

## **SUPERSTORM SANDY — A TEST OF RESILIENCE**

How Educational Testing Service weathered the storm and came out ahead

By Dr. Timothy Mathews

ETS Executive Director of Enterprise Resiliency

When Super Storm Sandy battered the East Coast on Oct. 29, 2012, it brought devastation that disrupted the personal and professional lives of millions, and the Garden State was not spared. The hurricane, with its winds of up to 100 miles per hour, brought with it intense flooding and wrought devastation throughout the state. In New Jersey, more than 2 million households lost power, 350,000 homes were damaged or destroyed, and business losses have been estimated at \$30 billion.

Recovery from Sandy has been slow in some areas and, indeed, not all residents and businesses have bounced back entirely even more than two years after this singular event. But some have — most notably, Educational Testing Service, the nonprofit organization devoted to educational research and assessment founded in 1947 and based in Princeton, N.J.

Of its 3,600 full-time employees across the globe, 3,000 work on our main 340-acre Lawrenceville, New Jersey, campus and a nearby location in Ewing Township — with those two sites likely to be affected by the huge storm. Moreover, our employees — the majority residing throughout the state and across the Delaware River in suburban Pennsylvania — would also be hit, as well as thousands of testing sites for the College Board’s SAT® test, which was scheduled for the following weekend. Local suppliers were likely to be affected as well.

All in all, this perfect storm could have set back ETS, its employees and its clients — students and their families, educational institutions, even government agencies — indefinitely.

Instead, ETS not only weathered the storm, but learned from it and today is a better organization because of what happened before, during and after Sandy hit.

“How was ETS able to keep functioning? A lot of planning and hard work,” President and CEO Walt MacDonald said. “Planning is all about prioritizing. When disaster hits, we know what to focus on to get things done. But it doesn’t happen without great people and lots of hard work.”

The driving force behind preparing for Sandy and coming out of it relatively unscathed was the organization’s Department of Enterprise Resiliency, created in 2006 to confront head on the challenges of natural disasters or other threatening and significant emergency interruptions and allow critical business functions to continue.

The area I head, Enterprise Resiliency, conducts emergency management simulations, business continuity and disaster recovery walkthroughs, and validation exercises year-round. But it was an organization-wide effort coordinated to merge the best resources of every department that made the outcome a successful one following Super Storm Sandy. In reviewing our performance during and after the storm I spoke with many of the people involved.

“When Sandy hit, we were prepared,” said Scott Weaver, the organization’s chief strategy officer. “From an external perspective, it looked like we were still open when we were actually shut down for about a week.”

Intrinsic to the plan was ETS’s culture of employee well-being as a primary tenet. You have to take care of your staff before the disaster. The focus is not just corporate preparation. Personal preparedness is the key.

How ETS rallied and met Sandy head on was an important validation for the nonprofit, which each year develops, administers and scores 60 million tests for students and teachers in 180 countries, at 9,000-plus locations worldwide. The organization takes being an example and a role model very seriously.

During Sandy, businesses throughout the East Coast were shut down and unable to operate. While ETS lost power on our main campus, we were still able to get our campus up and running with very little business interruption. This was possible only because ETS’s comprehensive strategy integrates more than 200 business continuity and disaster recovery plans.

ETS deals with many vendors throughout the world. One of our priorities is to encourage them to implement similar preparedness programs. We’re all part of one long and complex delivery chain, and any organization is only as strong as each individual link.

Weaver noted that Enterprise Resiliency is dependent not only on individuals, but also on the organization’s suppliers. “Some years ago, a major IT [information technology] supplier had power problems that could have resulted in 30,000 TOEFL® [*Test of English as a Foreign Language*] test takers sitting there unable to take their tests,” he said. But they didn’t have to, because “we realized how reliant we are on suppliers — and now, depending on their size, we will question their resiliency capability,” Weaver added. That includes asking for assurances that IT suppliers have dedicated disaster recovery strategies and space.

But the strategies gleaned from Sandy can reach even further. ETS, branded by integrity and representing the best in educational resources, also now stands for prevailing against a natural disaster while continuing to deliver its products and services. The valuable lessons it learned in the process can help other institutions face adversity and carry on successfully as well.

The seeds for Enterprise Resiliency were planted more than a decade ago. After 9/11, ETS’s Board of Trustees began thinking seriously about what might happen to the organization and its employees should a catastrophe — natural or human-made — occur in its vicinity.

In 2004, with ever-expanding staff and an important educational mission that could not afford to be stopped in its tracks by the drastically unexpected, ETS engaged me as a management consultant to make an assessment of the organization from the standpoints of business continuity and disaster recovery. The following year, at the behest of Vice President of Facilities and Real Estate Bruce Gilbertson, I came on board as a full-time employee of the organization and began building the department.

By 2008, Enterprise Resiliency became a formal department. Today, I head a department of eight and oversee an annual budget of more than \$6 million.

“Things can escalate from an incident into a crisis pretty quickly, and that affects the entire organization,” said Chief Strategy Officer Scott Weaver, who has 13-plus years with ETS, where he started by helping to run IT before moving into his current role five years ago. Weaver has overseen Mathews’ department for the past three years.

“We’ve continued to spend more money on Enterprise Resiliency every year. And it has paid off,” said Weaver, a Bucks County, Pa., resident who lost power at home for 36 hours after Sandy hit.

For the most part, the department has relied on exercises to simulate disasters of every conceivable type, from data system failure to catastrophic loss of staff. It looks at single points of failure, searches out vulnerabilities, documents risks and how to mitigate them, and establishes how easy some fixes are and how complicated others remain.

My job is to implement strategies that narrow the gap between the time of a disaster and the amount of time the organization can be offline and still recover critical business processes. While these are information technology terms, the concept translates into other aspects of a multilayered corporate model as well. I am charged with the task of determining what investments in emergency preparedness to make and balancing them with the savings and benefits they could yield in the short and long runs.

Every department and application team in the organization is responsible for developing resiliency plans and updating them through designated Plan Owners, Coordinators and Recovery Team Members. Over 400 people throughout the organization participate in some way, even if it’s as little as two hours a year.”

For the past five years, ETS has asked the Red Cross to present to our staff during September, which is the Federal Emergency Management Agency (FEMA)-sponsored National Preparedness Month. “It’s to prepare the staff personally, letting them know that ETS cares about them and that without them, we can’t recover as an organization,” Enterprise Resiliency Business Continuity Analyst Angela Gill said.

Added Weaver, “The degree to which an organization is resilient is highly dependent on how people are resilient in their own homes. We’ve been adding a lot more emphasis on personal planning for disasters around our employee base.”

In 2011, a year before Super Storm Sandy, the organization had a chance to expand on what it learned during its drills and simulations when natural disasters struck— and Enterprise Resiliency sprang into action for real.

Within the space of a week in late August 2011, a rare earthquake affecting Washington, D.C., where ETS has an office, and the arrival of Hurricane Irene, which did damage in New Jersey and other states on the East Coast, tested the department and allowed it to gauge contingency plans for power outages and any other obstacles the natural occurrences created. Soon after, in early September, Tropical Storm Lee arrived bringing more flooding and power outages. Next came “Snowtober,” an exceedingly rare

occurrence of a late October Nor'easter that crippled the East Coast and dumped up to 19 inches of snow on New Jersey, bringing with it high winds, downed power lines and more outages along with a white Halloween.

I live in nearby Ringoes, N.J., and was among the thousands of ETS employees whose personal lives were also affected. Our family was without power for seven days during Hurricane Irene and Tropical Storm Lee, and for eight days during the October snowstorm, when colder temperatures created a much more dire situation. Travel was impeded not only because of downed trees and wires, but also because gas stations were unable to pump gas. I was able to keep a generator running, and created a flexible work schedule during that time, using showers at ETS's Facilities building and running home every four hours to keep my generator going.

Not only did ETS emerge from these disasters unscathed, but employees were of a mindset to re-evaluate their own emergency plans for the future. For example, ETS already had a generator and a fully stocked pantry. But with dependence on gasoline and the lack of a substantial back-up heater, I adjusted my plan to include evacuation should a power outage go beyond five days.

In the wake of Sandy, my family and I were without power for 12 days. I travelled back and forth daily, managing the ETS response and recovery team while maintaining my home generator to provide some electricity and heat there. Although I live nine miles away from ETS, the roads were blocked in several areas and the ride took more than 45 minutes each way.

With many other employees similarly affected, peace of mind about home life during a crisis made it easier to maintain work stability.

"At least locally, people helped each other," said Wayne Cosner, Manager of Business Continuity and Emergency Management for the Enterprise Resiliency Department. "While we were worried about our organization, we could network to get people connected. And, people could shower at our facility if they needed to, and we were even able to provide some generators and spare heaters, too."

Because the organization has a hotel on the premises at the Chauncey Conference Center, which suffered only insignificant roof damage — and whose rooms were left empty after storm-predicated cancellations — it was able to provide lodgings for essential ETS staff whose own homes had been more severely impacted.

All of 2011's trying fits of Mother Nature proved invaluable precursors to Sandy, as did other nuisance situations, such as a water main break that caused power outages on the Princeton campus the summer before the storm.

"These instances actually made everyone more comfortable, because we were becoming more established in our roles," said Paul Steinberg, Manager of Enterprise Resiliency's Disaster Recovery Program. "It was like crawling, walking and then running."

As it turned out, all of the naturally occurring precursors to Sandy would pale next to the super storm. With about a week to prepare once the National Hurricane Service identified Sandy brewing south of

Kingston, Jamaica, Enterprise Resiliency staff began discussing the coming storm with emergency management team members, and Strategy, Marketing and Growth shared preparedness information with all staff.

“We had forewarning of Super Storm Sandy, and so we could have communications with staff that we thought were critical,” Steinberg said.

Communication before, during and after Sandy hit was key, said Emergency Resiliency’s Emergency Management Coordinator Alison Kane. “We alerted 4,300 staff and other key non-employees in New Jersey,” she said. “Having multiple ways to communicate was critical.” Besides blast emails and other electronic updates, there was a hotline number for people who were offline primarily due to power outages. Through a cloud-based enterprise notification service, conference calls among team members and other crucial communiques could be implemented. All Enterprise Resiliency Department staff have handheld devices to keep in constant touch.

“The key aspect was to share consistent information among all departments,” Kane said.

Gill noted that how ETS gathers impact data was also crucial. “Prior to Sandy, we had a form in place but we had not gone through anything on this scale before,” she said. The department has revamped its business impacts form as a survey with multiple alternate methods that allows the Business Continuity Teams to report impacts to the emergency response teams, honing in on what each department needs to respond to an emergency and recover from it.

One of the smart decisions made even before the storm hit overnight on Sunday into Monday was not to open on Monday, giving staff time to prepare themselves for what was to come at home and at work, Cosner said.

Cosner, who lives in Solebury, Pa., didn’t suffer any personal property loss during the storm. Although he lost power, his family had prepared with an adequate supply of food, wood, first-aid materials, and gas for a chainsaw in case he needed it (he didn’t). The family visited nearby relatives who had a generator for showers and “the occasional non-campfire meal.”

A volunteer firefighter based in New Hope, Pa., Cosner helped out his community during the first days of Sandy’s aftermath while working on ETS continuity out of his firehouse. When he left work on Friday prior to the storm, he brought home his laptop, cell phone and any information he anticipated needing if Sandy hit hard. He made sure his laptop and Virtual Private Network (VPN) access were working and that all electronics were fully charged.

ETS closed both its Princeton and Ewing sites on Monday and Tuesday. But on Wednesday, the organization was doing business again, with staff reporting as needed to carry out critical functions. Some staff members could do their jobs remotely without having to brave the sometimes unnavigable roads leading to the campus.

“It was a question of finding out who needed to be working, getting them up and running here or moving them,” Cosner said. “Although I was not always physically at ETS, thanks to technology I was in

communication with the ETS Emergency Response Teams throughout the weeklong Sandy experience. I spent Monday after the storm making sure that I had all I needed to work remotely, including sending notifications to staff,” Cosner said.

On Tuesday, Cosner worked from the Eagle Fire Station in New Hope, which was supported by a generator and still had network access. “I was able to discuss issues with ETS team members and put out notifications to all impacted staff. I attempted to make it to Princeton on Wednesday, but all of the roads were blocked, so I drove to Ewing and set up a space on the third floor of our building that was available,” he said.

“I worked from Ewing for the remainder of the week, helping other staff who relocated there from other buildings and campuses to get set up and be able to perform their jobs. I also worked with the response teams,” Cosner added. He encouraged staff to help themselves on the home front in future natural disasters by getting to know their local fire and emergency medical service providers and donating to these vital organizations so they can remain great resources during such crises.

ETS did catch some lucky breaks. Although all but one building on the main Princeton campus lost power from Monday through Friday morning, the Ewing facility did not lose electricity. Some critical staff, including Cosner and about two dozen others who normally work on the main campus, reported to Ewing by the third day of the storm’s aftermath.

And because facilities were undamaged, IT connectivity was unaffected. Mobile generators had been brought in, as back-ups to the back-ups, onsite and ready to go.

“All our technology is supported by generator power, and that generator support worked effectively,” Cosner said. Although two commercial feeds did go down during the storm — and stayed down for an extended period for the first time in 25 years, Steinberg noted — it did not impact the technology capabilities.

With connectivity uninterrupted in Sandy’s aftermath, emergency teams were able to focus on areas that were critically impacted. For example, the impending SAT tests offered by the College Board and planned for the first weekend of November had to be addressed immediately. While test papers had already been distributed, many test centers up and down the East Coast could not open, or students could not get to them. That meant a lot of work for the testing call center staff — itself reduced due to the impact of the storm on workers’ homes and communities.

The lessons of Sandy proved helpful not only to ETS’ future, but as a model that others took note of on subsequent visits to the campus. While the organization’s Business Continuity Management System was certified to the BS-25999 certification since 2009 and is now certified to the ISO-22301 standard, ETS also earned PS-Prep certification from National Quality Assurance in 2013 for meeting the U.S. Department of Homeland Security and Federal Emergency Management Agency’s Private Sector Preparedness Program. All of these programs are designed to guard against threats and disruptions including sudden loss of critical services, failures of technology, natural disasters and more.

“Super Storm Sandy was an excellent example of how preparedness pays off,” said the organization’s former president and CEO Kurt Landgraf, who led the organization at the time of the disaster.

Douglas Smith, the Department of Homeland Security official who visited ETS the summer after Sandy hit, called its plan a role model for other companies in the face of unexpected disasters.

“During Super Storm Sandy, their advance planning allowed them to keep operating for six days until city electricity was restored,” Smith said. The organization was still able to administer a nationwide SAT test for the College Board® the following weekend and also deliver a global administration of its TOEFL test.

Given ETS’s mission — to help advance quality and equity in education by providing products and services to people who need to make decisions critical to their own future — the organization has a unique calling to prepare for its own fortune or misfortune to the extent that it can.

For Paul Weichler, Executive Director of Facilities and Property Management at ETS, Super Storm Sandy was the event that would validate the adage about things going wrong at the worst possible time.

His 65-member department, which includes electricians, plumbers, artisans and tradespeople, designers, interior designers, building-maintenance and janitorial-service personnel, knew the storm was coming. For ETS to continue operating, the Facilities Department had to take the lead. Without electricity, a place to work, or a clear path to navigate once on campus, it wouldn’t matter how many employees could make it to the campus.

And as bad luck or circumstance would have it, one of the Princeton campus’ two main generators — a 5-kilovolt model that provides power to approximately half the site — was already out of service, taken offline for repairs and upgrades.

But with constant planning in conjunction with Enterprise Resiliency, and back-up contingency plans already well in place, Facilities was well prepared for what might come.

“Our planning was based on previous hurricanes,” Weichler said. That meant making sure all emergency generators — nine of them at the time — were in working order and ready to go, along with portable pumps.

It also meant ensuring that all fuel tanks were full to run the generators and motorized pumps — and having enough propane, natural gas and diesel fuel for what could be an extended outage. ETS has existing contracts with local fuel suppliers who are obligated to supply fuel within a two- to four-hour window, Weichler noted.

The organization’s fleet of more than 75 vehicles was refueled, including construction vehicles such as front-end loaders and backhoes, which could be pressed into service for emergency work, and bucket trucks to cut away any threatening tree branches (normal tree-trimming is done on a yearly basis by an outside organization).

The business continuity strategy for a scenario in which the power would go down campus-wide dictated that Anrig Hall, with its own generator, would become the nerve center and the site where critical staff could work during the crisis.

Facilities Director Lawrence Zukowski conferred with Enterprise Resiliency and key members of other ETS teams to determine how much space would be needed and what was needed to go into that space.

“The most important things were a place to sit, a place to eat, a place to use the restroom. Without these three things, no one can really work,” Zukowski said. After figuring out what would be needed for whom, Zukowski’s staff picked up necessary items — including food and bottled water — and got them to where they were needed so essential staff could work for an entire week under adverse conditions.

Still, it was preparing for the unknown. Would water systems be affected? (They were not; ETS had running water throughout the crisis.) Would electricity go down, and for how long? That turned out to be the greatest challenge. “Electricity powers everything else,” Weichler said. “It’s all about having electric.”

Zukowski lives in Langhorne, Pa., normally a 25-minute commute. On Monday, after Sandy had blown through, it took him 90 minutes just to find a route he could travel because so many streets were closed or impassable due to downed trees and wires and/or flooding. But his home was unaffected by the storm and his power and cable TV stayed on there, so he could see reports on how surrounding areas had been affected.

Because the organization has a snow removal plan, Facilities personnel were already of a mindset to come in at odd hours. “Our people are used to getting calls at 2 a.m. and hearing, ‘Get in here immediately,’” Weichler said.

Between 70 and 80 department members made it in on Monday. After assembling staff in the parking lot, Zukowski sent workers to assess damage to roadways and clear paths. About 100 trees were down and plenty of roads were blocked — although, with more luck, fallen trees had not caused building damage. One large tree that fell near the Laurie House, adjacent to the Chauncey Conference Center, missed the structure by about two feet.

“Everyone was hands on — it was no more ‘Plumbers here, electricians there,’” Zukowski noted. “People were working tirelessly day and night, coming in despite problems at home. From office staff to technical staff, everyone wanted to know, ‘What can I do?’”

Assessing the actual damage on Monday was critical.

“For us, Sandy wasn’t as much of a wind event as it was a rain event,” Zukowski said. Improvisation played into solutions. For example, where minimal flooding occurred, staff placed pig blankets in doorways and low areas. These materials are normally used to contain hazardous material spills, but came in handy to combat the flooding risk.

As the days wore on, more facilities personnel were coming in as they could navigate the still-difficult terrain. “We had enough people Monday to do what we had to do, and as it went on we had staff here around the clock,” Zukowski said. He spent a minimum of 10 to 12 hours daily on site all week, ensuring the complex was cleared of downed trees and debris while dealing with other storm-related issues affecting staff coming to the campus.

But even the Facilities Department adhered to the general plan, which included telling staff who were not needed on campus, where space was limited, to stay home. Weichler worked from his home in nearby Ewing. “I’d be just one more body in the way,” he said.

Facilities Planners Marie Dermond and Nhan Nguyen were charged with working with IT to set up space for its critical staff and ensure LAN connections could be made at Anrig Hall, where the only working generator was doing its job.

Dermond, who lives in Ewing, lost power at home but stayed there Monday. Soon enough, she got a call. “Once it was clear we’d be closed more than one day, my manager asked me to come in. I lived close by, and they needed help to accommodate people,” she said.

“The worst part of coming to work was that no traffic lights were working and having to get through a big intersection with the lights out,” noted Dermond, who luckily had no downed trees along her route.

Nguyen, who lives in Middlesex Borough, a Middlesex County community closer to the shoreline, had no electricity at his house for one and a half weeks after Sandy hit. At home, he depended on a small generator to operate his sump pump.

Nguyen called in and learned that more help was needed to help coordinate space. He volunteered to come in. “The trip was bad. It took me two hours when it normally takes one,” he recalled.

Once at the Facilities Building, staff found themselves without electricity. “So we went through the files and took what we needed to Anrig Hall,” Dermond said.

There, the facilities planners set up shop in a large conference room on the ground floor. The Enterprise Resiliency Department had contacted key people for every ETS team to find out who needed to come on campus, and relayed the information to Facilities so its planners knew roughly how many to expect. They would need to find space for about 90 workers early in the week, and more as time went by and additional staff was needed onsite.

“We had to move everyone into Anrig Hall and set them up with laptops as needed,” Dermond recalled. “Some people used existing computers at work stations, and some brought their own computers over from their buildings. In other cases facilities staff, accompanied by security personnel, had to navigate darkened hallways to retrieve laptop computers, other technologies or files.”

Using drawings and floor plans based on who would be coming in and what they would need, Dermond and Nguyen worked with ETS’s moving crew — several of the crew’s six movers made it in — and others to ensure getting needed staff into Anrig as their workstations became ready.

Those drawings and plans are now stored in the Facilities Building should the need to use them arise again. Dermond noted that back-up drawings are kept at the Ewing site, “just in case.”

Throughout the week, the Facilities Department worked closely with Enterprise Resiliency. On the third or fourth day of the crisis, Enterprise Resiliency Executive Director Tim Mathews made the decision to bring in a 2-megawatt portable generator on a flatbed truck, providing enough power for the whole campus.

“Our electrical staff manned our nine generators at the [Princeton] site and worked 24 hours a day maintaining the generation of power we could provide, ensuring the equipment had fuel, did not overheat and performed as needed,” Zukowski said.

The five-kilovolt generator that was under repair and offline when Sandy hit wasn’t functional, but Facilities made it work before the week was through. “We had it repaired Thursday night to go on if power wasn’t restored. Because we were waiting for a part for the transfer switch that was to be delivered about a week after the storm hit, we had to bypass the transfer switch and reroute the power across the floor, with help from external contractors,” Zukowski said.

As it turned out, power came back on at 1 a.m. Friday morning. ETS reopened the following Monday.

There was another complication, though, that ETS had to be ready to circumvent. Normally, there are two feeders available to send electricity from PSE&G for distribution to the ETS campus. Normally, if one of those lines goes down, the other kicks in. But nothing was normal in Sandy’s wake. Due to storm damage to PSE&G lines on the street, only one of those lines was functional.

“So after a single line was recovered and there was no estimated time of repair for the second line, we established the 2-megawatt portable generator to serve as our back-up line,” Zukowski said. “Since much of the Rosedale site had been down for a week, we did not want to risk an extended additional outage in the event of an impact to the single line. It took PSE&G an additional week to find everything and get it repaired.”

At ETS’s buildings in nearby Ewing, power was never lost. Staff there — including those who had to deal with SAT test cancellations and reroutings because of the storm — were able to function during the crisis.

But since the storm, both the Princeton campus and the Ewing offices are being looked at with an eye to what can go wrong in the future and how to guard against it.

In Princeton, where construction on the new Landgraf Hall was ongoing after Sandy, there was a built-in opportunity to add more safeguards to protect the entire campus from power failures.

The Princeton campus has a new 2.5-megawatt emergency back-up generator — a \$1.8 million investment — at a new, \$7 million substation. The old substation was dismantled and has been gone since the new one went online in early 2014.

The state-of-the-art generator can power the entire campus. Zukowski is proud of the organization-owned substation, which boasts safety features such as interlocks and protective devices to prevent arc flash explosions. The system was built with expansion capabilities so there will be ample room to supply any new buildings.

Where ETS had nine back-up generators on the Princeton campus prior to Sandy, it now has 11. “These 11 generators provide both life safety and full power back-up for the entire campus,” Weichler said. Three are standby power source generators located at Anrig Hall, at the mechanical building and at the generator substation.

“Sometimes, we have triple redundancy ... and that’s a good thing,” Weichler said.

At the Ewing site, where power remained on during the crisis, there was still cleanup to do. “The Facilities staff at that site managed well and made it comfortable for those who needed to return to work there,” Zukowski said.

For Ewing, our emergency power is provided by three 500-kilowatt natural gas generators. Those generators currently back up the Data Center located there — housing computers, servers and IT equipment in their proper environment — and some critical loads related to the Data Center, such as cooling and lighting.

The organization recently conducted a study on whether to install a whole-building generator just for Ewing’s Z Building, or how best to provide back-up power to the remainder of the building. The study yielded three options to back up the rest of Z Building with emergency power generation, Zukowski said. “We are in the process of reviewing the recommendations and will choose one of the three, with the most costly coming in at approximately \$2.4 million,” he added.

Ewing’s Q Building, a rental, has a back-up generator. ETS is also arranging for an easy back-up system for Ewing’s V/Ludlow Building.

The organization has acquired a new portable 300-kilowatt generator that is mobile and can be used at different locations, such as V/Ludlow and Q Building. “We are preparing a tap box at V, Q and the Chauncey Conference Center just for that use if needed,” Zukowski said.

Zukowski said plans for the tap boxes — each one to be mounted to the building exterior and connected to a transfer switch for fast connection to the mobile emergency generator — were being finalized in March 2015, with installation envisioned for early April at V/Ludlow, followed by Q and then at Chauncey.

Weichler noted that regular preventive maintenance is crucial to preparing for disasters such as Sandy. The organization’s roofing maintenance program, for example, meant that all roofs had been recently replaced and so there were no roof leaks during the super storm. It was the same story with the organization’s solar panels, which sustained no damage. “They were made to withstand 120-mph winds, and they did,” Weichler said.

Still, Weichler conceded that keeping ahead on repairs and not skimping on the best materials isn't a total panacea. "You just can't plan for winds that powerful," he said.

But ETS is determined to do all it can to overcome what Mother Nature may inflict.

Zukowski said an extensive preventive maintenance program is one of the keys to weathering natural crises — "just in case," he said, using a favorite and not-to-be-underestimated expression.

Before Sandy arrived, ETS's Treasury Department was betting that its emergency preparedness plans were good. But would they be good enough?

As in other key departments at ETS, the unknown brought surprises that not even the best-laid plans could foresee.

"We have a documented disaster plan — 24 hours/48 hours/72 hours and longer. We have a phone tree. But none of us were prepared for the magnitude and scope of Sandy, and the loss of contact with people," ETS Treasurer and Vice President of Finance Jay Basehore noted.

The Treasury Department was able to take advantage of Wi-Fi hotspots and technology that made it possible for employees who hadn't been hit hard by the disaster at home to keep working off-campus through the week. "From a Treasury aspect, we have a lot of people here who typically work on laptops to begin with," Basehore noted.

Long before Sandy hit, ETS's Finance Department had learned valuable lessons to prepare for the super storm. The nonprofit 501(c) (3) corporation owns Prometric®, a Baltimore-based test development and delivery provider to more than 400 organizations worldwide. Prometric has approximately 10,000 test centers in more than 160 countries, and more than a dozen global offices — including one in Tokyo.

When Japan was devastated by a major earthquake and tsunami in March 2011, testing locations were affected. Based on how Prometric fared, ETS was able to gain perspective from the aspects of insurance and risk management.

Still, Basehore said, decisions often must be made on the fly during events such as Sandy. "You begin to operate from a bureaucratic standpoint," Basehore said. "But some decisions have to be made quickly and on the spot, without people knowing the financial ramifications."

The financial impact was the purview of Basehore's department as Sandy played out, and in its aftermath. As circumstance would have it, some of the disaster planning that had been done earlier — such as reappraising campus buildings in 2010 and reinsuring them at the new property values, and reviewing and increasing business interruption insurance should the organization be unable to administer testing and conduct other key functions — were not factors during Sandy.

A lot of insurance that ETS has turned out to be irrelevant after Sandy hit. Buildings were not destroyed; testing went on, even if not exactly as originally planned. But there was no way of knowing that before the super storm, so preparedness was key.

“I recommend these types of insurance to anyone facing the possibility of a catastrophic event,” said Philip Kiefer, the Treasury Department’s Director of Receivables and Risk Management.

Kiefer works with insurance consultants, brokers and carriers. For the first few weeks following Sandy, his main job was providing documentation for insurance recovery.

“We were paid and done by the end of April,” he noted. In all, the organization was reimbursed for additional labor and other expenses that did not include payroll, and for gross profit of business income lost at Chauncey Center, an on-campus facility that provides meeting and banquet space as well as food service and overnight accommodations to outside companies, organizations and individuals.

Basehore lives in Manalapan at the Jersey Shore, where much of the devastation occurred. His home lost power for a week, and gas was an unavailable commodity. Once ETS was operating on generators, he could make his way onto the campus, which lost a lot of trees during the storm, because he could find gas along State Highway 206. Kiefer, who lives in Gloucester County’s Washington Township — like Princeton, close to the Delaware River, but some 60 miles south of ETS — had no damage at his home.

For Treasury Department staff such as Collections Supervisor Barbara Dunn-Tomasco, lessons learned from earlier experiences also came into play during Sandy. But unlike the knowledge gained from disasters on the other side of the world, hers was from personal experience. Dunn-Tomasco had weathered Hurricane Irene in 2011 and could share her cautionary tale with other ETS employees.

Dunn-Tomasco, an Emergency Medical Technician for nearly 23 years, works with Hillsborough Emergency Services in Central Jersey. When Hurricane Irene made landfall on Aug. 28, 2011, she was living in nearby Manville with her husband and young son. With a creek running through her backyard, Dunn-Tomasco insisted on flood insurance on her raised ranch. It was a wise move: When Dunn-Tomasco checked on her home during her EMT shift on Saturday night — prior to the storm touching ground — the structure was already taking on water. The family evacuated; the house flooded and then flooded again when area rivers crested.

Dunn-Tomasco had prepared for Irene with outdoor pumps, flood alarms, Shop-Vacs and AC/DC converters to run them, flashlights with fresh batteries, cell-phone chargers and emergency phone numbers. Her family moved furniture and possessions to the second floor — she now recommends thinning out personal belongings so as to get items out more quickly — and secured all outdoor furniture along with her son’s toys. She had the drainage system cleared and surrounding trees trimmed.

“As an EMT, I tend to be over prepared, but no matter how much my family and I prepared for [Irene] there’s no stopping water,” she said.

Dunn-Tomasco’s Manville home was condemned, and a yearlong rebuilding project began. Repairs and remediation had just been completed when word of Sandy came. Her recent past came into play when Dunn-Tomasco, a member of her department’s emergency team, had to prepare for Sandy and advise her fellow workers, as well.

“When Sandy hit, my first concern was for my own house and family,” she said. “We were still obviously recovering from Irene, and I had my own responsibilities on my rescue squad.”

At ETS, she and Enterprise Resiliency Executive Director Tim Mathews spent the week prior to the arrival of the super storm going back and forth on how to maximize preparedness, and sharing documents and reports from FEMA and the National Weather Service.

“Nobody really expected what we got — the extent of it and being without electricity for so long — but the reports were pretty dead on,” she said. “We went around warning people. I look at it from a people standpoint, having been through it myself with Irene.”

Before Irene came through, Dunn-Tomasco had thought about worst-case and best-case scenarios, but knowing that “even then, it went beyond the worst-case scenario,” her message regarding Sandy pulled no punches with members of her home and work communities.

“I learned there is no such thing as over preparing. With Sandy, we prepared differently and were more cognizant of what could happen,” she said.

During Sandy, Dunn-Tomasco lost electricity and heat at the Manville house for more than two weeks. She lost some trees and had no water, so her family shut the house down and moved in with her mother in Hillsborough.

“Even if I wanted to get to ETS while it was closed, I wouldn’t have been able to. With all the downed trees, there was no clear path there,” she recalled. Dunn-Tomasco returned to work the following Monday.

After the super storm, Dunn-Tomasco put the Manville house up for sale “as is.” Her family moved into a home on much higher ground in Ringoes, Hunterdon County, in October 2013 — with no water around the property anywhere, “not even a birdbath.”

Back at ETS, the Chauncey Conference Center sustained some physical damage, but thanks to of preparedness, escaped much more. However, one byproduct of preparations on its part and also on the part of its clientele — mass cancellations of events — led to a major loss of business.

“From an insurance standpoint, ETS was viable and operating, but Chauncey was not,” Kiefer said.

Money losses in the testing arena were more difficult to ascertain because of such variables as test windows and cancellation fees, and the inability to track certain items. And while ETS has insurance in a multitude of areas ranging from the theft of intellectual property to the loss of buildings, most of them did not need to be tapped in the aftermath of Sandy.

“Our loss of revenue was minimal,” Basehore said. “We’re a service industry and we live in a virtual world, where people can get to the Web.”

Even before the natural disaster in Japan, the organization had learned financial lessons after the stock market crash of 2008. “What we learned from that market meltdown really came into play during Sandy,” said Basehore, who has been with ETS for about 14 years.

“After that stock market crash, we accelerated payments to vendors who needed it, and extended terms to those who owed us money to keep them afloat. It was good for morale and from a business aspect,” Basehore said, explaining the strategy of adjusting the ratio of DSO (days sales outstanding) to as short as possible and DPO (days payable outstanding) to as long as possible.

“So after Sandy, we did not press hard for receivables,” he said. “We were willing to have their cash flow adjusted to ensure their sustainability. It’s about walking a fine line between good citizenship and good business decisions.”

Basehore is confident that ETS emerged from Sandy in good shape from an insurance/recovery standpoint and in other financial aspects, too.

“We built a brand-new substation so the entire campus can remain running in an emergency,” Basehore noted. “It went live in early 2014 and has created some cost savings.”

In another forward-looking change, “we’re getting more and more laptops as we transition from a static workforce in place to a mobile workforce,” he added. “The changes going on in society definitely reduce the impact of things like Sandy.”

His department — in the organization’s state-of-the-art Landgraf Hall, dedicated in honor of the immediate past President and CEO in April 2014 — is an example of that societal change.

Today, with its open-style workstations, desks that rise and lower, and offices in the core interior, Landgraf Hall embraces the evolving modern office style that can more easily lend itself to quick recovery after an interruptive event.

Basehore looks forward to other technological changes on the testing front that will eventually reduce the impact of occurrences such as Sandy — for example, being able to take assessments on one’s own iPhone® with security provisions such as fingerprinting, cameras, and even the ability to detect changes in typing speed to guard against cheating.

In the meantime, Basehore emphasizes the mindset echoed by Dunn-Tomasco and others at ETS — that emergency preparedness begins with taking care of its people.

“The human element is the most important,” Basehore said. “When something like Sandy occurs, we absorb the cost if necessary. That keeps a very dedicated and loyal employee base in place.”

Said Kiefer, “This is the most employee-centered place I’ve ever worked at ... and I love it.”

ETS administers 60 million tests annually in 180 countries worldwide. But with Super Storm Sandy fast approaching at the end of October 2012, its Test Administration Services Department was focused on up to a thousand SAT testing centers in Sandy’s path that were sites for the College Board’s pencil-and-

paper exam on the first Saturday in November — Nov. 3, less than a week after the storm made landfall — as well as the students registered to take it and the proctors assigned to monitor it.

The department approached the coming storm calmly, though, knowing it already had well-tested procedures in place for dealing with natural disasters that could disrupt testing.

“Generally speaking, severe weather events — such as tornadoes in the Midwest — don’t impact us in New Jersey,” said Bethanne Mowery, Executive Director of ETS’s Test Administration Services. “We have standard procedures to prepare for potential test center closures and make-up days.”

But this was a different kind of storm brewing — one that would also affect the very people in charge. “We knew the storm was coming, but we never thought it would be as severe as it was,” Mowery said. “And of course, it being in New Jersey, we had people here who were without power themselves. We were short-handed, without all hands on deck, so it was different than our routine weather events. This was a game-changer for us.”

Stephen Stroman, Senior Director of Operations for Test Administration Services, said that in Sandy’s aftermath the department deferred to schools — asking them to notify ETS, as near to the testing date as possible, about whether they would remain open or be forced to stay closed.

“It was a combination of them calling us, and us reaching out to the centers,” he said. “Once we got confirmation of a center closure, we would get notification out to students.”

A second major test administered by ETS — the *Praxis*<sup>®</sup> teacher certification exam — was coming up on the weekend following the SAT tests. But the super storm’s impact on the *Praxis*<sup>®</sup> exam was minimal: it was given online and at a small number of testing sites, involving not only fewer physical sites but also many fewer test-takers. Power had been restored in many areas by the time the *Praxis* exam was given, and where make-up tests were needed, they could be done online or rescheduled at colleges and universities where the paper version was normally given. (In the relatively short time since Sandy, *Praxis* testing has evolved into an all-online product.)

The paper-and-pencil SAT tests are given in a far more communal and community-dependent setting, and in far greater numbers. Moreover, the *Praxis* tests are the property of ETS and not administered on behalf of another organization, such as the College Board.

“For the SAT tests, we’re dealing with a different client, so our planning for the storm involved more from a client management perspective,” Stroman said, noting that SAT test centers in as many as 13 states could have been affected, from Virginia north to Massachusetts.

ETS College Board Program Executive Director Rui Ferreira said that meant as many as 1,000 centers and upward of 50,000 students disrupted.

“Testing could be moved to a different school, or to another location that might not be a school,” Stroman said. “Most districts were able to test at their own facilities, but we worked with schools to find

alternative testing sites. Most would dictate to us what would work well. Then we'd make whatever changes we needed to."

It helped tremendously that although ETS's Rosedale campus was officially closed for the week after Sandy came through, the Test Administration Services Department is located at the Ewing offices, which — unlike the main Princeton campus — did not lose power.

Some staffers lost power at home and had to deal with other effects of the storm, from blocked roads to water damage. Ferreira, who lives in Lambertville on the Delaware River north of ETS, lost power at home for about 12 days, although he did have water. Stroman, who resides in Hopewell, just five miles away from his Princeton-campus office, lost power for 13 days. Because his septic tank was not operating to pump well water, Stroman was coming in early to shower at one of the ETS buildings close to his own. Mowery, who lives south of ETS in Hainesport, fared better, losing power at home for only one day.

Staff members without heat and power were urged to utilize the phone tree in place. As a result, some were able to avail themselves of heaters donated by the College Board during the emergency. Moreover, if someone couldn't get to work because of transportation issues and someone else in the department lived nearby or had a vehicle more suited to road conditions, carpools could be quickly arranged.

The department's senior management and leadership team worked remotely on Monday and Tuesday to get plans in place for staff to work and testing centers to be relocated as needed. Emergency calls from centers were being fielded as early as Tuesday morning, and outgoing calls were being made. On Wednesday, while ETS's Rosedale campus was still officially closed, 41 of the 43 department members made it to work.

The department stayed in touch with Enterprise Resiliency, but had the resources to function well on its own during the week. "Had our building been impacted more, we would have worked more closely with Enterprise Resiliency," Stroman said. "If we needed to deviate from the process, we could have pulled more people in."

Ferreira said it was reassuring that the Enterprise Resiliency Department was there to help. "If we needed more space, its people would have directed us," he said. "But Q Building [where Test Administration Services operates] had power."

Test Administration Services followed a course in keeping with the organization's policies, with an emphasis on knowing what staff members had the expertise to keep business on track and at its best with the least impact on employees who needed to take care of problems at home.

"We had a business continuity plan in place, with standard procedures for rescheduling tests, and that really helped us," Mowery said. "The difference here is that the numbers [of affected sites and test takers] were tremendous, but our staff put their personal needs aside and rose to the occasion. We had processes in place and people knew what they had to do."

Make-up tests were offered to 64,000 test-takers in 13 states. Students scheduled to take the test at 444 centers impacted by Sandy were offered make-up sessions on dates including Nov. 17, or they could opt to make up the test during a future regularly scheduled SAT test date or even on the make-up date for December SAT tests. Additional make-up tests could be generated for students opting to take the test after the national SAT test-taking date of Dec. 1.

During the crisis, the department also made space available for the Assessment Development team, who had to determine which test forms could be used for the various make-up tests to be scheduled. The department also had to reschedule tests at 13 centers on the West Coast because of other emergencies; it is normal for a small number of centers to have unforeseen issues during any given test date.

ETS's dedication to getting the job done in preparation for the Nov. 3 SAT tests was noted in a Nov. 6 email from College Board President and CEO David Coleman to then-ETS President and CEO Kurt Landgraf. There, Coleman highlighted a few of the steps taken to ensure "the best possible experience" for test takers and administrators:

- Outreach to support staff to encourage them to return to work.
- Communications and instructions to impacted test center supervisors.
- Critical SAT program staff and supply chain personnel working on-site in Ewing and remotely to establish make-ups, using scenarios and resolving logistics issues to make them a reality.
- Tracking at-risk shipments of test materials to testing sites within the storm zone.
- Being fully staffed on Saturday (Nov. 3) to support the SAT test administration despite continued power outages and transportation challenges.

For Test Administration Services, the bottom line was that lessons of the past resulted in excellent preparation that became the prologue to weathering Sandy.

"The knee-jerk reaction is to do something other than the tried-and-true, but we have tried-and-true processes for how to handle this," Stroman said. "It's important to have standards documented, and how we operated during Sandy is proof of that. I'm glad we stayed as close to the process as we could."

For the popular Chauncey Conference Center, with its dining and banquet facilities and 100 guest rooms, Super Storm Sandy meant business would come to a grinding halt. The popular venue was sold out for several days, starting the very Sunday that Sandy was expected to arrive, according to Chauncey General Manager Sara Blivaiss.

Like the rest of ETS, the hotel and conference center had a week to get ready for Sandy. "We didn't know how hard we'd be hit, but we have a preparation mode we get into," Chauncey General Manager Sara Blivaiss said.

Despite the unknown aspect of what was to come, there were standard procedures to follow immediately, based on past experience.

Staff began calling the groups due to arrive during the critical period from throughout the country. “We told them we were having a state of emergency, noting that we do not operate in an emergency and planned to be closed,” Blivaiss said. “All six business groups decided to pull out.”

OR - “We told them we were having a state of emergency noting that we do not operate in an emergency, but planned to be opened,” Blivaiss said. “All six business groups decided to pull out.”

Chauncey relocated the wedding that had been scheduled for the Sunday of Sandy to a nearby location, the Hyatt in Princeton. Reservations for people who had booked other rooms at the hotel were also moved to the Hyatt.

“We have a relationship with other area hotels and know where to relocate first,” Blivaiss noted.

Next, Chauncey staff members turned their attention to the facility itself. They removed all the outside furniture, closed the drapes, and pulled items away from the windows.

“We chained things up that couldn’t come inside, and we locked the building down entirely,” Blivaiss said. “Every department had a checklist of what it had to do.”

One item of concern was the large tent kept erected for frequent receptions. It can withstand winds of 80 miles per hour, but Sandy threatened to exceed that and the staff was not willing to take any chances. After all, the tent had pancaked during Hurricane Irene in 2011.

“So we had some experience, but never at the level being threatened this time. We knew to remove the tent,” Blivaiss said.

The Hamilton Township organization that Chauncey uses to take down the 80x40-foot structure was called on Friday, two days before Sandy was due to make landfall. But while the organization was close by, that didn’t necessarily mean it could get there soon. “We were in line with hundreds of other tent-owners across the state to have our tent removed,” Blivaiss said. “But we got it done Sunday — and it took the whole day to do it.”

It was a labor-intensive challenge to remove the tent, at a cost of \$4,000 — and when it was safe to put it back up, it cost an additional \$4,000. It was an investment the organization had to make.

Once Sandy arrived, working in Chauncey’s favor was the fact that it had a generator onsite, installed as part of a renovation earlier in 2012, “so we were able to operate fully,” Blivaiss noted. “We didn’t have heat [that was not controlled by the generator power], but our lights were on.”

Nonetheless, the center was effectively closed for events over the next five days after Sandy hit. Instead, Chauncey provided shelter for some essential ETS staff, emergency workers and even local community members.

FEMA workers were accommodated for two months while they worked at the hard-hit Jersey Shore. “There was no place for them to stay there, so they commuted,” Blivaiss said. It was FEMA that relocated 16 families from Long Beach Island — their houses destroyed — to Chauncey, where they

stayed from four to six weeks. Throughout the emergency and general area shortage of hotel rooms, Chauncey offered its usual rates while some other facilities raised theirs.

Blivaiss, whose home in East Brunswick was without power for 10 days, arrived on Tuesday with her family and stayed until her own electricity was restored. Workwise, she fared better than her husband, a Lower Manhattan attorney whose business was closed for an entire month after Sandy hit.

Chauncey's return to operations was dictated by consumer demand — and the staff had to be ready, at least to plan for when it would be business as usual again. "By Tuesday, our phones were ringing off the hook," Blivaiss said. "But we didn't want to open the building to businesses until we were fully operational. I started working the front desk, taking reservations. We opened the conference center on Day 6 [Saturday]."

All of the guestrooms at the Chauncey Center's main facility could be used as emergency shelter. Only the seven rooms at the adjacent Laurie House, which features bed-and-breakfast-style accommodations for self-contained conferences, were initially off-limits because of fallen trees outside.

Chauncey's guest rooms were occupied by people ranging from members of the local community who had been displaced from their homes by Sandy to the FEMA workers commuting back and forth from assessing Jersey Shore devastation. ETS's then-President and CEO Kurt Landgraf stayed at Chauncey, as did the chief engineer, whose cooking skills came into play as he prepared meals for the staff.

"Any team member who wanted a room — we gave them a room," Blivaiss said. That included employees of ARAMARK, which operates the center, who lived closer to the Shore.

By Day 6 post-Sandy, Chauncey needed all 65 employees back to work — housekeeping, food service, engineering, sales force and others needed to keep the operation running. Some still couldn't make it in because of circumstances at home, or even because of blocked roads.

Although the center did sustain some flood damage, it was still up and running by Day 6. Staff notified other area hotels that it could host some of the conferences that those facilities had scheduled but were still unable to accommodate. Because Chauncey is part of the larger ETS campus, the organization was able to monitor its generator power throughout the crisis period — a luxury most other hotels don't have, Blivaiss noted.

Unlike many of the losses incurred at ETS from Sandy, the organization had insurance to recoup money for Chauncey's cancelled conferences and events.

But recovery meant more than insurance or even getting back to business as soon as physically possible. In the aftermath of the storm, Chauncey also wanted to help those outside its own walls, and did so by donating food and cleaning materials to a soup kitchen in its chef's hometown community of Brick, Ocean County.

The center even rallied its staff to do more for the local community outside its walls — an extension of the ETS mission to make sure its employees have what they need at home before they come to work.

Staff members collected their own canned goods and pantry items for the Mercer Street Friends Food Bank in Ewing.

There were other lessons learned that should make future storms more palatable. Post-Sandy, the Chauncey Center created emergency boxes — at least 200 — that it has stored accessibly should another disaster hit. The boxes keep necessary items together, including enough flashlights for every guest, sticks that light up by motion, AM/FM radios and batteries. And as Blivaiss put it, “We’re like a cruise ship — we have enough food on hand to last 10 days.”

Having an Enterprise Resiliency Department at ETS is like turning unanticipated lemons into satisfying lemonade. From Super Storm Sandy, ETS has learned to try new recipes for disaster recovery and tweak them for the best results.

This is not a one and done. “We have a living, breathing, acting program involving changes in how our business operates.

The Enterprise Risk Management Executive Committee meets periodically to discuss where disaster preparedness has taken the organization, and where it wants to go. President and CEO Walt MacDonald stressed the importance of creating more scenarios, even after Sandy, as discussions continue on how ETS can become more resilient.

“We want to keep talking about expecting the unexpected,” MacDonald said. “That is what allowed us to weather Sandy.”

While the team is interested in incorporating the best of existing national programs into its own plans, it is particularly intrigued to discover pathways along which it might break new ground.

Over the next three years, for example, Chief Strategy Officer Scott Weaver envisions cloud data centers that would be proprietary to ETS but managed by an outside data provider.

“Our intent is to virtualize our infrastructure needs,” Weaver said. “We can have an app and data running in our own cloud as opposed to a physical device. We can segment our infrastructure devices into logical servers.”

“We want to use virtualized capability in our data centers — and we have more than one in the nation,” he continued. “It would give us more versatility to take a data center offline and still remain up. It takes away maintenance windows that we must have in our physical centers, because virtual storage means we can take one unit down and still have a mirror of that data remaining online.”

Weaver envisions leveraging a second virtual data center as a disaster recovery site, which can end up being cost effective by allowing ETS to do away with having to pay “insurance” for an outside organization to supply disaster recovery capability in the event of a disaster.

MacDonald said one of the reasons things went as smoothly as they did in the aftermath of Sandy is the geographical diversity of the organization. He emphasized that having multiple sites is important for the future. “Part of being resilient is having things in different geographical areas,” he said. “Don’t put all your eggs in one basket.”

Above all, Weaver said, having adequate resourcing cannot be stressed too highly. “Make sure you’ve got human resources who are very experienced and that people know what they are doing,” he said.

That means continuing to learn from the experiences of staff such as Barbara Dunn-Tomasco, the EMT who works in Finance. With emergency situations on the increase — and more talk about sheltering in place should a natural disaster hit without warning and during the week, when thousands of people are on campus — she noted that there must be emphasis on how work companions take care of each other.

“During Sandy, we learned how easily we can get shut off from the real world,” Dunn-Tomasco said. “We’re not accustomed to living in a world without cell phones and other conveniences. We learned how vulnerable we really can be. We need to be prepared for that.”

Workers have to know that during the next event, if it’s bad enough, they may not be able to get home, she said. “Make people aware before Doomsday happens, when it’s too late. That’s why there are people like us, preparing for the worst yet hoping for the best.”

The changes to the generator system since Sandy are geared to just that — preparing for the worst, or the “just in case,” while hoping for the best outcome. Before the super storm, ETS had a limited number of back-up generators; now, there is enough generator power available to provide power for the entire Princeton campus. Even though it meant installing a new power substation, the organization is certain it was a wise and worthwhile investment.

Finance Vice President Jay Basehore said some of Sandy’s lessons learned are very simple. “Learn to run your business the way you run your personal life,” he said. “Take videos. Know what you own. Document expenses incurred during the [disaster] event.”

For Facilities Executive Director Paul Weichler, the biggest lesson learned was that it pays off to have a process in place. “And we had a good process in place. The process works,” Weichler said. “Managers made good decisions. If you don’t have to be here, don’t come in. You have enough problems dealing with your family, so work from home if you can.”

MacDonald reiterated that it’s all about accepting the unknown as a given — but doing everything possible to be prepared for whatever comes.

“From my perspective, the organization has made a commitment to planning for the future,” MacDonald said. “We’re a nonprofit, but people expect us to deliver products with quality and on time. It’s an important part of our mission. It’s important that we think ahead to address things that can happen in the future.”

*Dr. Mathews holds a Doctor of Science degree in Civil Security, Leadership, Management and Policy from New Jersey City University.*