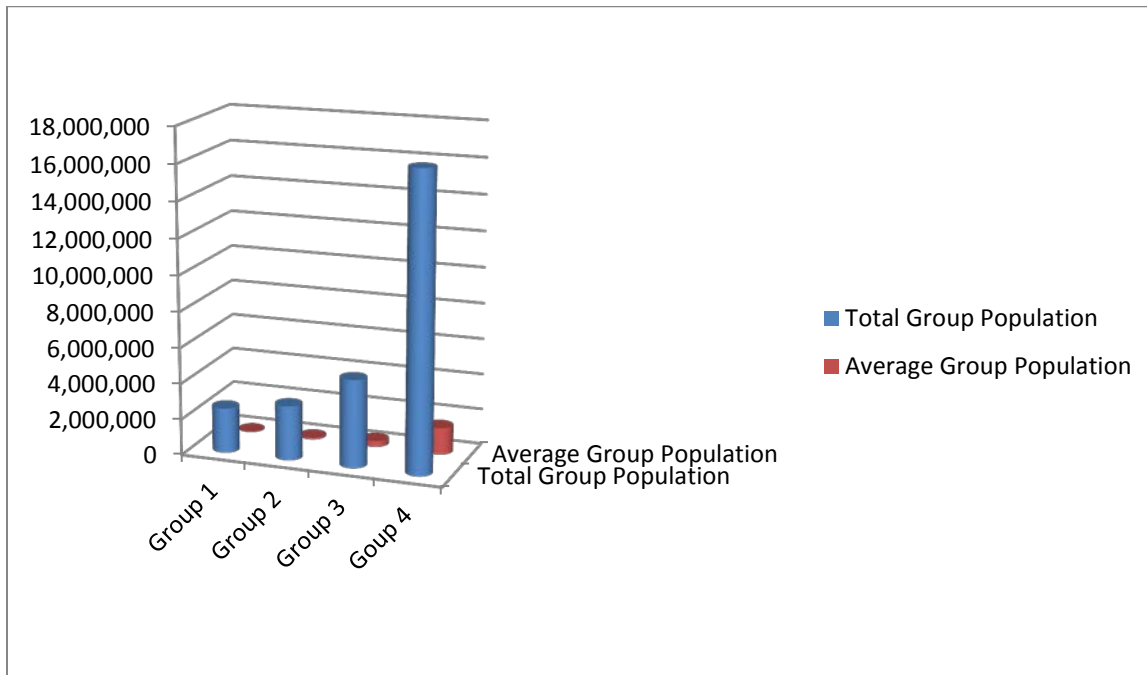
Appendix C

1. What is the size of your organization? Number of uniform personnel, number of stations, coverage area in square miles...



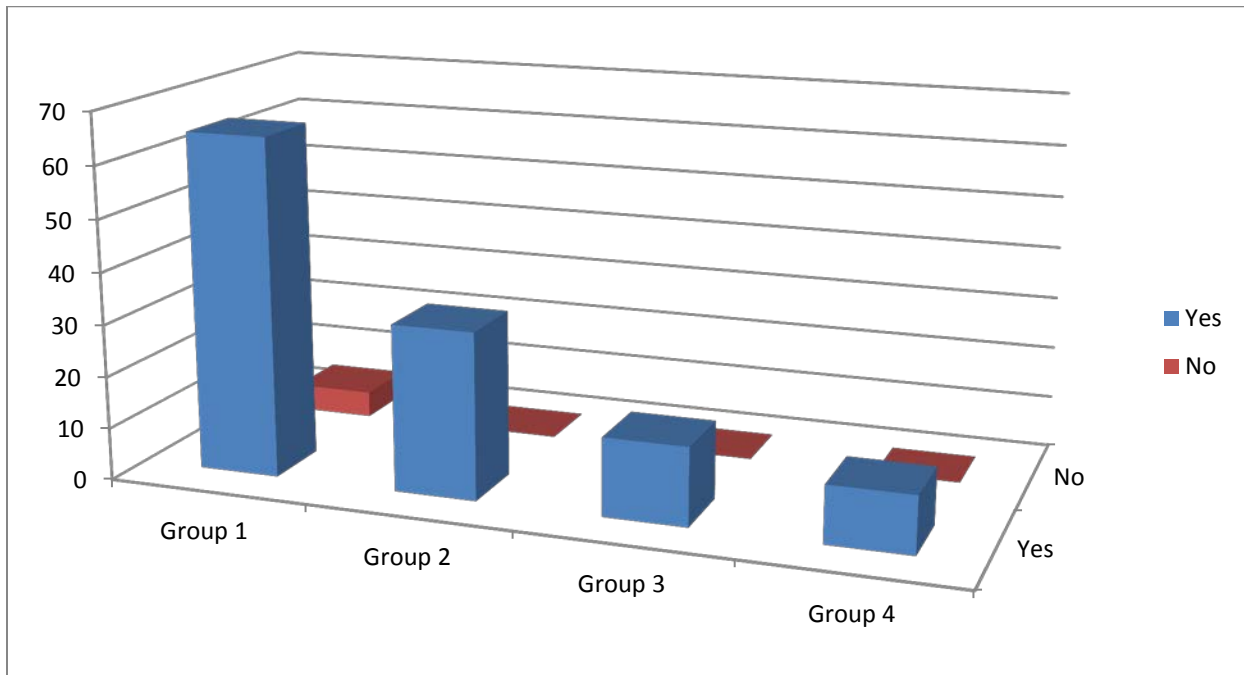
	<u>Number of Personnel</u>	<u>Number of Stations</u>	<u>Average Square Miles</u>
Group 1	54	3	48
Group 2	157	8	123
Group 3	478	18	317
Group 4	1,560	49	516

2. What is the population size of your city or county?



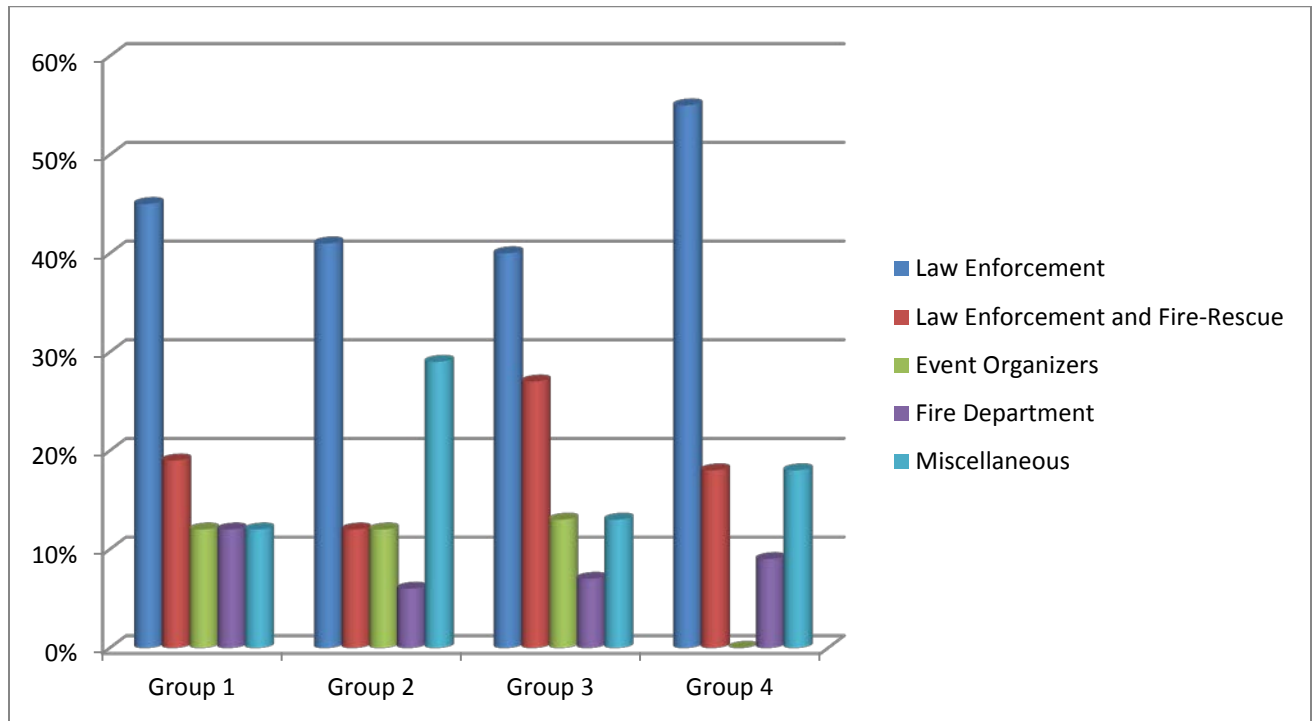
	<u>Total Group Population</u>	<u>Average Group Population</u>
Group 1	2,507,125	35,816
Group 2	3,039,601	94,988
Group 3	4,895,631	326,375
Group 4	16,472,750	1,500,000

3. Does your department, city, or county host special events?



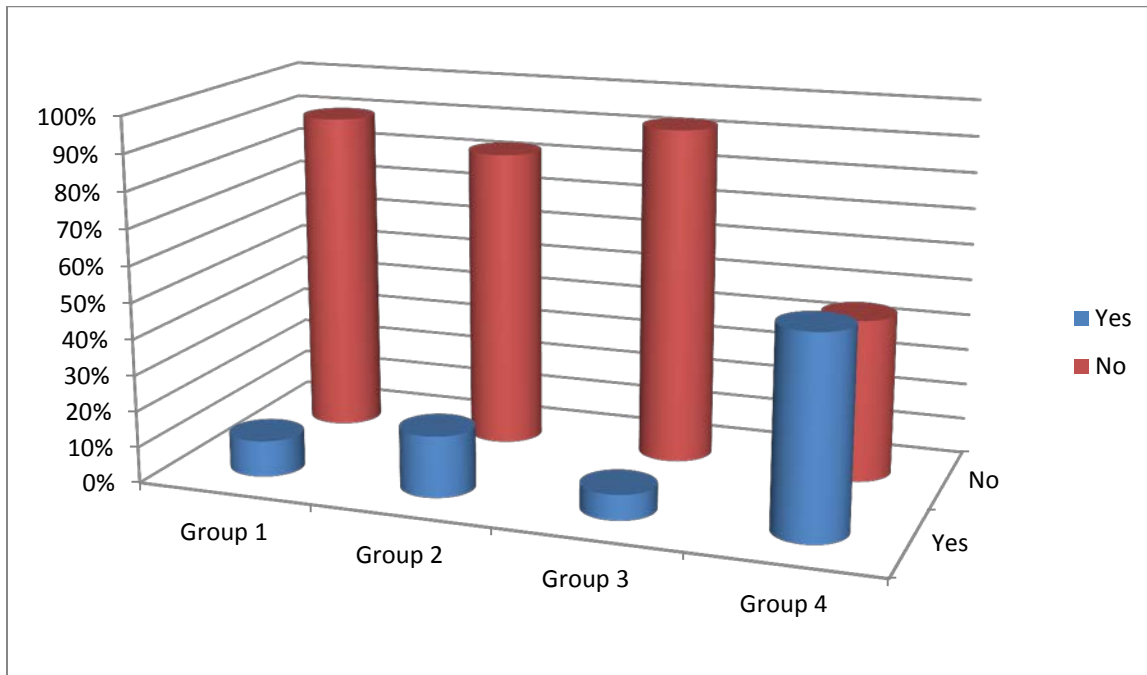
	<u>Total Group Respondents</u>	<u>Yes</u>	<u>No</u>
Group 1	70	65	5
Group 2	32	32	0
Group 3	15	15	0
Group 4	11	11	0

4. Who is responsible for event crowd management?



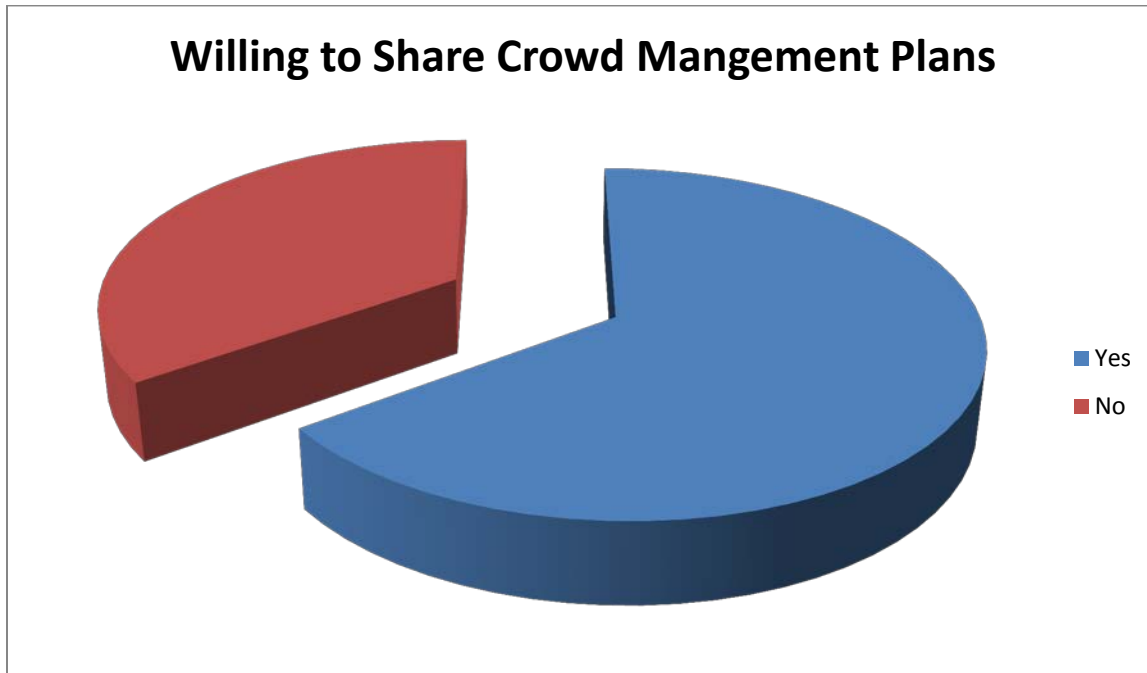
	<u>LE</u>	<u>LE/FD</u>	<u>Event Organizers</u>	<u>Fire Department</u>	<u>Miscellaneous</u>
Group 1	45%	19%	12%	12%	12%
Group 2	41%	12%	12%	6%	29%
Group 3	40%	27%	13%	7%	13%
Group 4	55%	18%	0%	9%	18%

5. Does your department, city, or county have a crowd management policy or plan?



	<u>Yes</u>	<u>No</u>
Group 1	10%	90%
Group 2	17%	83%
Group 3	7%	93%
Group 4	55%	45%

6. Will you provide a copy of your crowd management policy/plan for review? Of the twenty respondents to the aforementioned research question, thirteen respondents answered in the affirmative.



Of those responding to the research question:

Thirteen organizations represented or 65% answered in the affirmative.

Seven organizations represented or 35% answered in the negative.

Appendix D

City of Delray Beach Event Management Plan (Special Event Crowd Management Plan)



Delray Beach, Florida

Event Name	
Event Location	
Event Date	
Organization's Name	
Last Document Update	

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1. Introduction

The purpose of this document is to provide broad guidance for event organizers planning to promote an event within the jurisdictional boundaries of Delray Beach, Florida. The document also provides sections that should be completed to help you (the organizer) develop a Crowd Management Plan and a detailed Event Management Plan (EMP). It is recommended that you save a version of the document. After its completing all sections of this document, you will have an EMP for your event.

2. Event management

i. Pre-Planning

The success of any event is always dependent upon adequate pre-planning and it is essential that you allow enough lead time to ensure that your event is a success. By addressing the why, what, where, when and who early in your planning process, it will help you to make informed decisions during the event planning process.

What – As the organizer, you need to decide what it is that you will present at your event. Your core values will provide direction here.

Where – Some things that should be considered when deciding on your event venue include:

- Site area
- Access (ingress and egress)
- Community impact
- Transport and parking
- Ground conditions
- Existing facilities (e.g. toilets, food, water, etc.)
- It is also worth considering your venue in terms of your target audience, is the location accessible to your main target audience?

When – Consider your event date in terms of some of the following:

- Other events
- Day of the week
- Likely weather conditions at that time of the year
- Do your opening times suit your audience

Who – This is one of the most important points to consider in your pre-planning process. Who is your target audience; this will help you identify what elements should be at your event. Try to put yourself in the shoes of someone from your target audience, what are their interests, what will attract and excite them at your event. Identifying the ‘who’ will come from your ‘why’

core values. The ‘who’ may also mean you need to give special consideration for facilities such as young children, teenagers, the elderly or disabled.

ii. Event Overview

Provide an executive summary paragraph of the event. Please keep in mind that you are trying to provide someone who knows nothing about your event with as much information as possible in a succinct paragraph or two.

iii. Key Event Management Contacts

Populate the following table with the names, roles, responsibilities and contact details of the key people involved in organizing your event.

Every event should always have one person who is ultimately responsible for all aspects of the event. Depending on the nature and scale of the event a number of other people will have key tasks and responsibilities allocated to them, but will report to the event manager.

Name	Role	Responsibility	Contact Information
John Doe	Event Manager	Overall responsibility	Cell #: Email:
John Smith	Production	All event infrastructure, ordering, delivery timings etc	Cell #: Email:
Jane Doe	Volunteer Coordinator	Volunteer recruitment, training and event day management	Cell #: Email:
Mary Queens	Health & Safety	Risk assessments, legal compliance, fire points, site inspections	Cell #: Email:

iv. Key event contacts – other

Populate the below table with all the other key contacts for your event. You as the event organizer should start collating the details of all people that will have some involvement with your event.

This should include all suppliers, stakeholders, emergency contacts, performers, promoters, etc. While it is not necessary that the City of Delray Beach have this list, it is important that you create this comprehensive list primarily for your benefit. This helps with your event planning and event management. There is nothing worse than the main act or a prominent service provider not showing up on time and you as the event organizer don’t know how to contact them!

Suppliers (marquees, catering etc.)				
Organization	Contact	Service	Contact details	Notes
ABC marquees	John Smith	Temporary structures	Email and mobile	Price confirmed waiting for written quote
Authorities (fire, police, first aid etc.)				
Organization	Contact	Service	Contact details	Notes
Elite Security	Jacob Drayson	On call security	Email and mobile	Have briefed on event
Artists / Entertainment				
Organization	Contact	Service	Contact details	Notes
24 Carat Entertainment	Joe Smith	Walkabout entertainment	Email and mobile	Require payment on the day

v. *Staffing*

Over and above the key event management contacts you have documented under section 2.3 please list here the other staff that will be required to deliver your event.

It is important that you think carefully about your event and the level of staffing that will be required. It is easy to underestimate how many staff will be required to plan and successfully run your event.

Following an event design process and completing a risk assessment will help to ensure that you allocate adequate staff to the event, thus ensuring it is effectively managed and is safe for the public and your staff.

vi. *Organizational matrix*

Create a simple organizational matrix below.

An organizational matrix helps everyone understand the management structure and who is responsible for what. It is also an essential element in your emergency response planning. If an incident occurs it is crucial that your staff, the public and/or emergency services know the chain of command.

For smaller and community based events an organizational matrix should still be developed. The below example is a very simple structure, you should highlight the levels of command and the protocols for communication up and down the hierarchy.

Police / Emergency services				
		Event manager		
Security manager	Safety manager	Production manager	Artist manager	Volunteer manager
Security staff	EMS Manager	Production staff	Stage manager	Volunteers
Stewards	Medics and EMTs	Crew	Stage crew	

vii. Crowd Management

Any events, including small natured events have the potential of becoming crowded. Crowd management is a vital factor of any event and requires profound consideration. The concept of crowd management involves the operational planning, strategies developed, and tactical procedures employed to facilitate crowd actions and movements. Effective crowd management calls for having a definitional understanding of crowd management, a thorough understanding of crowd dynamics and behavior, and coordinated pre-planning to ensure the safest environment for special events. Let’s begin by defining crowd management.

1. Crowd Management Definition

First and foremost, crowd management is not crowd control. Crowd management is concerned with effectively organizing the movement of crowds. Crowd management involves consideration of a number of key matters including seating arrangements, crowd behavior, demographics and time to name a few.

Crowd management is defined as a complete systems approach that includes relevant fire and life safety legislation and direction, planning, management structure (e.g. organizational charting), performer, participant and audience profile, all bound together by identifying hazards through risk assessments and preparing to alleviate/mitigate risks through training and preparation. The following shall be considered while developing a crowd management plan for submission with event application:

2. Crowd Management Planning

- Crowd management involves pre-planning
- Planning and preparation are essential elements of effective crowd management
- The primary aim of crowd management planning is to control crowd density
 - A dense crowd is one in which individual physical movement is rapidly becoming less likely or possible due to the density of the crowd

- People are attempting to move but they are either swept along with the movement of the crowd or are falling on top of each other
- Crowd density results in the compression of people causing fatalities and serious injuries due to suffocation (Berlonghi, 1993)
- Create a planning team or coordinating group
- The pre-planning process establishes a foundation for informed decision-making and accountability
- Pre-planning is beneficial for any unusual or special event and should begin well in advance of the event or as soon as reasonably possible
- Planning entails pre-event meetings between organizers with stakeholders
- As a matter of fact, the effective management of a crowd calls for thorough planning and a coordinated effort for providing safe environments accommodating all types of audiences
- Pre-planning also entails researching applicable laws/ordinances/regulations for compliance
- The preparation of a crowd management plan is an essential part of the event and would be normally prepared by the person charged with overall event safety. The crowd management plan must detail some basic requirements such as:
 - The findings of site inspection
 - Recommended number and type of staff (e.g. crowd managers, ushers, etc.)
 - Communication methods
 - Chain of command
 - Audience profile
 - Methods of ingress and egress
 - Contingency planning
 - Emergency procedures
- The crowd management plan will be concerned with prevention through identifying, eliminating, and controlling hazards and risk related to the assignments given to ushers and crowd managers.
- Crowd management inclusion ensures that the correct design, information, and management system is developed in tandem with other aspects of the event plan. The crowd management plan should follow a progressive path. For example:
 - Arrival
 - Ingress
 - Event
 - Egress
 - Contingency
 - Emergency procedures

3. Perform a Risk Assessment

- Safety is the inverse or opposite of risk

- Greater safety means the reduction or elimination of risk
- Perform an event risk assessment that considers
 - Demographics of the crowd
 - Performer, participant, and crowd profiles
 - Previous event history
 - The availability of alcoholic beverages for purchase by patrons
 - Political or social agendas present during event
 - How to effectively manage crowd densities
 - Venue or site inspection/visit consider
 - The phases of arrival and queuing
 - Ingress and egress
 - Exists, lighting, etc.
 - Occupant load/capacity
 - Potential for Murphy's Law (e.g. contingency planning)
 - Contingency plans should be board in nature
 - Should include a full range of scenarios
 - It does not matter how low the probability, if it is remotely reasonable, it must be considered
- An adequate risk analysis/assessment will assist organizers by providing invaluable information to be utilized in the development of the crowd management plan

4. Legislation and Standards

- As the organizer, you should be mindful that crowd management planning and operational delivery is regulated by a host of statues, codes, and standards.
 - NFPA1 *Uniform Fire Code*
 - NFPA 101 *Life Safety Code*
 - NFPA 5000 *Building Construction and Safety Code*
- It is imperative that you govern yourself accordingly and operate within the confines of the appropriate laws and regulations.

5. Statement of Intent

- A crowd management plan should contain a Statement of Intent that summarizes the different roles and responsibilities of those with the authority to implement the plan.
 - The aim of the statement is to ensure that each decision-making organization (e.g. organizers, law enforcement, crowd Management Company, etc.) is clear about where their responsibility begins and ends.
 - The statement of intent should be a concise document that each party formally signs to indicate their understanding and acceptance of their area of responsibility.

6. Temporary Structures and temporary infrastructure

- The crowd management plan should also consider the safety of temporary structures.

- Temporary structures may include staging, marquees, and large circus-style tents
- Issues that should be taken into considerations when temporary structures are utilized are as follows:
 - Fire safety
 - Means of escape (e.g. egress)
 - Occupant load
- Where temporary structures are installed as a part of a larger event, crowd mitigation must also be taken into account when managing ingress, egress, and capacity
- The safe management of crowds depends on many factors. When utilizing temporary infrastructure such as power supplies, consider how this will affect the movement and visual acuity of those attending the event.

7. Performer and Participant Profile

- Performers and participants can a positive or negative influence on crowd management. Performers (e.g. music artist or entertainers) and participants (e.g. individual athletes or a team) profile factors to be considered are as follows:
 - Previous activity and behaviour
 - Cultural views of those performing or participating
 - Political views of those performing or participating
- Understanding of performer/participant profiles is essential. If the risk assessment or profiling of an event discloses the probability of crowd-related issues, prepare protocols in advance to assist in communicating expectations and possible outcomes.

8. Audience Profile

- Thorough research into the audience profile is important to establish the correct methods of communicating with the public and helps to ensure that the crowd management initiatives are designed around the expected audience.
- Please be mindful that events are often linked to cultural aspects of society that tend to reflect in the profile of the audience.
- While most attendees visit an event for entertainment and enjoyment, a small minority can undermine the experience for the majority.
- Gender and age are also considerations to explore.
 - The ratio of males to females and their ages needs to be taken into account during event planning.
 - This discovery will govern the deployment of crowd management staff.
- Behavior and activity profiling of expected audience is also essential.
 - Certain audiences or groups will conduct themselves in certain patterns of behavior.
 - Aggression, anti-social, anti-establishment, or recklessness may ensue.

- Consideration of audience response to actions must be taken into account when planning and managing the event in both the normal or emergency setting.
- The crowd management plan should include methods for accommodating VIPs and may require isolated ingress, egress, and viewing areas. Contingency planning will help prepare event staff for VIP attendance and the audience subsequent reactions.

9. Occupant Capacity

- Every event, whether indoor or outdoor, free or paid must establish a safe capacity.
- An important element to ensuring an event remains within a safe capacity limit is to establish the occupant load and employ a method for providing a continuous count.
- Where the venue is not clearly marked (e.g. a street festival) the event should be broken down into constituent parts.
- Please be cognizant of a few basic crowd management principals
 - Maintain clear ingress (access routes, queuing space and entrances)
 - Maintain clear egress (exit routes and exit-gate widths)
 - Circulation space (e.g. areas around facilities)
 - Viewing space (seated or standing)
 - Maintain occupancy requirements within key areas (bars, food and drink areas, etc.)
- The safe capacity number should be determined during pre-planning process and subsequent site visits and should include the sum total of
 - Staff
 - Contracted employees
 - Guests
 - Performers
 - Volunteers, etc.

10. Crowd Dynamics

- It is the legal requirement and responsibility of the organizer to provide a safe environment by proving that adequate safety considerations are in place.
- An understanding of crowd dynamics is useful for linking the planning process with operational elements.
- There are three (3) main phases of crowd behavior:
 - Ingress (e.g. access routes, entrances)
 - Circulation (e.g. concourses, areas around facilities)
 - Egress (e.g. exit routes and exit-gate widths)
- There are also three (3) main influences on crowd behavior
 - Venue design
 - Information/communication
 - Event management
- Understanding flow rates, fill times, and critical densities (review Fruin) all help define a safer crowd.

11. Management Structure

- Because clear lines of communication and an understanding of roles and responsibilities are vital, a documented management structure is in order.

- Preparing an organizational chart will assist in demonstrating how the reporting lines will work between people in the same area of responsibility and also those from other agencies.
- Identifying the management structure assist not only in visible chain of command reporting lines during crowd management operations but also in the overall event management.

12. Communication Systems and Methods

- Another element of an effective crowd management plan is adequate communications among employees, guests, and between management and guests
- Effective communication should lead to successful coordination between all parties
- Communication in relation to the crowd management operation is vital for the exchange of information between individual members of staff, and between the staff and the audience
- It is important to consider all methods of communication during the crowd management planning process
- Methods of communication include
 - Two-way Radio Systems
 - Two-way radio systems are commonly used for crowd management communications at events.
 - If two-way radio systems are to be employed, it is essential that crowd management personnel be briefed, if not trained, in the correct use of two-way radios.
 - Other methods include
 - Face-to-face between the staff and the audience
 - Staff briefings and hand-outs
 - Information signs that direct people or display conditions of entry
 - Bullhorns (to enable an usher to communicate information locally)
 - Public broadcast system
 - Electronic displays
 - Electronic displays are considered the most effective
 - Bring enormous benefits to events covering a large area
 - Signage is a form of communication that is significant to event managers. Utilized properly:
 - Signage can serve to warn, instruct, inform, or direct
 - Signage achieves the requirement to advise of potential dangers
 - Signage should be clear, concise, unambiguous, and readily recognizable for maximum effect
 - Social media (e.g. social networking sites, text messaging, and websites)
- The communication process must be flexible in case the environment of the event changes. Information transferred must be clear, concise, courteous, correct, complete, and correctly directed.

13. Crowd Monitoring

- Crowd monitoring should be used to inform the crowd management operation of changes in the movement or behavior of the crowd or when the crowd masses have

- approach critical density as determined by risks assessment and occupant load requirements.
- Monitoring should take place at various times and locations pre-event, during, and post-event.
 - Monitoring methods that assist with crowd flow and capacity include
 - Electronic turnstiles
 - Ticket scanning
 - Manual click counts
 - Closed-circuit television
 - Utilize ushers in key locations both internally and externally as spotters in various elevated positions to assess dynamic audience movement
 - It is important when calculating flow rates that organizers consider
 - The overall requirement for managing crowd ingress and egress
 - Avoiding individual locations of isolation
 - Utilizing historical data to establish an efficient system to maximize a safe flow rate and reduce congestion.

14. Ingress and Egress

- Crowd management planning must take into account the safety issues that relate to how people will access an event, move around, and then exit.
- Ingress is essential to the audience gaining access and being appropriately distributed throughout the area.
- Egress must take into account individuals departing and must involve clearly identifiable routes to exits.
- Before the public are admitted to an event, a pre-opening safety evaluation must be performed and documented.
- Pedestrian egress should be kept separate from those used by emergency services.
- The safety evaluation related to egress should include:
 - Checking all exits to ensure that they are unlocked and clear of obstructions
 - Ensuring that all pedestrian routes are clear
 - Ensuring that all emergency lighting are working
- Ensure that exits are clearly indicated and operate according to design requirements
- Ensure that there are exits that are ADA compliant.

15. Emergency Contingency Planning and Arrangements

- A key element to event safety is the preparedness for emergencies and the response that should be provided.

16. Crowd Manage Staff

- The main responsibility of all personnel, whether professional or volunteer, involved with implementing a crowd management plan is public safety.
- The crowd management plan should detail roles and responsibilities of all those involved in providing crowd management to ensure they are closely intertwined.
- Crowd management organizations may be hired to provide services depending on the level of ushers required as result of a risk assessment.
- *Paid staff* carries out safety critical tasks and should be subject to formal employment processes.
 - Recruitment- formal application process, relevant screening, and interviews

- Terms and conditions- rate of pay, hours of work, job specification, and conduct.
- *Volunteers* employed to carry-out crowd management duties should be trained to a level comparable to paid staff and relevant to the event.
- *Crowd Managers* have been mandated through the adoption of NFPA 1 *Uniform Fire Code* 20.1.5.6 and NFPA 101 *Life Safety Code* 12.7.6.
- Duties of crowd managers and crowd management attendants represent a marriage of hands-on assistance and behind-the-scenes observation include:
 - Understanding general responsibilities towards the safety of all audience members (including those with special needs)
 - Performing pre-event safety checks
 - Being familiar with site layout, assist audience by providing facility's information (e.g. first aid, toilet locations, concessions, etc.)
 - Staffing ingress, egress, and other strategic points
 - Controlling and directing audience entering or leaving the event and helping to achieve an even flow thereby restricting critical density
 - Recognizing crowd conditions to ensure safe dispersal
 - Assisting in the safe operation of the event by remaining vigilant in ensuring exits are free from obstruction
 - Investigating possible safety incidents
 - Being aware of and reporting fire hazards
 - Responding to emergencies, raising the alarm, and taking necessary immediate action
 - Being familiar with evacuation protocols, including coded messages, and undertaking specific duties during an emergency
- An appropriate plan for crowd management entails ushering and security personnel
 - *Security personnel* are an integral part of the crowd management operation at an event and a significant feature of a crowd management plan
 - Security personnel should be experienced in handling disputes, protecting from theft, implementing emergency services, and providing an overall safe and secure environment for the guests
 - All events require security details for the safety and enjoyment of event goers.
 - Security Personnel shall be for hire and filled by City of Delray Beach Police Department Officer on special detail

3. Health and safety

i. You are responsible for health and safety at your event

The Health and Safety at Work Act 1970 is the primary piece of legislation that covers health and safety at work. Even if you are a community organization with no employees it is still your responsibility to ensure that your event and any contractors are operating legally and safely. To this, it is essential that you address the following headings to ensure that you have taken all steps

that is reasonably practical to ensure your event is safe and complies with all health and safety laws and guidelines.

ii. Risk assessments and management

Please provide a copy of your completed risk assessment using template provided.

The risk assessment process is not an option when planning an event, it is an absolute necessity and no event will be granted until a suitable risk assessment has been completed. This document includes a risk assessment template. Guidance notes are provided on this form that will lead you through the risk assessment process.

It is important that a risk assessment is not just something you do because it is a legal requirement; it is the single most important tool to ensure you cover all health, safety and planning aspects of your event. A risk assessment is a ‘fluid’ document that should be developed early, constantly monitored, adjusted and shared widely with internal and external stakeholders.

The first step in the process is to identify and record every risk. Do this with your planning group and brainstorm every identifiable risk and associated alleviation/reduction initiatives. Each identified risk will then be dealt with via the risk assessment template. You must include the fire risk within this assessment.

iii. Risk assessments – other contractors

Please list here all other contractors associated with your event that you will need to collect copies of their risk assessments.

Some examples could be a fair rides, face painter, fireworks or walkabout performers. Remember that you as the event organizer hold ultimate responsibility for every element of the event.

iv. Security

Most events, although not all, will require some professional security. The main purpose of security and stewarding is crowd management and it will be your risk assessment that will identify what your security requirements will be. When assessing the security needs of your event give consideration to the following:

- Venue location
- Date
- Operating times
- Target demographic
- Planned attendance
- Fenced or open site

Document your security plan here.

v. Stewarding

In addition to your own organizations staffing requirements you will also need to consider stewarding requirements.

Document your stewarding plan here.

Some key points to consider when developing your plan are:

- Your risk assessment will help you identify your requirements
- Stewards require training and briefings to ensure they are fully aware of their duties and responsibilities
- You must ensure that you develop a communications plan for all staff, including stewards as they need to understand how they can cascade information or report incidents during the event
- Give consideration to;
 - Venue location
 - Date
 - Operating times,
 - Target demographic
 - Planned attendance numbers
 - Fenced or open site

vi. Emergency procedures

Please document here what emergency procedures you will have in place for your event.

Once again your risk assessment should help you document your procedures. Think about what you will do if a fire occurs, where on the site will you evacuate people? How will you communicate this instruction to your audience? Who will take responsibility for these decisions? What systems do you have in place to contact emergency services?

It is important that you document your procedures and communicate this with all your event staff, contractors and volunteers, as well as the community's public safety services. Emergency procedures will always include definitions, i.e. when does an incident become major and therefore the management of the incident is handed over to the police.

vii. First aid / medical cover

Please document here what first aid and or medical coverage you will have at your event.

The City of Delray Beach Fire-Rescue Department Special Event Coordinator can assist you

with this process.

viii. Electricity

If you are including electrical supply as part of your event please document the details here.

Temporary electrical installations are subject to the same standards and regulations as permanent electrical installations and must comply with the general requirements. Any event that has electrical supply included must have a competent electrician sign-off on the installation prior to the event starting.

ix. Fire safety at your event

You must address the area of fire safety for your event. As stated under 3.2 Risk Assessments and Management you need to include the risk of fire in your event risk assessment.

Please confirm here that you have addressed the fire risk in your event risk assessment. Also document how you have addressed the key areas of the fire risk assessment process highlighted below:

- Identify the fire hazards, i.e. sources of ignition, fuel and oxygen
- Identify people at risk within and surrounding your site and those at highest risk
- Evaluate the risk of a fire occurring and evaluate the risk to people should a fire occur
- Remove or reduce fire hazards and remove or reduce the risks to people
- Consider the following: detection and warning, fire fighting, escape routes, signs and notices, lighting, maintenance
- Recording significant findings and action taken
- Prepare and emergency plan
- Inform and instruct relevant people, provide training
- Keep assessment under review and revise where necessary

Useful resources for fire safety planning include:

x. Fun fairs and inflatable play equipment

If you plan to have bounce houses, rides or a fun fair at your event you must carry out a number of checks and collect a range of documentation before event approval for these to be present at your event.

Please include here any inflatable play equipment you intend to have at your event.

Points you will need to address before approval is granted for any piece of inflatable play equipment are:

- Is the operator conforming to industry best practices?
- Has daily checks on the equipment been performed as required by industry standards?

- When was equipment last inspection?
- Do you have a copy of the current test/maintenance compliant certificate for this equipment?
- Is the equipment clearly marked as to its limitations of use?
- Does the contract have liability insurance coverage for the event?

Please include here any rides or fun fairs you intend to have at your event.

Points you will need to address before approval is granted for any ride or fun fair are:

- The operator must provide you with a copy of their annual inspection papers and copy of these must be provided to the event organizer and municipality for review
- The operator must also confirm in writing that the organization adheres and operates within the industry standards

xi. Temporary demountable structures

The use of temporary demountable structures at events is an area that is broad and complex may simply be some market stalls and a marquee or may include stages, grandstands, lighting towers, gantries, site offices etc. Depending on the scale and types of structure, different authorities will be required to be involved in the approval process. If structures are planned to be in place for extended periods of time then special permits may be required. Larger temporary constructions would require independent engineers to sign-off structures before they can be used.

Please provide a detailed list of all temporary structures you plan to bring onto your event site. Include what procedures you will follow to ensure all structures are supplied, built, or installed by a competent contractor.

Guidance on minimum requirements prior to approval:

- All suppliers must present a copy of their public liability and employee insurance certificates
- All suppliers must prepare a relevant risk assessments and method statements relating to the product they are supplying for your event

You need to consider all other health and safety aspects relating to any temporary structure

xii. Animals at Events

You must obtain consent in writing before you may bring any animal's onsite for exhibition, performance or entertainment. The City may prohibit the use of any animal at the event which they may consider a danger to the public welfare.

Event organizers may use only those animals which are listed on the event application, which must be submitted for approval at least 30 days before the animals are to be brought to the

site. Copies of all relevant licences / registration documentations for each animal must be provided with the application form.

The organizers and handlers shall be responsible for the welfare of the animals, which are to be transported, housed, fed and displayed to the public in a manner suitable and appropriate to the animals' needs.

Please provide a detailed list of all animals you plan to bring onto your event site. Include copies of all relevant licences / registration documentations for each animal.

4. Communications

The importance of communications when planning and delivering an event is paramount. You need to consider three main areas of communication when developing your event.

- A. Communicating with your planning team pre-event to ensure all people are aware of the proposed event, its impacts on the local community and local emergency response capabilities and resources. It is also essential that you communicate your event plans to the residents and businesses in the surrounding area, the earlier the better.
- B. Communications on the day of the event, ensuring that there is a clear communications plan in place and that all stakeholders are familiar with the plan. You also need to make sure that you have the practical tools to make the communication plan work on the day, this could include radios, mobile phones, runners (staff to run errands and messages) and a public address system.
- C. Audience communication needs to be considered to make the visitor experience enjoyable and seamless. Elements here could include flyers, site plans, signage, public address system, stage schedules, MC's and information points.

i. Event communications – Surrounding residents

Document here how you are going to communicate your event plans to surrounding residents and businesses

ii. Event day communications - Audience

Document here what plans you have in place for communication with your audience on the day of the event.

iii. Event day communications – Internal

Document here what plans you have in place for your event day communication for event staff and emergency services, both on site and off site.

Key points to consider when developing your plan are:

- Ensure that you list phone contact details and radio channel details if radios are being used
- Ensure that via your organization matrix all people working on your event understand the chain of command and therefore who they will contact should they need to report an incident or cascade information
- Your communications plan needs to be developed taking into consider the organizational matrix and the emergency response plan

5. Lost children

Please document here what your lost children’s policy and procedures are if applicable.

You must ensure that you develop a lost children’s policy and make all event staff and volunteers familiar with the procedures and policy. Some important points to consider when developing your policy are:

- Identify arrangements for the ‘safe’ care of children until such time that they can be reunited with their parent/s or guardian
- There should be a clearly advertised point for information on lost children
- Lost children should never be left in the care of a sole adult, always ensure that there are at least two adults that have had appropriate background screenings.
- If a lost child is found and reported to event staff, a message should be communicated to all event staff as per the communication plan (radio, phone, in person to event control point) that a ‘code word’ at ‘location’. Two staff should then remain with the child at this point for a period of 10 minutes to allow for a possible quick reunification.
- If after 10 minutes there has been no reunification then the child should be taken to the designated lost children’s point by two members of staff. If possible this point should be adjacent to your event control point or the first aid/medical area.
- All incidents need be logged, ensuring all details are recorded.
- Staff should try to ascertain a description of the child’s guardian, their name, and a mobile number if known.
- The child and the parent/s guardian should not be reunited until a match has been established and verified. To this if a parent comes to the lost children’s point claiming they have a lost child they must provide identification and a signature along with a description of their child, this could include age, clothing, hair colour, height etc.
- If there is any reluctance from the child to go with the adult then you should inform the police.
- Once a lost child incident has been resolved you must inform all staff that the ‘code’ has been resolved and complete the report in the log.

6. Insurance

All event organizers must hold public liability insurance. Organizers must also ensure that any contractors that you are engaging also hold public liability insurance and any other appropriate insurance, i.e. product liability, employee insurance.

Please confirm that you hold public liability insurance and that a copy of the policy has been forwarded to the City.

You will also need to ensure that you hold copies of all contractors relevant insurance and that copies of such can be provided to the City upon request.

7. Provision of food

Document details here of any catering and or provision of food you plan to provide at your event. Please note that all details of any catering concessions should be listed under 2.4 Key Event Contacts – Other.

8. Site considerations

i. Site Plan

Please include a copy of your site plan within this document or as separate attachment.

A site plan must be submitted for each and every event. As this template has been designed to assist smaller event organisers we do not expect you to supply a site plan of a standard that we would anticipate from a larger professional event organizer. However, the more accurate and detailed the plan the better. Your site plan should include the following:

Placement of all temporary structures	All other site infrastructure
Any fencing or barriers	Generator or power sources
Power supply runs (cables)	Entry and exit points
Emergency exits and assembly points	First aid points
Information point	Lost children's point
Vehicle entry points	Any event décor, i.e. flags, banners etc.

Be aware that you may want to create two versions of a site plan, one that you would use at the site on the day to provide event participants with information and another version that is purely for your management team. Accurate site plans are very helpful when you are doing the site build as you are able to clearly direct people when they arrive on-site to their correct position.

Site plans are also a useful tool in the event design process as you can plan how people will enter the site, how people will interact with the site and how people will move about the site.

ii. Toilets

You are required to provide adequate toilets facilities for your event attendees, staff and contractors.

Please outline here your planned toilet provisions for your event based on your expected numbers and gender split.

Be mindful that you will need to provide disabled facilities and separate sanitary facilities for caterers.

For events with a gate opening time of 6 hours or more		For events with a gate opening time of less than 6 hours duration	
Female	Male	Female	Male
1 toilet per 100 females	1 toilet per 500 males + 1 urinal per 150 males	1 toilet per 120 females	1 toilet per 600 males + 1 urinal per 175 males

iii. Vehicles on site

Please outline here what your vehicle policy is for you event site.

Points to consider when developing your vehicles on site policy:

- As part of your emergency planning (and included on your site plan) you should have clearly marked emergency ingress and egress routes. Ideally this should be a sterile route however this may not always be possible and you therefore need a procedure in place for the safe ingress and egress of emergency vehicles.
- What vehicles will need to access the site for your event?
- What vehicles will need to remain onsite throughout your event and which will be off-site before the event opens?
- Are there any vehicles that will need to move on the site during your event? It is strongly recommended that you avoid the need for this, however if it is needed you should have a rigid procedure in place and ensure that all people involved in your event are fully briefed on the protocol.

iv. Traffic, transport and parking

Many smaller community events will have limited impact on traffic and parking, however it is still important that you give this consideration when planning your event. Larger events can have significant impacts on local traffic and transport and will require extensive risk assessments and

detailed plans dealing specifically with traffic and transport. It is important that through your risk assessment you consider traffic, transport and parking no matter the scale of your event.

[Outline any traffic, transport or parking plans you have in place for your event.](#)

Points to consider when developing your plans:

- How will your target audience travel to your event?
- Consider the various transport links around the event site, and how these can be promoted to your audience as a way to get to your event.
- Are you proposing any road closures? If so the City will provide you with the correct contacts to apply for a road closure. Be aware that road closures may require a minimum of a few weeks of lead time and in all cases the more notice provided the better.

9. Environmental considerations

It has never been more important for event organizers to put in place plans to minimize their environmental impact. The City will not approve any event unless the following headings regarding the environment are addressed.

i. Recycling

It is essential that your event has a recycling plan in place and that it is carried out. For small community events this could be as simple as labelling some bins to encourage people to separate their waste into a range of categories and then making sure that these are taken for recycling.

Larger events will need to demonstrate that they have a sound recycling strategy in place or are employing a professional recycling organization to manage recycling on the day of the event.

[Document your recycling plans for your event here](#)

Points for consideration:

- Make sure your concessions and food suppliers have appropriate policies and procedures in place in regards to providing biodegradable containers and systems for the disposal of dirty water, cooking oil etc
- Think through how you will encourage people to place the appropriate waste into the correct receptacle. Contaminated recyclable materials could mean that the materials need to be sent to landfill
- How will you keep the site clear of waste?

ii. Noise

The City of Delray Beach has a noise ordinance and is fully aware of any event elements that may cause noise issues. The most obvious elements that have the potential to cause noise issues are live music stages, fun fairs and public address systems. It is therefore essential that you

contact the City in advance to discuss your plans and get agreement on noise levels at identified sites surrounding your event.

Please document what elements of your event have the potential to cause noise nuisance and what plans you have in place to mitigate this.

Points to consider:

- Selection of location for your event
- Larger events that have a music stage will always have to employ a professional sound engineer and they must liaise with appropriate City personnel to establish agreed sound levels
- Residents should be provided with an event day contact from your organization that can be contacted on the day should they wish to raise a noise complaint

iii. Surface protection and trees

If your event requires a large amount of equipment to come onto the site you may need to consider installing track way to protect the ground. Please make every attempt to preserve the sanctity and beauty of the City of Delray Beach.

Please document here your plans for minimising damage to the parks ground and trees.