Investing in New Approaches: Donation Leads to Advances in Disaster Management in Baton Rouge

Baton Rouge, LA – On August 29, 2005, Emmet and Toni Stephenson watched from their home in Nevada as Hurricane Katrina roared from the Gulf of Mexico into New Orleans, resulting in massive devastation and death. The Stephensons were horrified at the chaos that unfolded during and following Katrina's landfall, and for them the disaster struck a little closer to home. Alumni of Louisiana State University (LSU), the Stephensons hailed from the city of Bastrop in the northern part of the state, where they had met as children.

In the wake of Katrina, the Stephensons, both successful business people, noted a number of things they felt could have been done differently, especially from a management perspective. To address these failings, in 2007, they made a large donation to LSU, a portion of which was used to found the Stephenson Disaster Management Institute (SDMI). SDMI's mission is to tie disaster management academic theories to the practical, real world arena of disaster response.

Brant Mitchell is the Director of SDMI and a former Deputy Director at the Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP). He also serves as a Lieutenant Colonel in the Army Reserves where he is assigned to the National Cyber and Communications Integration Center at DHS. Both of these careers offer a unique understanding of, and experience with, disaster management.

"Initially the whole concept of SDMI was to take research that existed at the university level and apply it to the disaster management community," said Mitchell. "We recruit people who have emergency management practitioner experience who also have the ability to transition into academic research."

SDMI's mission statement reads "…to save the lives of people and animals by continuously improving disaster response management through leadership in applied research and education." The relationship people have with their animal companions has always been an important facet of American culture, whether they are domesticated pets or utilized in agriculture. Statistics suggest nearly 50% of households in America contain some type of domestic pet. Despite this strong bond, animals are often overlooked during disaster planning until it is too late, often with tragic results. It is reported that more than 600,000 animals were lost or abandoned in Hurricane Katrina alone. One of SDMI's goals is to ensure animals are considered in the planning process.

SDMI founded the Animals in Disaster Advisory Group (ADAG) to address the difficulties of including animals in the disaster planning process. The group has experts from various entities such as the LSU School of Veterinary Medicine, Texas A&M, and other organizations. One of the first actions the ADAG took was publishing a document in Oct. 2014 detailing the options available for reimbursement following a disaster evacuation involving animals. Much of the costs of sheltering and transporting animals during a disaster can be recovered, but many entities are unaware of the steps necessary to recoup these expenses.

"It's important because people will make decisions based on whether they can take their animals with them during an evacuation," said Mitchell. "Many will not leave if they're not allowed to bring their pets, which puts people at risk."

In 2015, SDMI partnered with ADAG members: Louisiana Department of Forestry and Agriculture, Louisiana State Animal Response Team, Louisiana Veterinary Medical Association, and Walter J. Ernst Veterinary Memorial Foundation to design and build a mobile animal shelter. Housed in an 18-wheel tractor trailer, the

shelter can hold 55 cages of various sizes and outfitted with running water and an air conditioning unit. The trailer can transport animals to new locations or it can function as a semi-permanent shelter. As part of the multi-state Emergency Management Assistance Compact (EMAC), when not in use in Louisiana, the trailer can be made available to other states. Mitchell believes that once word grows about the potential of the mobile shelter, funding for an additional unit will soon follow.

SDMI currently belongs to two of the Department of Homeland Security's (DHS) Science & Technology Centers of Excellence. The first is through participation in the Stevens Institute of Technology Maritime Security Center which works to improve security and safety throughout our nation's ports. This is a traditionally vulnerable area for disasters whether natural or man-made.

Using the media capabilities of LSU to craft specific scenarios, the center runs tabletop exercises to devise, discuss and review potential strategies of response to various hazards and emergency situations. The long-term goal is to craft, as Mitchell puts it, "exercises in a box" which will allow other port facilities to take the already developed scenarios and run training simulations to deal with any type of possible future situation. Ultimately, the Maritime Security Center intends to host on their website all the various information and scenarios they produce.

SDMI also works with the University of North Carolina's Coastal Resilience Center. Through research funding provided by the center, SDMI is developing a Storm Surge Vulnerability Index that predicts potential results of a coastal storm surge prior to landfall. While many storm-predicting programs are limited in detail, LSU's high performance computing systems enables the LSU research team to run storm surge models with a high amount of detail and accuracy. This provides surge prediction modeling at actual street level.

"We can identify which populations are most vulnerable up to 48 hours prior to the storm making landfall," said Mitchell. "We can also tell what the potential consequences for that storm will be. With this knowledge, we can prioritize search and rescue teams and damage assessment teams. We also know whether facilities like schools or hospitals are going to be in the flood zone. We will have the ability to alert GOHSEP and local emergency managers which important infrastructure sites are susceptible to flooding."

For the past six years SDMI has hosted the National Evacuation Conference, partnering with the Gulf Coast Research Center for Evacuation and Transportation Resiliency (a joint research center established between LSU and the University of New Orleans) to explore evacuation topics.

"At the most recent conference in March, 2016 we facilitated ten panels," said Mitchell. "The panels were mostly comprised of academics presenting their research on evacuations. We had some practitioners from Washington D.C. address the topic of pedestrian evacuations, and I hosted a panel FEMA presented demonstrating their new evacuation software tracking system and planning guidance."

Another of SDMI's major projects involves writing the Hazard Mitigation Plan (HMP) updates for 56 of Louisiana's 64 parishes. States, tribes, and local governments require approved Hazard Mitigation Plans for a number of important reasons. A thorough HMP allows a community to identify and analyze the risks and vulnerabilities posed by local natural hazards and to devise strategies that protect lives and property. An approved HMP is also required to qualify for certain federal non-disaster assistance programs like the Hazard Mitigation Grant Program (HMGP), the Pre-Disaster Mitigation grant (PDM), or the Flood Mitigation Assistance (FMA).

“We want the parish plans to feed into the state’s HMP,” said Mitchell. “We’ve designed them to look like the state’s plan and all the information will be coordinated and synchronized.”

SDMI’s parish HMP project has created a website where each parish plan will have its own page. The web pages display the progress that an individual community’s plan has undergone and the expected timeline for completion. The page will also display details of each plan with a link to the actual document. This will allow anyone visiting the website to follow the HMP’s progress and have a clear understanding of the entire process of writing a Hazard Mitigation Plan from start to finish. The entire project is scheduled for completion in December, 2017.

SDMI is preparing for a future where the increasing risks of natural and man-made hazards will be met and potentially offset by the new, improved technologies and methodologies they are working to develop. Their commitment to the goal of helping people and communities resist the effects of disaster damage will lead to new and powerful tools to aid in the field of disaster management and promise to speed the recovery process and improve our ability to reduce, or even prevent, many of the hazards we face.