Group Trained by CCI Proves Its Worth in First Deployment

By **Doug Scott** (ASCE)

The members of an emergency response task force trained and organized by ASCE's Committee on Critical Infrastructure (CCI) had their first call to action when they were summoned to work with firefighters, police officers, building officials, and emergency management personnel in Utah and inspect structures damaged by the wildfires that ravaged Utah during the summer of 2012.

THE MEMBERS OF the task force included Brian Warner, P.E., S.E., M.ASCE, a structural engineer with McNeil Engineering, of Sandy, Utah; Robert Snow, P.E., A.M.ASCE, a geohazards engineer with URS, which is headquartered in San Francisco; and Ryan Maw, P.E., M.ASCE, also a geohazards engineer with URS. The team carried out reconnaissance work on structures damaged or destroyed by the fire that hit Herriman, Utah, on July 3. They inspected six properties affected in various ways by the fire, functioning as a valuable component of a larger, professionally trained emergency management team.

"The wildfire started in a rural and wooded residential area just south of Salt Lake City," says Snow, a resident of Utah. "Rapid response by local officials and emergency responders helped limit the total number of residences that were destroyed."

"This was the first real event where ASCE-trained volunteer members went on an exercise jointly with fire [and] building officials and officers of emergency management," says Mathew Francis, P.E., M.ASCE, the CCI's chair and a senior program manager for infrastructure resilience in the Gaithersburg, Maryland, office of URS. "To set up this pilot program in Utah, we not only had to train volunteer engineers, but we had to create an operational framework and agreements with the [Salt Lake] county emergency officers, including emergency management, building, and the fire department officials."

The emergency response task force in Utah was the first team trained by the CCI to be deployed in the field. Teams organized in Seattle and Boston have begun training, and teams in Nashville, Tennessee, in Chicago, and in California and northern Virginia are being planned.

To help set up emergency response teams and train Society members on the procedures that are to be followed in evaluating buildings for safety, the CCI offers workshops around the country through the Society's sections and branches. These workshops draw on the California Emergency Management Agency's program for assessing building safety, which in turn uses materials developed by the Applied Technology Council (ATC); in particular, the manuals ATC-20 (Procedures for Postearthquake Safety Evaluation of Buildings) and ATC-45 (Safety Evaluation of Buildings after Windstorms and Floods).

"To do building damage assessments — commonly done in the recovery phase — we need to have fully trained teams of engineers in the field as soon as possible following an event so homeowners and businesses can get back on their feet quicker," notes Francis. "In a large disaster, where there are literally tens of thousands of buildings that need to be assessed before they can be reoccupied, there is a critical need for large-scale resources [in the form] of fully trained engineers.

"The CCI pilot emergency response task force program was established in October 2010 with FEMA [Federal Emergency Management Agency] credentialing so that ASCE local sections could organize their teams for those kinds of disasters with the idea that they can be trained locally and in accordance with local state regulations. But they also would have the credentialing to be deployed as a state resource under FEMA in a national disaster declaration called under EMAC [Emergency Management Assistance Compact]."

"During the wildfire, the intent of the team was to help the county, city, and state officials inspect buildings in order to help people get back in their homes sooner," recalls War-

ner, a former president of the Wasatch Front Branch, part of ASCE's Utah Section. "However, an important goal of our first real deployment also was to see how we would work as a team. We performed our fire checks, looked at the structure to see what kind of damage had been done, and made an assessment on its safety. But for our first time out together at a live event, I think we worked very well as a team."

Snow says that the team members felt that the reconnaissance provided a number of important insights that will help them improve organization, reporting procedures, and building assessments. "We viewed our response to this disaster," he says, "as preparatory to organizing a response to other catastrophic events."

Members of an emergency response task force trained through workshops organized by ASCE's Committee on Critical Infrastructure carried out inspections in July of structures damaged by wildfires in Utah. Their efforts proved to be a valuable supplement to those of firefighters, police officers, building officials, and emergency management personnel. Image credit: Robert Snow

In April, as a prelude to its work in assessing building safety in connection with the Utah wildfires, the team was invited by the agency Salt Lake County Emergency Management to take part in a FEMA emergency training exercise, or "shakeout," dealing with the aftermath of a magnitude 7.0 earthquake.

"Mike Barrett [an emergency management consultant with Gorilla Design who acts as a consultant to Salt Lake County] had proposed that the [emergency response team] work jointly with local fire [and] building officials and the emergency managers at UDOT [Utah Department of Transportation], as well as with the Structural Engineers Association of Utah, the American Public Works Association, and the Utah National Guard," says Francis. "With those organizations we developed a joint assessment team program where the ASCE pilot team would be responsible for doing the building damage assessment.

"The teams performed damage assessments on the three critical facilities during the simulated earthquake: the Salt Palace Convention Center, which will be used for sheltering; the Salt Lake City and County Building, which will be used for administration, the mayor, and the official representatives of the county; and then the Emergency Operations Center, where the command and communication take place. After the exercise, one of the takeaways was that CCI felt the need to develop fifty damage assessment teams from throughout the U.S., each one composed of an engineer, a member of the police and fire department, and a building official representative."

Francis says that the CCI will be issuing a report for the Board of Direction covering both the results of the earthquake shakeout in April and the response task force's efforts at the wildfires in Utah last month. The committee will also be producing a guide for emergency response task forces that could be disseminated through ASCE's sections and branches.

"We feel more prepared to respond to future emergencies," concludes Snow. ▣

For more information about the CCI, including its postdisaster assessment workshops and disaster management training resources, go to http://ciasce.asce.org/cci-programs.