

LET IT SNOW, LET IT SNOW, LET IT SNOW: THE RELATIONSHIP BETWEEN EMERGENCY PLANNING AND LEADERSHIP

Michael Ritchie
University of South Carolina Aiken

During the second week of February, 2014, the University of South Carolina Aiken (USCA) was ground zero for a serious ice storm that shut down most of Aiken County, South Carolina for almost a week. USCA enrolls over three thousand two hundred students and provides continuing educational programs for the surrounding community. While most students were able to evacuate before the storm, over three hundred remained in student housing and were dependent on the University for food, shelter, and safety. This case reviews the Strategic Planning that developed a campus wide Emergency Action Plan as well as the leadership skills that were used to provide a safe environment during difficult and perilous times.

HOME AT LAST

Dr. Sandra Jordan, Chancellor of the University of South Carolina Aiken (USCA), was finally able to sit down and rest. Ever since the Christmas holidays had ended, work had been non-stop and it did not let up, even though it was the middle of February. It had been a long Monday. Her phone rang all day long with one issue after another. After work, she attended a Chamber of Commerce meeting and had the typical baked chicken and vegetable medley, and had finally gotten home at 10:30. As she turned on the TV to watch the 11:00 pm news, she actually began to relax.

The lead-in to the news immediately caught her attention. The announcer was very serious as he showed a graphic with a HUGE weather system just to the Northwest of the Central Savannah River Area (CSRA) with arrows pointing directly to Aiken. The weatherman continued to say that this was going to be a very large storm, with snow and ice, and that all precautions should be taken. Immediately, Dr. Jordan thought of the three thousand two hundred students attending her University, and especially the one-thousand housed on campus. Her main concern, at all times, was the safety and welfare of these students. Now she is learning that a potentially dangerous weather system is heading right for her students. "Here we go again.

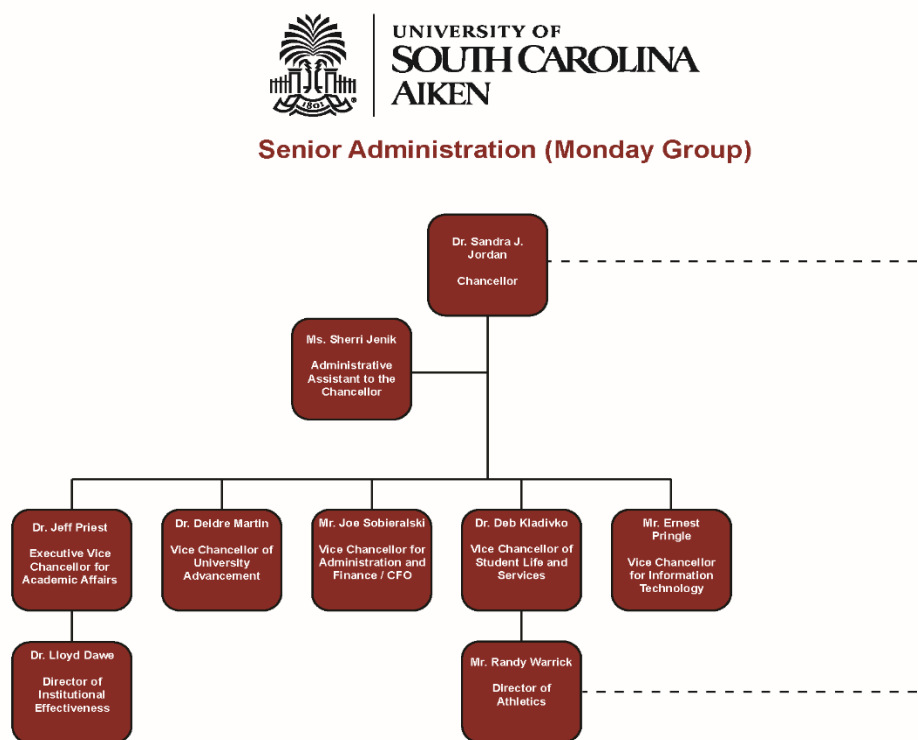
Better get some sleep tonight” she thought, “who knows when I will be able to sleep again”.

ORGANIZING THE TROOPS

Driving into work very early on Tuesday, Dr. Jordan knew that she needed to immediately contact her senior administrators (known as the Monday Group because they meet every Monday morning to report the activities of their respective areas) for their input and to start coordinating emergency preparation. This group was comprised of Dr. Jeff Priest, Executive Vice Chancellor for Academic Affairs, Dr. Deb Kladviko, Vice Chancellor of Student Life and Services, Dr. Deidre Martin, Vice Chancellor of University Advancement, Dr. Lloyd Dawe, Director of Institutional Effectiveness, Joe Sobieralski, Vice Chancellor for Administration and Finance/CFO, Ernest Pringle, Vice Chancellor for Information Technology, and Randy Warrick, Director of Athletics (Fig. 1).

FIGURE 1

USCA – Monday Group Organizational Chart

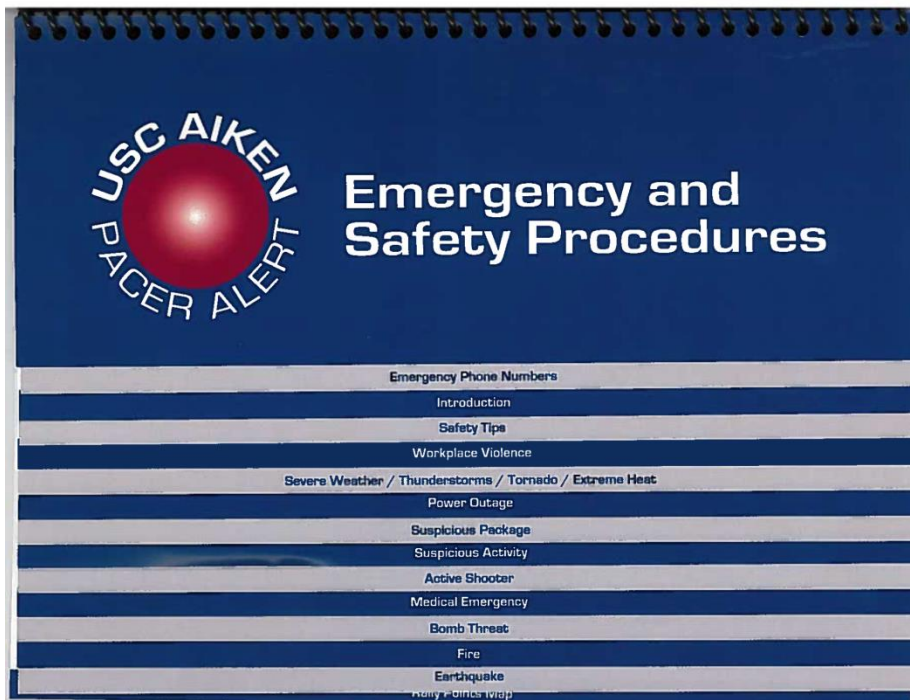


She also started compiling a list of the areas of the University that would play a key role in this emergency operation. By the time she reached campus, Dr. Jordan realized ALL of the areas she considered would play a role.

As soon as she reached her office, she emailed the Monday Group and notified them that they needed to meet that morning concerning the impending weather event. Dr. Jordan also noticed that she had already received several emails from various Monday Group members concerning the situation, as they had obviously watched the 11:00 pm news as well. By mid-morning, the Monday Group members that were on campus met with Dr. Jordan to begin the planning process. The University had an existing Emergency Action Plan (Exhibit 1) that gave a general overview of Chain of Command for many different types of situations, including inclement weather. First responders to emergency situations, especially in educational settings, rely on emergency plans to guide their plans of action (Challen, Lee, Booth, Gardois., Buckley-Woods, & Goodacre, 2012; Hayes, 2006).

EXHIBIT 1

USCA Emergency Action Plan



The USCA Emergency Action Plan was developed through the integrated effort of Senior Administration, Public Safety, and Len Engel, Environmental Health and Safety Manager. It is essential to include key stakeholders in the creation of a comprehensive emergency plan (Nicoll & Owens, 2013). However, this plan focused on large scale actions such as “The University of South Carolina Aiken will remain open during normal business hours unless notified to close by the Governor, or, in the event...”. The hundreds of other activities that were required were the responsibility of the various organizational areas of the University. Members of the Monday Group were responsible for these areas, and knew that each would have to act separately, focused on their particular area of responsibility, and also as a coordinated team with the other areas. These areas included: Central Coordination, Campus Police, Student Housing, Food Services, Student Services, Computing – IT – Campus Communication, and Maintenance.

CENTRAL COORDINATION

Dr. Jordan realized from the beginning of the crisis that coordination of activities to ensure the safety of the students as well as the integrity of the assets of the campus (buildings, labs, IT, etc.) was essential. During the first two months of the Winter of 2014, the CSRA had already been under two severe weather alerts. Each event was serious enough for USCA to take preventive action in preparation for the imposing storm. In each case, the campus had begun emergency preparation and centralized resources to provide a safe environment for the students. Dr. Jordan was adamant when she stated, “We were forced to rehearse a weather emergency, though luckily the first two delivered little negative effect. However, those events helped us know what to do and this speaks to the importance of drilling and practicing emergency procedures. In my mind, the fact that we had two earlier ‘near misses’ with the weather helped us to deal effectively with the ice storm when it did hit”.

One of the things that the recent weather events had highlighted was the need for a list of criteria that the campus should focus on during such an event. “A university is like a small city in that it never closes or shuts down. There are students, staff, and faculty on campus twenty-four hours a day, seven days a week, every week of the year. In fact, some students live in campus housing during holidays and breaks. It is important that these individuals are able to access the basic elements of day-to-day existence, such as shelter, heat, and food. We had always had the philosophy of student safety and service. But this was going to be different. The environment was changing, calling for new ways to keep our students safe” Dr. Jordan explained. She continued, “The Monday Group had been developing protocols for emergencies, including evacuating student housing”.

An early Wednesday meeting of the Monday Group was called and those on campus met in the Office of the Chancellor, located in the historic Pickens-Salley house. Several members were out of town on school business and their respected areas were represented by staff. After a discussion concerning each of the areas, Dr. Jordan simply stated, "You all know what to do. Remember our primary concern is student safety and well-being. Hopefully this will be another dry-run, but just in case, we need to be ready".

Dr. Jordan knew that the campus needed to use its expertise. The University is proud of its academic standing and is ranked #1 among top public regional colleges in the South in the 2015 edition of U.S. News & World Report's guide, "America's Best Colleges" (University of South Carolina Aiken, 2014). In addition, USCA has been ranked #1 ten times over the last fourteen years. Dr. Jordan was proud of the University's history of providing quality student services, such as housing, food service, police safety, and maintenance. These areas were staffed with individuals who knew what they were supposed to do and always did an excellent job. However, they usually performed in normal conditions. Now, with the impending storm, services might be a lot more difficult to provide and deliver. As Dr. Jordan put it "I had to trust my people and I did. I had a great team and I needed to make sure they understood the trust that I had in them".

Although USCA has its own administration, it is also part of the state wide University of South Carolina (USC) System. As part of that protocol, Dr. Jordan had contacted Dr. Pastides, President of USC, to inform him of the local decisions that needed to be made at USCA. In addition to dealing with USCA's relationship with USC, Dr. Jordan also had to react to the State of South Carolina, in particular, the Governor's orders on the closing of state institutions. To complicate matters, the Governor had recently issued a letter advising that state institutions should follow their county's decision on closing. In other words, the institution should only close in the event that the county decided to close operations. Dr. Jordan relayed her concerns to Dr. Pastides and was counseled to follow her own assessment and do what was in the best interest of student safety.

The University conducted normal operations all day Tuesday. University Police kept Dr. Jordan aware of changing weather conditions to the northwest during the day and they did not look promising. By the end of the day, the University was still bracing for the storm, but hoping for a reprieve. Aiken has usually been spared from these storms because of its geographic location, with these types of weather systems going north or south of the area. There have been many occasions when county operations were closed because of inclement weather in the northern part of the county, while the Aiken area received little if any precipitation.

Wednesday morning brought with it a dark and cloudy sky which soon turned into a light rain. The temperature was steadily dropping, though not yet to the freezing point. Dr. Jordan received information from Campus Police and also Aiken County that conditions were deteriorating, and was soon in contact with Aiken County administrators. By 11:00 Wednesday morning, the decision was made by Aiken County to suspend County operations, and USCA suspended all classes and activities at twelve noon. The University sent out notification that students should go to their homes if at all possible. In addition, warnings were given concerning icing conditions and students were reminded to make sure they could make it home safely before leaving campus. USCA has just under one thousand students in resident housing and seven hundred were able to leave.

All non-essential staff were sent home at noon on Wednesday, leaving only a handful of the Monday Group and the Campus Police on duty. By nightfall, only the Campus Police were still on campus along with the students who had chosen to stay.

Dr. Jordan woke up Thursday to a full blown ice storm. She immediately prepared to go to campus but soon discovered that the street leading out of her cul-de-sac was blocked by a fallen tree. She then notified members of her team and arranged for transportation, soon joining the members of the Monday Group to begin the coordination of USCA's response to the storm.

IT WAS MY CALL

Dr. Jeff Priest, Executive Vice Chancellor of Academic Affairs, was used to making decisions. As the head Academic officer at USCA, it was his job to make all decisions concerning the academic workings of the University, including the suspension of classes. Early in the week, he knew that he was going to have to make the decision to suspend classes, but when that decision would be made depended on several factors, including the speed of the storm, the decisions made by the Governor and Aiken county, as well as the input from the main USC campus in Columbia. "We were in contact with the Governor's office, the Aiken County Government office, and the main campus. We all knew that a decision to suspend operations was coming. We just had to coordinate the suspension".

As the storm descended on Aiken County Wednesday morning, the decision was made to suspend USCA classes at 12:00 noon. However, to reach that decision involved several phone calls to Dr. Jordan, the Governor's office and Aiken County. Should USCA not suspend classes at all, should we suspend classes for just a half day on Wednesday, should we suspend classes until further notice? There was a fine rain falling, but no freezing precipitation – yet. The decision was made to suspend classes at noon and see what happened. As Priest stated, "It was my call

to suspend classes but that decision was made with a lot of input from other areas. Looking back it was the right decision”. Priest left campus on Wednesday night as the storm continued to worsen.

Dr. Priest woke early on Thursday morning and headed to campus. Before arriving however, he rode around the community trying to gauge the impact of the storm and the driving conditions, which he found extremely hazardous. He arrived on campus sometime after 7:00 am and found several other Monday Group members already there. Shortly thereafter, the power went out. Priest remembers, “Luckily we were all in the cafeteria when the power went out. We immediately determined that our students need food and heat. We decided to take a limited menu of food to the students at the residence hall and to create a “warm space” for the students. When the power goes out, it is still warm in the building, but you know that is not going to last. We debated about where to locate the “warm space”, should we put it in the residence hall or in the Student Activity Center (SAC) and decided on the SAC because of the cafeteria and the available space”. The SAC is a large facility that houses the cafeteria, a gymnasium, meeting rooms, as well as administrative offices.

After taking breakfast to the students, maintenance set up a portable generator to provide heat and limited power outlets to a large room in the SAC. Priest and several others walked the campus, looking for dangerous conditions, such as ice accumulation and falling debris. A main concern was that students would injure themselves by walking to the SAC. Early that morning, Priest and several others began trying to clear sidewalk free of ice to lessen the chance of an accident. Priest was in communication with Sobieralski who assured him that the maintenance area was hard at work, setting up generators and checking on the conditions of the campus property. Priest remembers, “Everybody did what they did and it worked. We are lucky on this campus. We work very well together. As I said, everybody did what they needed to do”.

USCA PUBLIC SAFETY – THURSDAY MORNING

During Wednesday night and early Thursday morning, the storm dropped over an inch and a half of ice on the CSRA. Ice is so much more dangerous than snow because it clings to trees, power lines, and anything else with which it comes into contact. USCA Public Safety monitored the campus conditions and was on the look-out for fallen trees and other damage which had occurred. During the night, the Campus Police continued their rounds as usual with a normal staff. As Chief Kevin Liles put it, “it was not yet an emergency. Emergencies involve damage to life or property. We certainly had the POTENTIAL for an emergency and we were on high alert. Luckily, we never got to an emergency situation. We were in constant

contact with law enforcement from the city, county, and state. Their main advice was telling everyone to stay off the road if possible”.

Inevitably, Aiken lost power just before 8:00 am on Thursday morning. When the power started going off, it sounded like a war zone, with transformers blowing up as the weight of the ice caused power wires to sag and become tangled. When one of these transformers goes out, the resulting explosion is extremely loud. However, after the explosion, there remains an eerie green glow around the transformer that lasts for several minutes. Chief Liles was now in the dark. Campus Police had a back-up generator that was supposed to provide electricity for their communications, but this generator was currently under scheduled maintenance and did not work. However, cell phone technology allowed for communication. At least until you have to charge the battery!

Campus Police worked Thursday in conjunction with other campus administrators, roping off dangerous areas where tree limbs or trees themselves posed a possible threat and where ice had accumulated and made passage dangerous. Chief Liles’ crew also patrolled the campus on a continuous basis and assisted in any function necessary.

300 COLLEGE STUDENTS IN THE DARK

Deri Wills had been Director of USCA Student Housing for seven years and had spent over twenty five years working in that area. Due to his experience, he was already making plans for this potential ice storm well before being informed by senior administration. His responsibilities as Director of Housing were clear, to provide a safe and academically conducive living space to over 1000 college students of all genders, races, and nationalities. There are three main residential facilities at USCA, Pacer Downs, Pacer Commons, and Pacer Crossing. Pacer Commons and Pacer Crossing were new construction and consisted of four-student suites. Pacer Downs was an older unit that was constructed as individual apartments with their own entry point (for a campus map, see Exhibit 2).

On Wednesday around 2:00 pm, the Monday Group met again and now the real questions were being asked such as ‘how do we keep three hundred students warm and fed’ when the power goes out. Deri learned that the maintenance area had been busy since Tuesday making sure that all generators were full of fuel and were in proper working order (some were not as will be discussed later). Several of the Monday Group walked the campus after the meeting, trying to determine areas of concern before the storm really started. By this time on Wednesday, the rain was turning into a fine sleet. Sidewalks and streets were still passable, but it was evident that if it kept up, things were going to get messy.

A good portion of the Student Housing staff lives in student housing, either as Graduate students in official residential positions or student workers. Wills met with his staff Wednesday afternoon to prepare them for what might happen and reported that his staff was up-beat and ready to face the challenge. The staff also met with students that were staying in the dorm, reminding them that the building might lose power, and subsequently lights and heat. Again, all reports were that students were ready for the experience.

EXHIBIT 2

USCA Campus Map



M. Ritchie – Let it Snow, Let it Snow, Let it Snow: The Relationship Between Emergency Planning and Leadership

By the time Wills got to campus Thursday morning, the power was off. As he walked into Pacer Commons, he noticed the eerie silence. Where were all of the students? Then it dawned on him that they were still in bed asleep, as classes had been suspended. Pacer Commons, as well as the other residential housing units, was still comfortably warm. The power had only been off for an hour and there was even some hot water, but that was about to change. The walkways of the campus were now covered with a thick sheet of ice and those students that were up were advised not to 'go play in the snow'. A decision to bring food to Student Housing had been made to avoid any unnecessary travel through campus. Thursday morning breakfast was a continental type breakfast, consisting of cereal, fruits, and pastries.

The loss of power created other issues that are not normally considered. All of the Resident Halls contained smoke detectors; however some of them were run on batteries, while the new ones were hardwired into the building's electrical system. The hardwired detectors now had no power and were useless. To add to the list of problems, the Residential Housing at USCA is located on a sloping terrain and is below the rest of the campus. All waste material (sewage) from Student Housing has to be run through a 'Grinder' and then sent to a pumping station to take it up the hill to the city sewage line. The 'Grinder' and the pumping station are run on electricity. As most communities depend on critical infrastructures to meet the needs of residents, emergency response is critical (Bristow & Brumbelow, 2013). Wills remembers someone telling him there was something pooling up behind the building and he found that the refuse was escaping from an overflow unit (as was intended). However, there was now an exposed toxic waste dump behind Student Housing. To help with the problems encountered with the building, the maintenance staff rotated staff in and out all day to make sure that things remained safe and secure.

As a whole, the students who remained in the Resident Halls stayed calm and quiet. There were no reported incidents of bad behavior. On the contrary, it was reported that students wanted to help and asked where they might lend a hand. Sometimes venturing out into the common areas, they mostly remained in their rooms huddled up under blankets and talking on their cell phones – UNTIL THEIR BATTERIES RAN OUT (but that story comes later).

GENERATORS IN GENERAL

One of the biggest issues affecting students during this storm was the need for heat. Obviously, when the power goes out so does any heating source. Even heating units that run on fossil fuel are dependent on electric fans to deliver the heat. In preparation for the loss of heat, the University had examined all existing portable generators and found that some were under repair or simply not working. The

maintenance area then rented available generators to help meet the increased demand for generator power during the storm.

It is important to understand how a generator works. There are two basic types of generators, portable and fixed. Portable generators are portable, just as the name implies. They come in varying sizes and generating powers, some small enough to be picked up by an individual. These types are the ones you see at football tailgating, running the TV or sound system. Other portable generators can be very large and are usually transported on a trailer. Fixed generators are large units that are a permanent part of a building's structure and are wired in conjunction with the electrical wiring of the building.

The one thing that both portable and fixed generators have in common, in addition to creating electricity, is that they are powered by external fossil fuel sources, meaning that you have to fill them with either gasoline or diesel fuel. This fuel powers the generator's engine that produces electricity. When the generator's fuel runs out the generator cannot produce electricity.

FEEDING THE STARVING MASSES

As one of the many responsibilities that fell to the Director of Campus Support Services, Jeff Jenik was in charge of the dining facilities at USCA. In fact, Jenik started his career at USCA as Director of ARAMARK, the food service vendor used by USCA, before being hired by the University for his current position. This experience in the food service industry allowed Jenik to better comprehend the situation at hand.

During the first part of the week when the news was reporting the possibility of a severe winter storm with possible power outages, Jenik's mind went in several directions. First and foremost, how to provide dining services to a large number of students with no power. But Jenik's responsibilities went even further. He knew at that very moment, the University Dining Facility had a large inventory of food (meat, vegetables, and fruits) stored in coolers and freezers. If the power went out, there was the potential of losing that entire inventory, or in real words, food. As his mind was racing, he had to stop and try to prioritize the situation asking himself: 1) do we have food on hand and is it enough, 2) can we prepare the food we have, 3) will we lose any food to spoilage, 4) where can we get more food if we need it. As early as Tuesday, he was consulting with his staff concerning these very questions.

Expecting to lose power within the next couple of days, Jenik tried his best to locate generators that could be used for food preparation, but to no avail. Everyone in the CSRA was grabbing up every available generator in the area. He even tried to locate and borrow a refrigeration truck to store the frozen food inventory. Jenik soon

learned that he was going to have to feed over three hundred students for an indefinite time period with his existing inventory. In addition, the decision had been made to feed anyone from the community that came to the dining hall requesting food. He estimated that he had enough food on hand to feed the three hundred students for three days.

Once Jenik was confident that he had the inventory needed to service the campus in a short term situation, his focus then turned to food preparation. All of the electrical appliances used for food preparation were out of commission. The cafeteria had natural gas ovens and stoves; however, the hoods used for ventilation ran on electricity and were non-functioning. As Jenik stated, "Can you imagine making French fries for three hundred people with no ventilation? You wouldn't be able to breath in the kitchen". Issues like these continued to frustrate the University. We can cook the food but we can't ventilate the fumes. We have frozen food that might thaw out because we can't keep it frozen, even though we are in the middle of an ice storm.

Realizing his predicament, Jenik realized that he had enough food, but limited cooking availability. He started calling those who were still working on campus asking if they had turkey fryers or fish fryers that he could use for cooking. To his surprise, a substantial number of people brought in their fryers and food service was able to use these to prepare some of the food. Jenik realized that he had to cook the food or lose it.

Just before noon on Thursday, students were told to report to the dining hall for their meals. The USCA dining hall is located in the Student Activity Center (SAC), a large student complex, housing student recreational areas, the campus book store, meeting rooms, and administrative offices. A "warm space" had been established near the dining hall where portable heaters, powered by portable generators kept the area comfortable. In addition, students were able to recharge their cell phones, which was one of their most pressing concerns. Students were served meals continuously as the dining facility did not shut down during the emergency. In fact, the Monday Group used the cafeteria as a central meeting place because it seemed to be Ground Zero for the campus.

Thursday came and went, and Jenik was pleased with the outcome. However, when he took inventory Thursday night, he realized that he had used a good portion of his available food. With food running out, combined with the lack of ability to cook the food, Jenik got on the phone. On Friday, the Citadel prepared and delivered enough Fettuccini Alfredo to feed the USCA campus. Several stories like this were common during this period, emphasizing the camaraderie and assistance that the Aiken, as well as the South Carolina, community provided.

Friday was also February 14, Valentine's day. To lighten the mood and because he really cared, Jenik visited Sam's Club, which was open and near the campus, and purchased candy and sweets to be given out with the meals. As Jenik put it, "Everyone always hangs out in the kitchen when you have a party and our students decided they wanted to hang out at the cafeteria. Everybody on my staff did an incredible job. We all did everything from cook to serve to clean. I know it sounds crazy, but we actually had a lot of fun. Not much sleep, but a lot of fun".

THESE ARE MY KIDS – I'VE GOT TO TAKE CARE OF THEM

Dr. Deb Kladvko, Vice Chancellor of Student Affairs at USCA, is responsible for the welfare, safety, and development of the entire student population and she takes her job personally. Kladvko received a call on Monday, February 10, from Joe Sobieralski, Vice Chancellor of Finance and Administration, that a severe winter storm was heading for the CSRA. Sobieralski also had been given control of the Maintenance Department and it was this area of responsibility that had him worried. After the call from Sobieralski, Kladvko notified her staff that student services could possibly be interrupted and that they should prepare accordingly. As a member of the Monday Group, Kladvko was present in all of the administrative meetings that took place on Tuesday and Wednesday. Her main concern, as was everyone's, was student safety and welfare.

Dr. Kladvko's office and staff were housed in the SAC. On Wednesday, all of her staff reported to work as usual, and the morning was spent reviewing the student services and areas that could possibly be affected by the storm. As the weather deteriorated during the day, the University suspended classes and activities at noon and Kladvko sent her staff home. However, she remained on campus and was involved in administrative conversations and meetings on Wednesday afternoon. At some point, everyone went home. As Kladvko remembers, "We had done all we could do to prepare. The storm was yet to arrive, although we knew it was coming. There was little we could do on campus during the night, so we all went home".

Wednesday morning was a different story. Kladvko woke early as she usually does and was amazed at the steady precipitation of ice. She was determined to get to campus before travel became impossible and made it to campus a little after 7:00 am. When she arrived, she found that Sobieralski, Brian Enter, Senior University Facilities Executive, and Priest, were gathered in the cafeteria. She was also pleased to see a handful of cafeteria staff on hand as well. It was comforting to see other Administrative officials and a handful of staff, even though the ice was falling fast. That comforting feeling was short lived as just before 8:00 am, the power to the campus, and in fact, the entire city of Aiken, went out.

As the three Administrators sat in the dark, they knew it was time to mobilize. The first priority was to check on the students. They were waking up hungry. They were also waking up to no electricity. There are generators located in Student Housing that automatically turn on when power is interrupted. However, these generators only provide emergency lighting to the facility. The decision was immediately made to take breakfast to student housing. Jenik was tasked with putting together a nutritional breakfast that could be transported to the students. A “Continental Breakfast” was arranged (‘Continental Breakfast’ is just a fancy name for cereal, pastry, cheese, and bread). At the same time, Sobieralski and Priest were walking the campus to determine the extent of ice buildup and damage. The food was delivered and students were advised as to the dangers the ice had created, such as difficulty in walking and falling debris from trees and buildings. Also, students were told that the cafeteria would be serving meals in the SAC for the rest of the day. They were advised that a “warm space” had been established and they were welcome to use that space.

While the food was being prepared and delivered, a “warm space” was being created in the SAC. The University had several portable generators and several of these were used to provide power to a limited area in the SAC. Several of the SAC’s large meeting rooms were designated as “warm space” and portable heaters and electrical outlets were installed. Students were notified of this as the food was delivered but were cautioned to be careful as they made their way across campus. Students were also encouraged to shower while there was still hot water remaining. However, the hot water did not last long.

Food Service immediately began developing ways to prepare food, given their limited ability to provide energy for cooking. As Kladviko put it, “It was an odd selection of food, but it was what we had and no one complained”. Students started showing up around lunch-time and the cafeteria was ready for them. Many of them brought sleeping bags and other personal items, intending to stay in the “warm space” for the duration of the storm. However, very few students actually slept in the “warm rooms”, most preferring to walk back to Student Housing to sleep. During the day, the SAC began to fill up with students who came for meals but remained in the SAC, playing pool and ping-pong or just gathering in the student areas. Many brought their mobile devices and soon discovered that they could charge them in the “warm room”. However, there were only a few outlets powered by the generator which caused some students to become impatient.

Kladviko was confident the students were well fed and their physical needs for heat and comfort were being met. However, she was concerned about the physical dangers imposed by the storm. Ice still covered all of the walkways. In addition,

limbs were breaking and falling under the accumulation of ice. She and several others surveyed the campus and asked Campus Police to rope off areas that were deemed unsafe because of fallen debris or the potential for falling debris. Kladvko remembered, "Campus Police were quick to respond by roping off dangerous areas. But what gave me a good feeling was that Senior Administrators of our campus were out shoveling and clearing ice off of the sidewalks to make it safe for students to walk. Jeff Priest and Joe Sobieralski and Brian Enter were outside, ice still falling, with shovels in their hands. Others were helping, but those guys showed leadership. It gave everybody a good feeling".

Students, as well as the University staff, were fortunate that no one reported any accidents or injuries during the entire event. As Kladvko put it, "A student could have easily slipped on the ice or been hit by falling debris. We were fortunate that we escaped any of that. I would like to think that our planning and actions prevented a lot of that".

COMMUNICATION AND COMPUTERS AND CELL PHONES

Dr. Jordan relied on cell phones to communicate with her staff during the storm. "We usually take cell phones for granted, but without cell phones, communication would have been extremely hard. I was calling the Monday Group and they were calling each other and it was all cell phones". Dr. Deidre Martin, Vice Chancellor of University Advancement and Patti McGrath, Director of Marketing and Community Relations, were coordinating the flow of communication before and throughout the 'iced-in days' that followed. They updated the USCA web page and sent out messages throughout the day. Any communication to the campus or Aiken community were first vetted with the appropriate individuals on the 'ground' for input and accuracy and then sent to Dr. Jordan for approval. However, as Dr. Jordan stated, "We did learn that we needed a more robust communication plan for contact with parents".

It was very important to keep the IT Computing services connected to the outside world. The USCA IT system has its own back-up generator that provides power for the computing capabilities of the University. When the power goes off, it takes a few minutes for the IT generator to begin functioning. However, the IT system should never go down and maintains a system of large batteries (Golf Cart Batteries) to provide power to the system until the generator can become active. Without the IT system, the campus would have no way to electronically communicate with any of the support agencies, students, parents, and external constituents.

However, the reliability and ease of cell phones proved to cause a problem as the day went on. As stated earlier, Dr. Jordan needed to communicate as the central

point of information for the campus during the storm. Working with the Marketing area, she was able to send out emails to students reassuring them that the University was doing everything in its power to provide warmth and food.

However, the problem was not too little communication, but too much communication. It was important to communicate the campus status to the students as well as their parents and to try and control that communication with a consistent message (Sirui, Murray-Tuite, & Schweitzer, 2014). Although, as we all know, every student that remained on campus was in possession of a cell phone and began calling home. Campus administrators began receiving numerous calls from parents concerned about the safety and well-being of their student as well as the progress being made to restore power to the campus. All of sudden, Senior Administrators were spending time responding to worried parents instead of attending to the situation at hand. Some parents had heard wild tales of freezing and starving students. Other parents could not understand why the University did not bus students to nearby hotels. These parents had to be convinced that the entire area was without power, including hotels. The uncontrolled flow of communication during this emergency situation was just another headache that USCA officials did not need.

MAINTENANCE TO THE RESCUE

Joe Sobieralski, Vice Chancellor for Finance and Administration, was a finance guy. Having earned his CPA, Sobieralski had spent much of his career in Higher Education finance positions, and had been the head of finance at USCA for four years. Shortly after his arrival at USCA, several changes were made to the organizational structure and Sobieralski found himself responsible not just for finance, but for the campus maintenance area.

Sobieralski, like everyone else, had learned of the impending storm through the local media. As part of the Monday Group he was involved in meetings as early as Tuesday, but had contacted the Maintenance areas before that meeting, notifying them that they needed to start preparation for the storm. As Sobieralski stated, "I'm a finance guy, I don't know a whole lot about maintenance. But our maintenance department is excellent. I had complete confidence that they knew what had to be done. After I met with the maintenance people, I knew they would take care of the campus".

MAINTENANCE AND ENGINEERING – ENTER ENTER

Brian Enter, a Professional Engineer, had been the Senior University Facilities Executive for two years. He was responsible for all of the campus facilities,

buildings, electricity, plumbing, waste, etc. He maintained a staff of fourteen who made sure all of these facilities remained in proper working order. Now he was challenged with keeping these facilities safe during an unprecedented winter storm. Upon learning of the impending storm, Enter's first conversation was with John Cumbee, Director of USCA's Physical Plant. Cumbee knew where to find every shut-off valve, leaky faucet, and chiller unit on the USCA campus. After talking with Enter, Cumbee called his crew and started preparing for the storm. The actions taken that afternoon by the maintenance department are too numerous to detail here, but a partial list would include draining the buildings' water systems, keeping the water running on campus, placing portable generators in needed areas, shutting down pieces of equipment, and making sure all generators, both permanent and portable, were full of fuel.

Enter also realized he probably needed more portable generators and fuel. Of course, everybody in Aiken was also looking for these items. During the real time experience of an emergency situation, supply chains are often stretched to the breaking point (Sheng & Ling, 2013). Relying on his relationships with outside vendors, Enter was able to obtain six portable generators and three portable heaters. He also had fuel delivered to top off all of the existing generators. Enter felt like his area had done all they could to prepare for the storm and he and his crew went home Wednesday evening to get ready for the next day.

When the power went out early Wednesday, the maintenance area went into overdrive. As Enter put it, "We had to decide what was worse, hungry students or cold students. We attacked both problems at the same time". The first order of business was to provide energy to the dining facility to begin food preparation. A "warm space" was also created in the SAC by using portable heaters run by the largest portable generator on campus. "We couldn't have done any of those things if our maintenance people hadn't done such a great job on Wednesday", Enter added. Enter was also in communication with South Carolina Electric and Gas, (SCE&G), the local power company. Enter explained that this was not just an inconvenience, but that the campus had over 300 students who were dependent on power. As can be expected, he was told that SCE&G was doing everything they could to restore power. Enter prioritized his morning by focusing on 1) providing assistance for food production, 2) providing assistance on maintaining a "warm space", and 3) ensuring that all facilities remained in safe condition. Thursday came and went and everything seemed to work as well as it possibly could. Food was being prepared, students were using the "warm space", and no building had suffered any damage. However, Friday brought on new and problematic situations.

Friday morning dawned cold and wet. The temperature had risen all day Thursday and was still on the rise, just below freezing, but it was still cold in the buildings

and there was still no power. Calls to SCE&G were politely answered, but still no word on when power would be restored. To add to the disappointing news from SCE&G, Enter was informed by his crew that the fuel in the generators was running low. Calls to local fuel vendors proved frustrating. USCA's main supplier of fuel could not get their trucks out of their lot because of the ice. Others reported that they were running out of fuel themselves because of heavy demand. Enter finally had his group siphon all of the gasoline out of every available source, the tanks of tractors, campus automobiles, anything that had gas in it.

JOHN CUMBEE TO THE RESCUE

John Cumbee, Director of USCA Physical Plant, had probably forgotten more about the USCA Physical Plant than most people had ever learned. He knew it like the back of his hand and his personable and helpful attitude only added to his remarkable skills. This campus was his baby and he wasn't about to let anything mess it up. Cumbee and Enter talked Tuesday about what they needed to do in preparation for the storm and Cumbee focused his staff on gathering generators and making sure they were fueled. He also started thinking about the time it would take to shut the buildings down and prepare them for the event. On Wednesday, he learned that several of the generators on hand did not work. Some were under repair and waiting for parts, and others just did not work. He immediately notified Enter, who did his best to procure generators to replace those that did not work. Someone from the maintenance areas was on campus for the duration of the event (Wednesday – Sunday).

Early Thursday morning around 4:00 am, the decision was made to suspend classes for that day and the maintenance crew went into action. All of the unused buildings needed to be shut down, some simply by throwing the breaker of the facility. Buildings suffer little damage when the power goes off. However, when the power is cut back on several things can go wrong with electric motors, sensors, and alarms. Electric motors can burn and cause serious damage to the equipment and the building. Plumbing systems need to be drained to prevent freezing pipes. Cumbee's area made sure all of the measures were accomplished by early Thursday morning.

The USCA campus got its lights back on around lunch time on Friday. As cheers went up for all involved, students, staff, and administration, it was soon realized the victory was short lived. While lights and refrigerators came back to life, THERE WAS NO HEAT! The heating units in the buildings did not turn on. A call was quickly made to SCE&G who stated they did their job and that the campus should have. The campus was clearly without heat, yet the power company was saying the power had been restored. Cumbee put his expertise to work and learned that the campus had only two phases of a three phase current needed to run all of the power,

especially the heating units. The power company was notified and still contented that they had done their job.

Saturday brought no relief, except that the roads were clearing and many students were able to travel to their homes. However, the campus continued to have no heat. Cumbee and others began to visually check all of the power poles feeding the campus, looking for any physical sign that would indicate the location of the problem. After searching for several hours off campus, Cumbee found a transformer that had two phase switches connected, but the third switch was not fully engaged. SCE&G was immediately called and the campus was told they would get to it when they 'could'. When they 'could' actually turned out to be Sunday morning and full power was finally returned to USCA. Cumbee's staff then made sure that all buildings had survived the power influx and began restoring all of the buildings to use.

EPILOGUE

The University of South Carolina Aiken resumed classes and activities at 12:00 noon on Monday, February 17. Full power (heat and lights) had been restored the day earlier and all of the buildings had been prepared for operation. There was a sigh of relief when the full power came back on, as it was discovered there was only a few hours of fuel left in the generators. The maintenance department spent the next month making sure that no damage had gone unnoticed and that all of the campus was safe.

In retrospect, Dr. Jordan believes a more proactive communication was needed with parents and that the campus must be careful to speak with "one voice". With the proliferation of personal mobile devices, this may prove difficult. However, Jordan is developing ways to streamline communication to the University's constituents. She is also going to create a comfortable place to sleep on campus if the need ever arises. The County and City have a monthly meeting and USCA is always present. Dr. Jordan believes this is a good forum to begin discussion on new and improved emergency planning.

The University received a sizable sum from Federal Emergency Management Agency (FEMA) for cleanup of the campus. The cost of emergency action can be very expensive (Dar, Buckley, Rokadiya, Huda & Abrahams, 2014), and USCA's experience was no exception. Jenik made application for those funds and also for a large permanent generator to provide heating and lighting power for the SAC. Aiken County received over \$30 Million from FEMA for the area cleanup.

Dr. Kladvko had high praise for the students who remained on campus during the storm. They were helpful and accepted the situation as best they could. Kladvko

laughs when she relates their biggest complaint was the generators did not provide enough outlets for all of them to charge their phones all at one time. However, at a Chancellor's Panel meeting several months later, some students thanked the University staff for their effort during February's ice storm.

The Monday Group met shortly after things had returned to normal. During their debriefing of the storm, several issues came to light. The main area of improvement suggested by the group was the development of a better, more focused, campus communication process. The need for more portable generators was discussed. It was suggested that the campus install a fuel tank to house diesel or gasoline for emergency situations. The Monday Group is considering all of these areas and is also revisiting the existing Emergency Action Plan for the University. All in all, USCA survived the Ice Storm of 2014 with little damage. However, there will be another storm, or hurricane, or fire. It is the responsibility of the campus to anticipate and prepare for such events, even though everyone is hoping that these events never happen. But they know that they will.

REFERENCES

- Bristow, E. & Brumbelow, K. (2013). Simulation to aid disaster planning and mitigation: Tools and techniques for water distribution managers and emergency planners. *Journal of Water Resources Planning & Management*, 139(4): 376-386.
- Dar, O., Buckley, E., Rokadiya, S., Huda, Q. & Abrahams, J. (2014). Integrating health into disaster risk reduction strategies: Key considerations for success. *American Journal of Public Health*, 104(10): 1811-1816.
- Hayes, G. (2006). Effective emergency planning for colleges and universities. *Fire Engineering*, 159(7): 89-94.
- Challen, K., Lee, A., Booth, A., Gradois, P., Buckley-Woods, H. & Goodacre, S. (2012). Where is the evidence for emergency planning: a scoping review. *Public Health*, 12(1): 542-548.
- Nicoll, S. & Owens, R. (2013). Emergency response and business continuity. *Professional Safety*, 58(9):50-55.
- Sheng, Y. & Ling, H. (2013). Emergency transportation planning in disaster relief

supply chain management: A cooperative fuzzy optimization approach. *Soft Computing*, 17(7): 1301-1314.

Sirui, L., Murray-Tuite, P. & Schweitzer, L. (2014). Uniting multi-adult households during emergency evacuation planning. *Disasters*, 38(3): 588-609.

University of South Carolina Aiken, (2014), Retrieved October, 14, 2014, from <http://colleges.usnews.rankingsandreviews.com/best-colleges/usc-1328/rankings>