

For Central Penn Business Journal

Sometimes the only “comfort” we can glean from a natural disaster or human catastrophe is the lessons learned.

All of us can learn from Hurricane Sandy, not just those who lay directly in its path. When Hurricane Agnes devastated a large part of Harrisburg four decades ago, Pennsylvania’s capital city reviewed FEMA’s national building codes carefully, and put many of them into effect in the 1980s, according to Art Emerick, the city’s codes administrator. One requirement in Harrisburg is that all electrical and control panels, generators, etc., must be above the flood plain. If some of these codes had been in place in New York City, the city would have been spared a great deal of destruction and distress during the recent hurricane. It would have been spared the distressing footage we all saw of hospitals evacuating patients.

The codes have continued to improve since the 1980s. The latest International Building Code, or IBC, was revised most recently in 2012, with input of experts from all over the United States as well as other parts of the world—including Scandinavian countries, which I know personally have outstanding environment and universal building standards. Unfortunately, though, OSHA regulates the standards of the electrical code in all commercial and public buildings, but not in private homes.

Furthermore, it is my understanding that while the portions of the IBC applying to handicapped accessibility are in effect in Harrisburg, the total code—including such requirements as wind loading and corner bracing—has not been passed. Turning these standards into requirements would have spared many of the buildings destroyed by Sandy in the New York area.

It's been proven that model codes minimize damage. When I was researching a proposed condominium project on North Front Street, it became clear that it is possible to build an environmentally friendly structure along the Susquehanna that could withstand water and flooding. It is also possible to construct such a building economically, to have a high-standard and healthy-living environment that is ZEB (Zero-Energy Building) and doesn't require the purchase of electricity, gas, or oil.

Since the building would be attached to the grid in case energy is needed, it would also mean that it could supply a limited amount of power to the surrounding homes and buildings in the event of emergency. In other words, not only would the building be designed to take care of its own emergency needs, but could assist the neighborhood in taking care of its needs.

Today, one of the most trusted systems for designing sustainable buildings is LEED, or Leadership in Energy and Environmental Design). Many of us in the design field, including Kristen Bacorn, a leader of the green architecture movement and head of a firm of LEED consultants, believe that LEED standards should include energy on site--perhaps solar or wind--and that this power should have the capacity to be converted for emergency use.

Manhattan has a number of outstanding environmental buildings—such as the Solaire in the lower part of the borough—that are LEED qualified. But there is one limitation: the Solaire produces some of its energy through solar power, but there is to date no way to convert this power for emergency use.

There are so many more things we can do too build environmentally friendly, low-energy-use, and safe buildings. Sandy must be a wake-up call-- not just for our

community, but also for the nation. It is imperative that we improve building standards so that we can get through hurricanes and other Acts of Nature with less damage and less despair. Let's make it a priority that the very highest standards will be incorporated into all our future building projects.

Such a goal is definitely achievable. We have better products and procedures—and less expensive ones—than we did in the past. Let's put them to use. We in the building and design industry need to take the lead to ensure that our communities will no longer be devastated by hurricanes and other natural disasters such as Sandy.

Every disaster costs a fortune—in lives lost, in rebuilding, and in considerable inconvenience to all. To avoid such an expense again, all we have to do is apply what we've learned from this one.