CONSISTENT ASSESSMENT AND REPORTING OF POST

Consistent Assessment and Reporting of Post Storm Damage

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Abstract

The Akron Fire Department (AFD) didn't have a comprehensive standardized process for consistent and reliable post storm damage assessments which could lead to inaccurate information being reported to the state of Ohio. The purpose of this ARP was to identify components of a comprehensive standardized process for consistent and reliable post storm damage assessments to ensure that accurate information is being reported to the State of Ohio fire incident reporting system. The research methodology used was descriptive. The research questions were:

What national guidelines are there for conducting and recording post storm damage assessments?

What criteria do utility companies (i.e. telephone, cable, electric) suggest/require for conducting and recording post storm damage assessments?

What criteria do fire officers from various departments around the country suggest/require for conducting post storm damage assessments?

What criteria do Akron Fire Department officers suggest/require for conducting and recording post storm damage assessments?

This ARP began with the aid of the staff of the Learning Resource Center (LRC) where the researcher performed a search for literature relating to storm damage assessment. The researcher developed a survey, through SurveyMonkey.com, that was distributed to approximately 200 fire service personnel throughout the county. The questions on the survey were generated by asking the department's storm duty inspectors if they thought a storm duty form was needed, and if they answered yes, they were asked to submit their ideas as to what should be on the form.

The researcher interviewed a representative of the cable, electric and telephone companies.

The results suggested a need for the AFD to have a comprehensive, consistent standardized process for assessing and recording post storm damage.

It was recommended that AFD implement a post storm damage assessment form and identify a foreign current detector to be purchased by the department and worn by storm duty responders.

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Consistent Assessment and Reporting of Post Storm Damage Assessment

Introduction

When the city of Akron experiences severe weather that results in damages such as downed trees, power lines, cable lines and telephone lines, the Akron Fire Department (AFD) is dispatched to access and or mitigate the damages or refer the incident to the appropriate agency that can mitigate the damages. Often times during these post storm damage assessments our line staff is overwhelmed by the number of calls so our administrative staff is called in to perform storm duty. While performing storm duty, it is not unusual for the administrative staff members to be dispatched to more than 10 to 15 calls. It is also not unusual for there to be in excess of a year or two between storm duty incidents for the administrative staff. Additionally, there is a varying degree of storm duty experience amongst the administrative staff members who respond to these incidents. Currently, the administrative staff members who respond keep track of their calls by writing or, in most cases, scribbling the information about each call they respond to on a piece of notebook or scrap paper. Also, once completing the after storm assessments, the information obtained must then be entered into the AFD incident reporting system (HTE). Since most of the administrative staff has very limited or no experience entering incident reports into HTE, most of their reports are gathered together and entered by the few administrative staff members who are familiar with the HTE system. These administrative staff members who are HTE experienced must then try to decipher the notes of the person who responded to the alarm, which can be a very difficult process even with the aid of the person who wrote the notes and sometimes impossible when the author of the notes is not available. The problem is the Akron Fire Department does not have a comprehensive, consistent standardized process for assessing

and recording post storm damage. The lack of an adequate process has lead to inconsistent and unreliable post storm assessment information being reported to the State of Ohio fire incident reporting system. The purpose of this applied research project (ARP) is to identify components of a comprehensive standardized process, which will allow for consistent and reliable post storm damage assessments as well as help ensure that accurate information is being reported to the State of Ohio fire incident reporting system. This is a descriptive research project and will address the following research questions:

1. What national guidelines are there for conducting and recording post storm damage assessments?
2. What criteria do utility companies (i.e. telephone, cable, electric) suggest/require for conducting and recording post storm damage assessments?
3. What criteria do fire officers from various departments around the country suggest/require for conducting post storm damage assessments?
4. What criteria do Akron Fire Department officers suggest/require for conducting and recording post storm damage assessments?

Background and Significance

Founded in 1825, the city of Akron is situated just south of Cleveland, Ohio along the Ohio-Erie Canal. Akron, derived from a Greek word meaning “high”, now covers 62.41 square miles with a population of 212,000 (Akron, Ohio, 2009). Once known as the "Rubber Capital of the World,” Akron is now a world-renowned center for polymer research and development (Akron, Ohio, 2009). As one of the first fully motorized fire departments in the U.S., the AFD, founded in 1839 (Denholm, 1996), is comprised of 13 fire stations with an authorized strength of 401 firefighters with an additional authorized strength of 31 support

staff (AFD Annual Report, 2007). Historically, the city of Akron has and can experience severe weather events during any of the four seasons. Periodically these events, which could be wind, rain, ice or snow, are too numerous for the department's line staff to handle and require the response of our administrative staff to perform storm duty. This project is significant to the Akron Fire Department for several reasons. First it allows the department to adhere to the mission statement (AFD Annual Report, 2007), which reads as follows:

Our mission is to improve the quality of life within the community by providing a high quality emergency medical service, by providing an excellent fire prevention program, including public education and arson investigation, by providing a firefighting force capable of handling emergencies, which may include structural firefighting, hazardous materials mitigation, all types of rescues and miscellaneous emergencies and catastrophes. We will accomplish this mission while maintaining a high regard for the safety and health of our personnel. We will maintain a high standard of training, a quality occupational and health program, and a superior communication system. We will receive superb backing from our fire and hydrant maintenance programs (p. 2).

In particular, it will better allow the AFD to handle the miscellaneous emergencies and catastrophes mentioned in the mission statement. Secondly, it will greatly improve the department's ability to accurately collect incident data and subsequently provide that data to the state of Ohio. The accurate reporting of incident information can be vitally important for many reasons, not the least of which is to protect the department from potential future legal liability. This applied research project (ARP) most closely relates to objective 1 in Unit 6 Damage Assessment, of the Executive Analysis of Fire Service Operations in Emergency Management (EAFSOEM) course, which states the students will "Develop a process for

obtaining and using damage assessment information" (NFA, 2007). This research project directly addresses the United States Fire Administration's Operational objective, "To respond appropriately in a timely manner to emerging issues" (NFA, 2008).

Literature Review

The researcher began the literature review at the National Fire Academy's Learning Resource Center (LRC) and began by searching for the definition of damage assessment. The National Fire Academy (NFA 2007) defines damage assessment as a "gathering of information related to the impact of an event, or series of events, on life and property within a defined area? FEMA (NFA 2007) divides damage assessment into two categories, which are immediate and post incident.

Immediate is defined as a rapid estimate of the damage site or area during the active phase of the incident (NFA, 2007).

Post incident assessment is a detailed examination and analysis of the total damage at an incident site or area (NFA, 2007).

The National Fire Protection Association (NFPA, 2007) defines damage assessment as "an appraisal or determination of the effects of the disaster on human, physical, economic, and natural resources."

According to the National Weather Service Weather Forecast Office (2008) proper techniques should be learned for conducting damage assessments and they suggest the following items be used as part of a storm assessment/survey kit: cell phone, digital camera, maps, pens and pencils, pads of paper, clipboard, compass, tape measure, walking distance meter, storm damage reference binder, paper clips, and extra batteries. Also, have the proper footwear and clothing along with proper I.D.

The Fury: Preparing for National Disasters by Marlow, Slatter, and Wozniak (2006) suggest that preparedness begins with understanding what exactly is at risk and creating emergency action plans for businesses in the community. They also suggest conducting annual drills to aid first responders in procedures and corrective actions to prevent or reduce property and equipment damage.

According to the Florida Division of Emergency Management (2008), one of the most important elements to an emergency or disaster is the damage assessment process. Emergency response can be more effective, equipment and personnel can be better used, and help can be provided quicker if a thorough damage assessment is performed.

The U.S. Fire Administration (April, 2008) believes the fire service is uniquely suited to respond when the community is experiencing a weather related disaster. To better prepare themselves for those disasters they recommend advance planning by fire service personnel to first identify the types of natural disasters and severe weather that have affected their area in the past.

The U.S. Fire Administration (USFA, 1999) also suggests establishing protocols for unusual and dangerous conditions such as:

- dispatch and response in high (over 39 mph) winds. Go/No-Go policies
- swift water rescues
- building collapse
- water distribution system problems due to prolonged power failure
- street, bridges, and tunnel closures/access limitations

FEMA (1999) believes individual workers and managers could both benefit from the use of Standard Operating Procedures (SOPs). The result of using SOPs is improved safety,

performance and morale, which leads to improved operational efficiency, greater accountability, and reduced liability. Additionally, FEMA (1999) states that SOPs can provide a framework for training, member briefings, exercises and drills. These activities improve the understanding of job requirements and help identify hidden problems.

The USFA (May, 2004) states that complete and accurate structural and hazard information about the incident site may not be readily available. So their recommendation is to complete and document an assessment of all target hazards in advance. They believe the information gathered can then be accessed through mobile data terminals (MDT) and digitally.

The USFA (May, 2004) gives a Homeland Security presidential directive that the Secretary shall ensure that, as appropriate, information related to domestic incidents be gathered and provided to the public, the private sector, State and local authorities, Federal departments and agencies, and, generally through the Assistant to the President for Homeland Security, to the President. The Secretary shall provide standardized, quantitative reports to the Assistant to the President for Homeland Security on the readiness and preparedness of the Nation – at all levels of government – to prevent, prepare for, respond to, and recover from domestic incidents.

The USFA (May, 2004) states the National Response Plan (NPR) will include a consistent approach to reporting incidents, providing assessments, and making recommendation to the President, the Secretary, and the Homeland Security Council.

They believe the use of specific forms for conducting after storm assessment will make the process both easier and more accurate. It is critical that these forms be created before the emergency so that adequate time will be available to train the users. It is also paramount that

these forms are easy to use and they can be tailored to meet specific needs (i.e. residential or commercial).

Strickland (as cited in Sinnott, 2006) states that not enough fire departments have thought about how they would assess damage in their jurisdiction. To eliminate or at least minimize confusion, based on information uncovered, the term damage assessment is a common term used by building officials, structural engineers and architects as an after disaster inspection process. However, this assessment process, also referred to as technical damage assessment, differs substantially because it often happens many hours after the incident, which allows them enough time to gather sufficient trained personnel.

Another term the researcher found throughout this literature is incident report. According to Wikipedia.com, "the purpose of the incident report is to document the exact details of the occurrence while they are fresh in the minds of those who witnessed the event".

Based on McEntire (2002) it is important to remember that the reporting of damages may be incomplete or incorrect because it is often difficult to have full or accurate knowledge of the damages even weeks or even months after the disaster has occurred.

Also, the Florida Division of Emergency Management (2007) says that one of the most important elements in disaster response is damage assessment.

Since the Akron Fire Department refers calls to the various utility companies, the researcher spoke to a representative of the local cable company, Erik Van Culbreath, Sr., Technical Operations supervisor for Time Warner Cable (personal communication, April 7, 2009). Mr. Culbreath was asked if there was anything the fire department's personnel working storm duty could do to make things easier for their emergency repair teams. He answered by showing the researcher the color coded plastic sleeves that are placed over the

cable wire to distinguish between fiber optic and regular cable. He explained that the orange sleeves are for fiber optic and the yellow is for regular cable. He asked me to share this color coding system with the entire department and emphasized that the fire department should never cut the orange fiber optic cable, unless it's life or limb situation, since this would disrupt service to thousands of customers. Their priority is to repair fiber optic lines first, so if our storm duty personnel can give the department's dispatchers a color to relay to the cable company they can better prioritize their repairs. He also gave the researcher a sample of each sleeve to take back to the Akron Fire Department, for training purposes. Mr. Culbreath also informed the researcher about a device each of their repair crew members wear called a Foreign Voltage Detector, which goes into alarm whenever the person wearing it is within eight feet of electrical current. He suggested that the fire department issue the Foreign Voltage Detectors as standard personal protective equipment for anyone performing storm duty.

The researcher also spoke with Daniel Syx (personal communication, April 23, 2009) foreman with the First Energy Company, the city of Akron's electric supplier. He was also asked if there was anything the department's storm duty personnel could do to make life easier for their emergency repair crews. He suggested that we ride with their repair crews so our personnel could be trained to recognize what type of electrical service, primary, secondary or house current might be involved during an emergency. The department accepted his offer to ride with their repair crews and all of the department's potential storm duty personnel have now received the training.

The researcher also spoke to Ms. Warren (personal communication, May 5, 2009) of the city of Akron's main telephone supplier, AT&T. She was asked if there was anything the

department's storm duty personnel could do to assist them during emergency storm responses. She replied by stating the fire department should recognize that phone wire can be identified by orange letters, and that even the writing on their junction boxes is orange.

Finally, Keyes (2002) states personnel must be properly trained to perform a damage assessment, which includes determining the cost estimate of the damage and completing the necessary paperwork.

Procedures

For this applied research project (ARP) the researcher utilized the descriptive research method to answer the following questions:

1. What national guidelines are there for conducting and recording post storm damage assessments?
2. What criteria do utility companies (i.e. telephone, cable, electric) suggest/require for conducting and recording post storm damage assessments?
3. What criteria do fire officers from various departments around the country suggest/require for conducting post storm damage assessments?
4. What criteria do Akron Fire Department officers suggest/require for conducting and recording post storm damage assessments?

This ARP began with the aid of the staff of the Learning Resource Center (LRC) where the researcher performed a search for literature relating to storm damage assessment. This process occurred in the last week of September, 2008. The initial search netted a few articles, so before leaving the National Fire Academy, the researcher filled out a request for literature to be mailed to the researcher's home. Once back home, the researcher utilized the Akron Summit County library and internet sources to identify additional literature sources.

In the first week of November, the researcher received a mailing from the LRC which contained several literature sources. In April 2009, the researcher developed a survey, through SurveyMonkey.com, that was distributed to approximately 200 fire service personnel throughout the county. The questions on the survey were generated by asking the department's storm duty inspectors if they thought a storm duty form was needed and if they answered yes, which they all did, they were asked to submit their ideas as to what should be on the form. The researcher received anonymous responses from all 15 of Akron's storm duty responders.

In April 2009, the researcher interviewed a representative of the cable company and a representative of the electric company. In early May, the researcher interviewed a representative of the telephone company. These interviews helped answer the second research question.

Research question three was answered through the results of the survey which were retrieved at the end of May and research question four was answered by the department's storm duty responders. The answer to question one was arrived at through the information identified during the literature review. The survey was sent to approximately 200 fire service personnel throughout the country. The limitations for this project were many. In January 2009, the department's training captain had a stroke, at the beginning of an inspection class he was teaching, and this researcher was tapped to fill in for him. At the completion of the inspection class, in March 2009, the administrative district chief suddenly decided to retire and once again the researcher was chosen to fill in. Also during the spring semester of 2009, at The University of Akron, the researcher was teaching two courses and taking one course.

The researcher's time was at a premium, but the two unforeseen issues made finding research time extremely difficult.

The following terms will be defined to eliminate possible confusion:

Line Staff – Employees assigned to fire stations working a 24-hour on, 48-hour off shift

Administrative Staff – Employees assigned to staff positions (not assigned to fire stations) who work either a five eight-hour shift or a four ten-hour shift Monday through Friday.

Storm Duty – Administrative staff responding to storm related calls in their assigned city vehicle.

Go/No Go policy – Go means fire department emergency vehicles/non-emergency vehicles will respond when called to service. No Go means fire department emergency vehicles/non-emergency vehicles will not respond when called to service due to unsafe conditions.

Results

The results of this ARP were arrived at through the information obtained from the literature review, surveys and personal interviews and answered the following research questions:

1. What national guidelines are there for conducting and recording post storm damage assessments? The researcher did not find any specific guidelines, but there were suggestions, such as having a storm damage assessment kit with: cell phone, digital camera, maps, pens, pencils, walking distance meter and other important items (National Weather Service, 2008). Also it was suggested that annual drills be conducted to aid first responders in procedures and corrective actions, which will better prepare them to prevent or reduce property and equipment damage (Preparing for Natural Disasters, 2006). Additionally, the U.S. Fire Administration (1999)

believes establishing a protocol is vitally important and that the protocol should include things such as: Go/No Go policies, swift water rescues, building collapse, street, bridge and tunnel closures/access limitations and water distribution problems due to prolonged power outages.

2. What criteria do utility companies (i.e. telephone, cable, electric) suggest/require for conducting and recording post storm damage assessments? The researcher conducted personal interviews with a representative from each of the above utility companies. Akron's local electric provider (First Energy), Daniel Syx (personal communication, April 23, 2009) suggested having the department's storm duty responder's ride along with their trouble shooters to learn how to identify what type of wire, primary, secondary or house line is involved when performing damages assessments. Also the training they provided contained general electric safety and instruction on utility pole identification and how to determine if a wire is electric, telephone or cable based on their position on the pole. The department did take advantage of the offer and at the time of this writing each storm duty responder has completed the ride along training. Akron's local cable provider (personal communication, April 7, 2009) made two suggestions, first that all of our storm duty responders be outfitted with a Foreign Voltage Detector which goes into alarm when the wearer is within eight feet of electrical current. The second suggestion or request was made after giving this researcher a class on their color coding system, which was a request that the fire department not cut the cables wrapped in an orange sleeve which identifies it as fiber optic cable, unless it is a life or limb situation because cutting a fiber optic cable will disrupt cable and phone service for thousands of customers. The researcher was

instructed that the other color used is yellow and that a yellow sleeve indicates that cable is standard cable. The researcher was told the cutting of a standard cable is not nearly as critical a condition and far less customers are affected.

3. What criteria do fire officers from various departments around the country suggest/require for conducting post storm damage assessments? The researcher answered this question by using the survey instrument created by the researcher (Appendix B). The survey asked the respondents seven questions. Question 1, does your fire department have a standardized post storm damage assessment form? The respondents were able to answer yes or no. Twelve of the 88 people who responded to this question answered yes and 76 responded no. Question 2, what dispatch information do you consider critical? The respondents were able to choose any of the given responses that applied. Of those responding, 86 of 88, 95% felt the actual incident address was critical, 83% felt the dispatch time was critical, 76% felt the date and arrival time were critical, 67% felt the run number and dispatch address were critical and 52% felt the in-service time was critical. Question 3, which of the following on-scene information items do you consider critical? The respondents were able to choose any of the given responses that applied and 86 of the 88 respondents answered this question. Of those responding, 100% felt people trapped was critical, 98% felt structural condition was critical, 86% felt street partially blocked or blocked was critical, 86% felt electric wires down and their type was critical, 50% felt trees/limbs down was critical, 26% felt cable or telephone wires down was critical. Question 4, which of the following actions taken do you consider critical? The respondents were able to choose any of the given responses that applied. 84 of 88

respondents answered this question. Of those responding 76% felt residents alerted was critical, 75% felt referrals made was critical, 68% felt area taped off was critical, 63% felt area barricaded was critical, 43% felt items removed was critical, 38% felt pole number identified was critical, 23% felt flares laid was critical. Question 5, what customer contact information would you deem critical? The respondents were able to choose any of the given responses that applied. 85 of 88 respondents answered this question. Of those responding 93% felt the occupant was critical, 68% felt the property owner was critical, also 68% felt telephone number was important and 37% felt witnesses were important. Question 6, what information would you deem critical for the narrative section of the report? The respondents were able to choose any of the given responses that applied. 86 of 88 respondents answered this question. Of those responding 100% felt a brief description of what you encountered and actions taken were critical, 76% felt the person writing the narrative was critical and 52% felt who you relieved at the scene or who relieved you was critical. Question 7, please include any other items you feel would be critical for consistent incident reporting. Out of 88 respondents, 6 responded to this question. The following responses are the answers they gave. Respondent 1 felt agencies giving assistance (mutual aid) was thought to be critical. Respondent 2 felt a call holding system was thought to be necessary to keep apparatus in their first due area. While handling damage service calls, apparatus must stay alert for priority call dispatch. A full district survey may assist the EOC in damage assessment. Hard to complete by engine company [sic]. Respondent 3 felt a standardized form for all units to use. Respondent 4 felt vehicle license numbers,

vehicle VIN number, persons involved date of birth, person involved drivers license number, responsible party contact information, billable items consumed at scene, a narrative stating what the dispatch center (remainder of response was cut off). Respondent 5 added, Al, this is Paul in KC. Good luck on your paper after the (remainder of response was cut off). Respondent 6 felt proper safety equipment is worn is critical.

4. What criteria do Akron Fire Department officers suggest/require for conducting and recording post storm damage assessments? The Akron Fire Department officers who respond to storm duty were asked to give anonymous responses as to the following question. Question 1, does the Akron Fire Department need a standardized post storm damage assessment form? All 15 respondents answered yes. Question 2, what dispatch information do they feel is critical? The following items were given as responses: run number, dispatch address, actual address of the incident, date, dispatch time, arrival time and in-service time. Question 3, what on-scene information items do you consider critical? The following items were given as responses: electric wire down and type (i.e. primary, secondary, house), cable wires down, telephone wires down, tree/limbs down, street blocked or partially blocked, structural condition (i.e. roof or wall collapsed) and people trapped. Question 4, what actions taken do you consider critical? The following items were given as responses: area taped off, area is barricaded, flares laid, pole number(s) identified, referrals made (electric, cable, telephone companies, parks, ladder company), residents alerted and items removed (i.e. cable or telephone wires, branches). Question 5, what customer contact information do you deem critical?

The following items were given as responses: property owner, occupant, telephone number (home/cell) and witnesses. Question 6, what narrative information do you deem critical? The following items were given as responses: a brief description of what you encountered and actions taken, person who is writing the narrative, who you relieved, at the scene, or who relieved you.

The researcher discovered an unexpected finding through this research process. That finding was the Foreign Voltage Detector worn by all Time Warner cable repair crew personnel. This device is also standard equipment for all First Energy company repair crews.

Discussion

This research has demonstrated how critical it is to have a damage assessment process in place and people trained to function as post storm damage assessors. The U.S. Fire Administration (April 2008) believes the fire service is uniquely qualified to respond when the community faces a storm related disaster, but they recommend advance planning to identify and prepare for whatever storm related emergency they're likely to face. In the survey this researcher conducted over 86% of those responding had no storm damage assessment form, (Appendix C) yet 100% of the Akron Fire Department's storm duty responders feel the department needs a post storm damage assessment form (Appendix D). According to FEMA (1999) both individual workers and management could both benefit from the use of SOPs. Additionally, FEMA believes SOPs are a perfect platform for training and exercises. In the researcher's opinion, a damage assessment form, in essence, is an SOP.

The researcher's opinion of the results is that the Akron Fire Department needs a damage assessment form which will lead to a more consistent storm damage assessment. Additionally, the researcher agrees with Keyes (2002) who states that personnel should be

trained to perform damage assessment which includes determining costs. The results of the ARP tells the researcher the Akron Fire Department's administrative staff should be doing post storm damage assessments and should receive additional training in order to become more proficient (i.e. determining costs).

The implications of the results for the Akron Fire Department are that now the department, in particular the storm duty responders, realize that we must take a different approach toward our storm duty responsibilities. No longer can we respond in a haphazard manner scribbling down random information on scrap pieces of paper. As stated in Wikipedia (2009) the purpose of an incident report is to document what happened at an emergency scene while it is still fresh in your mind. The best way for the Akron Fire Department to accomplish that is by using a post storm damage assessment form.

Recommendations

Through the research conducted for this ARP, it is recommended that the Akron Fire Department establish a SOP for conducting storm assessments. The SOP should contain an assessment form and an annual training requirement for each of the storm duty responders. Additionally, and most importantly, the department should immediately identify a foreign/stray electric detector to be worn by our storm duty responders. The original problem was the Akron Fire Department does not have a comprehensive, consistent standardized process for assessing and recording post storm damage assessment. A post storm damage assessment form is an answer that each of our current storm duty responders personally desires (Appendix D). The fact that our personnel are already desirous of a form will make creating and implementing the form far easier. The purpose of this ARP was to identify components of a comprehensive standardized process, which will allow for

consistent and reliable post storm damage assessments as well as ensure that accurate information is being reported to the state of Ohio fire incident reporting system. Once again, a standardized damage assessment form will provide a means to accurately record the information that is required for the department's incident reporting system, while simultaneously raising the quality of our collective assessment since the form will be generated by not only having tapped into the knowledge base of our storm duty responders, but also by using the information the survey generated from firefighters throughout the country. Each of the suggestions the researcher has proposed will be an extreme benefit to the Akron Fire Department, in particular, the discovery of the foreign/stray electric current detector that could be a real life saver. Also creating a form will tremendously simplify and greatly enhance our incident reporting system. In conclusion, in the future if anyone chooses to replicate this study remember not to ask survey questions that require written answers. Also, it would be interesting to explore some of the electronic data collection methods the researcher has heard being discussed.

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Appendix A

To:

From: Albert Bragg, Jr., Captain
City of Akron
Fire Department

Date: May 2009

Subject: Post Storm Damage Assessment

I would be grateful if you take less than five minutes and answer a few survey questions regarding your post storm damage assessment. If you currently use a form for conducting post storm damage assessment, if possible, please send me a copy. My contact information is below.

Please complete as soon as possible. Feel free to contact the researcher concerning the results of the survey.

(330) 375-2211 Phone
(330) 375-2146 Fax

Appendix B

Post Storm Assessment

I am currently enrolled in the Executive Fire Officer Program through the National Fire Academy. A requirement of this program is to conduct an applied research project after each course. Your participation in this survey is vital for this research project! Please take less than 5 minutes to complete this survey.

Albert A. Bragg, Jr.

1. Does your department have a standardized post-storm damage assessment form?

☐ *Yes* ☐ *No*

2. What dispatch information do you consider critical? Choose all that apply.

☐ *Run Number*
☐ *Dispatch Address*
☐ *Actual Address of Incident*
☐ *Date*
☐ *Dispatch Time*
☐ *Arrival Time*
☐ *In-Service Time*

3. Which of the following on-scene information items do you consider critical? Choose all that apply.

☐ *Electric wires down and type (i.e. primary, secondary, house)*
☐ *Cable wires down*
☐ *Telephone wires down*
☐ *Trees/limbs down*
☐ *Street blocked or partially blocked*
☐ *Structural condition (i.e. roof or wall collapsed)*
☐ *People trapped*

4. Which of the following actions taken do you consider critical? Choose all that apply.

- ☐ *Area taped off*
- ☐ *Area is barricaded*
- ☐ *Flares laid*
- ☐ *Pole Number(s) Identified*
- ☐ *Referrals made (electric, cable, telephone companies, parks, ladder company)*
- ☐ *Residents alerted*
- ☐ *Items removed (i.e. cable or telephone wires, branches)*

5. What customer contact information would you deem critical? Choose all that apply.

- ☐ *Property Owner*
- ☐ *Occupant*
- ☐ *Telephone number (home/cell)*
- ☐ *Witness(es)*

6. What information would you deem critical for the narrative section of the report? Choose all that apply.

- ☐ *A brief description of what you encountered and actions taken*
- ☐ *Person who is writing the narrative*
- ☐ *Who you relieved at the scene or who relieved you*

7. Please include any other items you feel would be critical for consistent incident reporting.

Please include any other items you feel would be critical for consistent incident reporting.

Done

Appendix C

Response Summary

Total Started Survey: 88

Total Completed Survey: 88 (100%)

1. Does your department have a standardized post-storm damage assessment form?

answered question	**88**
skipped question	**0**

	Response Percent	Response Count
Yes	13.6%	12
No	**86.4%**	**76**

2. What dispatch information do you consider critical? Choose all that apply.

answered question	**86**
skipped question	**2**

	Response Percent	Response Count
Run Number	66.7%	57
Dispatch Address	66.7%	57
Actual Address of incident	**95.2%**	**82**
Date	76.2%	66
Dispatch Time	83.3%	72
Arrival Time	76.2%	66
In-Service Time	52.4%	45

3. Which of the following on-scene information items do you consider critical? Choose all that apply.

answered question	**86**
skipped question	**2**

	Response Percent	Response

		Count
Electric wires down and type (i.e. primary, secondary, house)	85.7%	74
Cable wires down	26.2%	23
Telephone wires down	26.2%	23
Trees/limbs down	50.0%	43
Street blocked or partially blocked	85.7%	74
Structual condition (i.e. roof or wall collasped)	97.6%	84
People trapped	**100.0%**	**86**

4. Which of the following actions taken do you consider critical? Choose all that apply.

answered question	**84**
skipped question	**4**

	Response Percent	Response Count
Area taped off	67.5%	57
Area is barricaded	62.5%	53
Flares laid	22.5%	19
Pole Number(s) Identified	37.5%	32
Referrals made (electric, cable, telephone companies, parks, ladder company)	75.0%	63

Residents alerted	**77.5%**	**65**
Items removed (i.e. cable or telephone wires, branches)	42.5%	36

5. What customer contact information would you deem critical? Choose all that apply.

answered question	**85**
skipped question	**3**

	Response Percent	Response Count
Property owner	68.3%	58
Occupant	**92.7%**	**79**
Telephone number (home/cell)	68.3%	58
Witness(es)	36.6%	31

6. What information would you deem critical for the narrative section of the report? Choose all that apply.

answered question	**86**
skipped question	**2**

	Response Percent	Response Count
A brief description of what you encountered and actions taken	**100.0%**	**86**
Person who is writing the narrative	76.2%	66
Who you relieved at the scene or who relieved you	52.4%	45

7. Please include any other items you feel would be critical for consistent incident reporting.

answered question	**6**
skipped question	**82**

	Response

	Count
Replies	6

1. agencies giving assistance (mutual aid)

2. A "call holding" system is necessary to keep apparatus in their first due area.
   While handling damage service calls, apparatus must stay alert for priority call dispatch.
   A full district survey may assist EOC in total damage assessment; hard to complete by engine company.

3. a standardized form for all units to use.

4. Vehicle license numbers
   Vehicle VIN number
   Persons involved date of birth
   Person involved drivers license number
   Responsible party contact information
   Billable items consumed at scene
   A narrative stating what the dispatch center

5. Al, This is Paul in KC. Good luck on your paper. After the

6. Proper safety equipment was worn!

Appendix D

Storm Duty Survey

To: Akron Fire Department storm duty responders

From: Captain Albert Bragg, Jr.

I am conducting an anonymous survey for my third year course in the Executive Fire Officer program. The topic is "Post Storm Assessment" and since you are one of our storm duty responders, your answers to these six questions are critical for this survey. Please drop your completed form in my mailbox. Remember, names are not necessary. Thank you.

1. Does the Akron Fire Department need a standardized post storm damage assessment form?

   ☐ Yes ☐ No

2. What dispatch information do you consider critical?

   _____

   _____

3. What on-scene information items do you consider critical?

   _____

   _____

4. What actions taken do you consider critical?

   _____

   _____

5. What customer contact information do you deem critical?

   _____

   _____

6. What narrative information do you deem critical?

   _____

Appendix E

Storm Duty Survey

To: Akron Fire Department storm duty responders

From: Captain Albert Bragg, Jr.

I am conducting an anonymous survey for my third year course in the Executive Fire Officer program. The topic is "Post Storm Assessment" and since you are one of our storm duty responders, your answers to these six questions are critical for this survey. Please drop your completed form in my mailbox. Remember, names are not necessary. Thank you.

1. Does the Akron Fire Department need a standardized post storm damage assessment form?

   ☐ Yes ☐ No

   Of the 15 who responded, 100% of the respondents answered yes.

2. What dispatch information do you consider critical?

   The following items were given as responses: run number, dispatch address, actual address of the incident, date, dispatch time, arrival time and in-service time.

3. What on-scene information items do you consider critical?

   The following items were given as responses: electric wire down and type (i.e. primary, secondary, house), cable wires down, telephone wires, down, tree/limbs down, street blocked or partially blocked, structural condition (i.e. roof or wall collapsed) and people trapped.

4. What actions taken do you consider critical?

   The following items were given as responses: area taped off, area is barricaded, flares laid, pole number(s) identified, referrals made (electric, cable, telephone companies, parks, ladder company), residents alerted and items removed (i.e. cable or telephone wires, branches).

5. What customer contact information do you deem critical?

   The following items were given as responses: property owner, occupant, telephone number (home/cell) and witnesses.

6. What narrative information do you deem critical?

   The following items were given as responses: a brief description of what you encountered and actions taken, person who is writing the narrative, who you relieved at the scene or who relieved you.