

A Green Recovery in Cunningham Park: Drury University Responds to the Joplin Tornado

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We are all potentially connected to an unwanted disaster situation since no region is immune from some adverse risk. Most Americans live in areas that are exposed to hazards whether naturally occurring or through involvement with humankind. Natural hazards may be in the form of wild fires, heat waves, volcanoes, tornadoes, earthquakes, or hurricanes, while human intervention awakens hazards such as oil rig accidents, the physical neglect of buildings and infrastructure, or acts of terrorism. A disaster occurs when a hazard has a high degree of harm to human life, its shelter, or to ecosystems such as human lives lost, reconstruction costs of buildings and infrastructure, or the corresponding loss of fauna and flora (Hedges 2011). However, a disaster may seem distant until it happens in your backyard. One such disaster is the 2011 Joplin (Missouri) tornado. The tornado was particularly destructive: the community was plunged into darkness with over 10,000 buildings damaged or destroyed, and the loss of 161 lives.

The focus of this case study is on the Joplin community's recovery and response at ground zero of the tornado, Cunningham Park. The Volunteer Tribute Garden and the Butterfly Garden and Overlook are two major design-build projects that helped coalesce a community in turmoil. The narrative of the greening projects, their lessons learned, and recommendations are provided, beginning with the scale of the disaster event and some of the initial helping hands.



Figure 1: St. John's Regional Medical Center near Cunningham Park.

Photo courtesy of the City of Joplin, MO.

The Disaster Event

At 5:17 p.m. on Sunday, May 22, 2011, tornado sirens sounded. A veil of rain disguised the multiple vortex, EF5 tornado coming down on Joplin, Missouri (Sooter 2018). As the storm made its way across the city, it ripped a path of

destruction nearly a mile wide. The slow-moving storm became more destructive as it stalled for several minutes gaining wind speeds of more than 200 miles per hour on top of St. John's Hospital and Cunningham Park (Figure 1). When the storm finally passed, the five-story, concrete hospital was rendered unstable and the park, once filled with 100-year-old trees, was unrecognizable. The storm and the deadly debris cloud that began on the western edge of Joplin was slow to dissipate and continued on to the town of Duquesne and into Jasper and Newton Counties, a total of 22.1 miles over 38 horrific minutes. The impact was devastating. It became the deadliest tornado in the United States since 1953, and the more than 7,500 homes and 3,000 commercial buildings lost created over 3 million cubic yards of waste and caused over \$2 billion in damage (Onstot 2013).

Helping Hands

What happened immediately after the storm was best described by then-City Manager Mark Rohr as "the miracle of the human spirit" (Rohr 2012). The tornado had passed, but rain continued to pour upon the people of Joplin as they pulled themselves out of the rubble and began helping their neighbors. Community members from outside of the storm zone raced in to help. People from neighboring towns and cities also came to lend a hand. Local, state, and federal government agencies and first responders raced to the scene. From across town to across the world, the volunteers kept coming (Sooter 2018). As of April 13, 2013, the count for registered volunteers from reporting agencies and organizations was at 176,869 individuals who completed 1,146,083 hours of volunteer service (Onstot 2013).

Students, faculty, and staff from Drury University, a small school rooted in the liberal arts tradition 70 miles from Joplin, were among the volunteers (Sooter 2018). With a sense of urgency, Drury organized groups to help. Athletic teams collected and distributed vans full of food and supplies. Faculty and staff, in small groups and independently, assisted with search and rescue, served meals, collected and distributed clothing and supplies, and provided counseling. One staff member even suited up in his clowning gear to cheer up children in shelters. While this staff member was entertaining the children, he also noticed that the women in the shelters did not have purses or any of the things they would normally carry in them, and children did not have books. He soon organized a campus purse and book drive seeking donations from faculty and staff. The campus community contributed 200 filled purses and 1,100 books to the women and children in the shelters.

From moments after the storm lifted in May 2011 through spring 2014, Drury University faculty, staff, and students contributed more than 12,000

hours of volunteer service in aid of Joplin (Sooter 2018). A majority was brought to bear on the re-greening of Cunningham Park.

Responding with the Re-Greening of Cunningham Park

Cunningham Park, Joplin's first city park, has been recognized as the location where the tornado first reached its maximum intensity and has been referred to as ground zero. The park has a deep history since the beginning of the 19th century. Then-Mayor Thomas W. Cunningham donated 7 acres of Blendville, MO, land in 1899 that was annexed and became known as Cunningham Park (Simpson 2011). The Women's Park Association secured a tax levy to develop the park and they are responsible for its early success. By the Great Depression, the park was vibrant featuring a fountain, flowerbeds, bandstand, shelter, playground, refreshment stand, swimming pool, and bathhouse. Next to the park was the notable Carl Owen house. The house was built in 1911 and majestically overlooked the park from a higher elevation with its 19 iconic "airplane" dormer windows. The home sat at the northeast corner on Porter Avenue. All that changed when the tornado lifted the iconic feature of Cunningham Park off its foundation then dropped it on Porter Avenue. The park, the Owen's home location, and the land where two neighboring homes once stood, became a focal point for re-greening with two centerpiece projects by Drury University.



Figure 2: The SmartMob! heads to Joplin.

Photo by Mark Miller, used with permission.

The Volunteer Tribute Garden

In July 2011, the Drury Design-Build Program (part of Drury's Hammons School of Architecture) partnered with the ABC television show "Extreme Makeover: Home Edition" to help create a second wave of awareness and volunteerism for Joplin. The Joplin community asked Drury Design-Build Program to design and construct a tribute in Cunningham Park to thank the 170,000 volunteers that assisted Joplin after the devastating storm. The result was The Volunteer Tribute, with a monument bearing the sentiment "Miracle of the Human Spirit." The architecture students designed and built (along with the aid of other volunteers and professionals) a garden space honoring the volunteers who came to the aid of Joplin. Students developed the conceptual design, construction documentation, and execution of construction as part of their third-year studio project.

The design featured four rings of stone walls, four bronzed tools, and four stainless steel pedestals represent the processes of the search and rescue, debris removal, demolition, and the rebirth of Joplin. At the center of the ring, a mosaic butterfly symbolizes the reported stories of butterflies protecting children during the storm (Real-McKeighan 2011). The Tribute was implemented under the show's broadcast network television constraints (Verschoor 2012). The show negotiated to rebuild a neighborhood of seven houses in 7 days and to restore Cunningham Park. The show's contribution was built in 168 hours, with continuous, round-the-clock work.

The construction introduced "SmartMob!", a flash mob with a purpose: to engage the greater Drury University campus in the project (Figure 2). The SmartMob! premise is high impact, low time commitment projects. Students from across campus were informed via social media that a service project would happen on a particular date. Enthusiasm for the project was built over a 2-week timeframe as additional details were covertly released. It was only when the 120 students, faculty, and staff arrived at the construction site at Cunningham Park, did they learn that they would lay the sod for the Volunteer Tribute. This first-ever SmartMob! installed 26,000 square-feet of sod in less than 45 minutes. They were so energized by the experience, they continued to lay sod throughout the 6-acre park. A SmartMob! was initiated again for the construction of the stone walls at the Butterfly Garden and Overlook. Volunteers were serenaded by 20 music therapy students who provided a "rejuvenation station."

The Butterfly Garden and Overlook

A national grant from the TKF Foundation through their Nature Sacred Awards Program permitted the students to design and build a healing garden in Cunningham Park. TKF provided funding for six research projects designed to scientifically prove the inherent value and need for nearby, open access



Figure 3: Butterfly Garden and Overlook.

Photo by Evan Melgren, used with permission.

to urban nature. The purpose was to demonstrate how nature in the city can provide sacred, spiritual, and healing experiences for individuals and communities. In 2013, the Butterfly Garden and Overlook was one of the six funded projects offering students an opportunity to create a place within nature where Joplin residents could heal from the loss of a loved one, home, job, and sense of security or community as a result of the tornado (Figure 3).

The design of the Butterfly Garden and Overlook weaves together the conceptual ideas derived from Worden's four tasks of mourning (Worden 1991). Worden recognizes the process as accepting loss, processing the pain of grief, adjusting to the new environment, and creating an enduring connection with what was lost. The process is coupled sequentially with a portal, path, destination, and sense of surround, common elements among all TKF funded projects. The portal, symbolizing accepting loss, is the front door to the Carl Owen house, one of three houses destroyed by the tornado that were replaced with full-scale frames. The path is a labyrinth throughout the garden, which allows the users to process grief. The destinations are four sacred, private spaces with a bench and a journal as a means of adjusting to the new environment and healing. The surround is the circular butterfly garden and complimentary house frames to provide a connection to what was lost. The garden features a butterfly pavilion, symbolic water features, and educational storyboards of heroism and children's accounts of butterfly people. The Volunteer Tribute and Butterfly Garden and Overlook are two projects that re-greened Cunningham Park and facilitated recovery.

In Their Own Words: A Community Recovering

The oral histories and journal entries at the TKF bench are two foundations that demonstrate how the community recovered. Drury University collected, transcribed, and archived several dozen survivor stories. The stories provide the emotional depths at the time of the disaster. The post-disaster journal entries are from individuals willing to share their thoughts in the sacred place.

Oral Histories

Selected histories express the meaning of the park's loss, the symbolism of trees, and the guidance for healing. One survivor spoke about the park.

I miss the park, the gazebos, the trees, and miss watching people in the park getting married, playing with kids. I used to go outside on my lawn chair and just listen to music and enjoy the scenery. I still do that. I take my car with a lawn chair, put some music on and just sit where my house used to be. I will basically look at where the hospital used to be and I don't know what to think. I go over to my lot and I still mow the yard and make it look really nice.

The Woman's Park Association helped develop the park and its 200-plus trees. One survivor noted the significance of trees in their lives.

That tree in my backyard is a symbol for me of Joplin. It is a survivor, it healed, and now it is growing again. One minute you are sitting there, storm warnings happened, and then my life changed in an instance. I am lucky to be alive. Joplin will come back but it will take a while. Joplin will be bigger and better but it will not be the old Joplin.

One survivor mentions the need for grieving guidance and requests a book.

I know that everyone needs to grieve how they need to grieve. You can't put any time on grief. You can't. Whatever it is, your process should be your process. That's one of the things they kept telling me. I'm like, 'Give me a book, give me something so that I know what I'm supposed to do.' And they're like, 'There is no book.' And I said, 'What do you mean there's no book?' They said, 'There is no normal on grief. Everybody's different.' It took me a long time to get that through my thick head, that there was no playbook that I could read. There's a how-to book on everything else. I'm like, 'There's no Grief for Dummies book?' and they're like, 'No. There's ones to help you along the way, but there's no playbook to tell you what is normal because there is no normal. What you knew is not what you know anymore.'

The design team has responded by bringing Worden's four tasks of mourning to life. The notion is that the re-greening will facilitate healing.



Figure 4: A father reading the healing journal to his child.

Photo by Evan Melgren, used with permission.

Journal Entries at the TKF Bench

At the Butterfly Garden and Overlook, the four sacred destinations have benches with journals. The grant provider furnishes a bench, which is built by inmates. The bench “is place of respite that invites one to pause and reflect. More than just a place to sit, the presence of a Bench in an Open Space Sacred Place is an invitation to pause on one’s journey—to sit, to rest, to breathe, to be present, to experience all the gifts that an Open Space Sacred Place has to offer” (TKF 2017).

The journal is a specially created waterproof, blank book and pen combination located beneath the bench (Figure 4). The journal invites visitors to articulate their experience. Visitors share words or images of the experience of being in a sacred place. More than a simple diary, record, or log of daily events, a journal is a collection of inspiring thoughts and reflections that attest to our need for opportunities to connect with each other and be in nature (Stoner and Rapp 2008). Over 25,000 journal entries have been submitted at various sacred spaces in the United States and have been coded by researchers. One specific to the project was, “What a beautiful Memorial. I remember May 22 like it was yesterday. I remember the heartache felt. This park brought a sense of peace and healing.”

Becoming a Sacred Place

The dual identities of Cunningham Park as the city's first park and as Joplin's ground zero uniquely positions the park as a sacred place primed for rebirth. The community exhibits place attachment and conducts remembrance activities at the park and the park has become a national destination.

The oral histories and journal entries express a sense of place attachment by recognizing Cunningham Park as a home and a connection with the survivors' faith. Being Joplin's first city park, the place has been the home to many functions. In essence, it is a "third place," where individuals, not related by birth, share a kinship by gathering in groups and establishing feelings of a sense of place (Oldenburg 1999). The frames, of the Owen and neighboring houses and the healing garden is Joplin's "third place." The sacred home for the bench and journal is a place that "is remarkably similar to a good home in the psychological comfort and support that it extends" (Oldenburg 1999). Norberg-Schulz (1988) states, "that 'landscape' cannot be isolated from human life and from what is divine," implying the life and divinity are coupled. Faith plays an important role in place attachment: "While the characteristics of place itself can inspire and cultivate devotion, spirituality, community, and tranquility, a person's connection to place is not solely reliant on the qualities of place and can also be learned through the process of religious socialization . . . and the role of ritual, artifacts, storytelling, and the experience of place in the learning of place attachment" (Mazumdar & Mazumdar 2004).

Joplin has recurring remembrance activities at the park. On the 6-month anniversary, a ceremony was held by the city of Joplin in which they planted one tree in honor of the victims and unveiled a small memorial that held the 161 names of those lost. The Walk of Unity occurred on the tornado's 1-year anniversary with over 10,000 people recreating the tornado's destructive path in reverse, which concluded at Cunningham Park (Figures 5 and 6). The path has two poignant reminders where the reverse direction represents the healing process for individuals and families, while the gathering at ground zero in Cunningham Park provides community strength. Boston Globe correspondent Juliette Kayyem wrote about the Walk of Unity: "Joplin isn't just a story of hope winning over pessimism. What makes Joplin a truly American story is that its transformation is a triumph of local ingenuity, starting with the most democratic of events: a public meeting" (Kayyem 2012). Kayyem's insightful comment highlights an example of community and healing at a place re-greened. Each year since then, a ceremony of remembrance called "Joplin proud" takes place in the park.

As the first green space restored in the heart of the tornado's path, Cunningham Park has become more than healing gardens and now is a national destination for the masses. Although the design of the park was



Figure 5: The Volunteer Tribute Garden at Cunningham Park on the 1-year anniversary.

Photo by Jared Hoffpauir, used with permission.



Figure 6: Volunteer Tribute's central gathering space, mosaics, and plaque to thank the volunteers.

Photo by Evan Melgren, used with permission.

meant for the local Joplin community, according to the Director of Parks and Recreation, Chris Cotten, the park sees up to 1,200 visitors on any given summer day. The parking was redesigned to permit bus parking for tourist visitors. The community considered three elements built in the first 6 months in the park to be “memorials”: The Victim’s Memorial, The Volunteer Tribute, and the Children’s Reflecting Pond. All three drew tourists. Later, the addition of the Butterfly Garden and Overlook with its multifaceted layers of symbolism, iconic frames of the houses that once stood on the property, and the story boards further strengthen the community place attachment and sacredness of Cunningham Park. Furthermore, the community continues support to maintain the park through its heavy traffic demands.

Lessons Learned

The lessons learned have a theme of continuing community support, a strengthened stewardship.

- After disaster, people from across the world will show up to help, some will stay for months, some will stay indefinitely. These groups tend to be very dedicated and reliable.
- The success of the four stages of disaster recovery (search and rescue, debris removal, demolition, and rebuilding) can be attributed to the leadership, organization, and dedication of the municipality.
- The success of the rebirth of the community was due to the can-do attitude of the citizens who picked themselves up out of the rubble and their constant articulation of gratitude for the volunteers.
- Re-greening soon after disaster gave community members relief from the grayness created from the debris removal scraping the landscape.
- Archiving stories of heroism, symbolic spiritualism, and storm facts and making them available to community and visitors became important in healing the community. Most visitors to Cunningham Park spend time reading the storyboards in the Volunteer Tribute and Butterfly Garden and Overlook.
- Place attachment was prevalent after the storm. Many community members mentioned “missing” the iconic Owen “airplane window

house.” Creating the outline of the home gave community members an enduring connection to the past to allow them to move forward, but not forget (Worden 1991).

- Shards of debris became representative of people’s lives. Reconfiguring the debris in a meaningful way (butterfly mosaic and in storyboard pedestals) gave peace to some, was embraced by many, and became an important element in emphasizing the impact of the storm on lives.
- The theme “miracle of the human spirit” became a sense of pride for the community and supported the endurance needed to complete the four stages of recovery. Wristbands bearing the phrase were handed out and a sculpture of the wristband located in the Volunteer Tribute became a photo spot for the community as families posed in the 6-foot circle.

Recommendations

- Listen, be inclusive, and collaborative. All volunteers matter and can have overwhelming impact on design and execution of a project.
- Survivors need to tell their stories. Listen, remember, share, and respond through design. Butterfly stories were important to survivors and were memorialized on signs, murals, and were welcomed in the two Drury projects.
- Re-green soon after disaster. Greening gives community members relief from the grayness created as the landscape is scraped during debris removal stage of recovery.
- Archive stories of heroism, symbolic spiritualism, and storm facts and make them available to community and visitors. This becomes important in healing to the community
- Create an enduring connection to what was lost, as outlined in William Worden’s fourth and final step of the grieving process (Worden 1991). This could be a landmark, a symbol, or in the case of Joplin, the outlines of three homes in Cunningham Park which represent the 5,000 homes lost across the community, or shards of debris becoming a butterfly mosaic.

- **Articulate a rallying theme to unite and uplift the community. In Joplin, the “miracle of the human spirit” theme and the wrist bands given to volunteers bonded volunteers and the community. Chris Cotten, Director of Parks and Recreation in Joplin, made this observation:**

One day, shortly after we completed the Extreme Makeover of Cunningham Park, when we re-sodded the entire park in just a few hours, I turned the corner at 26th and Maiden Lane and noticed a family sitting in the grass picnicking. I saw that family in Cunningham Park doing something so normal before the storm and knew, everything would be alright.

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