The logo for EDEN (Extension Disaster Education Network) features the word "EDEN" in a large, bold, black, sans-serif font. To the right of the "N" is a graphic of a target symbol with three concentric orange circles and a black vertical bar pointing towards the center. Below "EDEN" are the words "EXTENSION DISASTER EDUCATION NETWORK" in a bold, orange, sans-serif font, stacked in two lines.

EDEN

EXTENSION DISASTER EDUCATION NETWORK

Responds to 2012 Wildfires and Drought

BY VIRGINIA MORGAN WHITE, STEVE CAIN, AND E. KIM CASSEL

The US Forest Service reported that more than 74,000 wildfires burned more than 8 million acres across the country in 2011. Fires consumed more than a million acres in both Arizona and New Mexico. Texas was the most severely affected, losing nearly 3 million acres, or one-third of the total burned acreage.

Wildfire season began early in 2012. By November 1, 52,053 wildfires had burned more than 9 million acres. All 50 states had wildfires, but Idaho (1,759,241 acres), Montana (1,139,820 acres), and Oregon (1,265,311 acres) lost the most acreage. Thousands of structures were lost. The June wildfire that consumed neighborhoods in Colorado Springs captured the nation's attention, even while wildfires burned in other parts of Colorado as well as in other states.

Ongoing drought conditions throughout much of the country increased the risk of wildfire and caused other major negative impacts to communities from Ohio to California. This year remains the driest in more than half a century and the hottest since record keeping began. The average temperature for July was 77.6°F, 0.2°F above the previous record set

in July 1936 during one of the worst months of the Dust Bowl. The lack of moisture coupled with extreme temperatures—triple digits in some states for weeks at a time—and high winds created the perfect setting for wildfires.

As of October 2012, more than 50 percent of the United States was in severe to exceptional drought. The November drought outlook released by the National Integrated Drought Information System (NIDIS) and the US Seasonal Drought Outlook through January 2013 indicate that drought will persist and/or intensify over much of the nation including areas prone to wildfires.

Drought and Wildfire Costs

Until 2012, the droughts of 1980 and 1988 were two of the most costly weather-related disasters in the United States, according to the National Oceanic and Atmospheric Administration (NOAA). The drought of 2012 will likely join them in the ranks of the five most costly weather disasters (see Table 1 below and NOAA for more information).

It is difficult to compare the costs of disasters because they are borne several ways. Individuals, communities, businesses, insurance companies, and local, state, and federal sources all bear costs. Because no central database collects that information, disaster costs are estimates. Wildfire can be fought and areas limited or contained by humans; whereas, droughts and

hurricanes can affect much larger areas and are not easily contained or mitigated.

To attempt an estimate of damage due to wildfires, consider Colorado, which ranked ninth in acres burned in the United States for the first ten months of 2012. According to the Denver Huffington Post, insurers estimated that the Colorado wildfires cost \$449 million. Combined, the 2012 wildfires might cost several billion in damages. Some would say the fires contribute significantly to drought damages.

The other significant cost of wildfires is environmental. According to a Washington Post Health and Science report, the 2012 wildfire season is causing significant environmental, air quality damage leaving some experts to say that staying indoors is not enough. The increased particulate matter, carbon monoxide and nitrous oxide, can infiltrate homes.

EDEN and Extension Response

This year, as in years past, Extension and Extension Disaster Education Network (EDEN) is engaged in disaster response. Unlike first responders such as fire fighters and law enforcement agencies, and the Voluntary Organizations Active in Disaster (VOADs), the bulk of EDEN's response to disaster primarily focuses on providing just-in-time education and information that helps local citizens recover from disasters. In addition to the response and recovery phases, EDEN has provided research-based education

TABLE 1. COSTLIEST WEATHER DISASTERS IN THE US.

Disaster	Costs in 2012 dollars	Rank
Hurricane Katrina	\$146 billion	1
Drought/Heat Wave 88	\$77.6 billion	2
Drought/Heat Wave 80	\$55.6 billion	3
Hurricane Andrew	\$44.3 billion	4
Midwest flooding 1993	\$33 billion	5

and information on preparedness and planning since 1994. More than 300 delegates, including member points of contact (POCs), represent more than 70 areas of expertise and have access to other experts and resources at their respective land-grant and sea-grant institutions.

Background information about disaster topics, including drought and wildfire, can be found on EDEN's topic pages at www.eden.lsu.edu. The topic pages are updated as specific disasters occur. Work on the Drought page intensified in June and July as the drought spread and the heat intensified over much of the country.

The EDEN Network

Delegates from across the country share resources, identify needs, and develop new materials as those needs are expressed. Response to a disaster begins locally with the national support system engaging shortly thereafter. That's when a disaster-specific, targeted email to the POC(s) in the affected areas is sent offering recovery assistance and providing links to resources on the EDEN and eXtension websites. POCs are also encouraged to use EDEN's Response Notes system as a way to share and document impacts, updates, and status of Extension employees and facilities. The POCs can use the system to note identified needs, or they can send an email to EDEN leadership or to the entire national email list of EDEN delegates. EDEN also hosts conference calls and webinars to support delegates responding to the disasters.

EDEN topic pages include collected resources and Response Notes. The primary audience for this information is Extension personnel. However, the

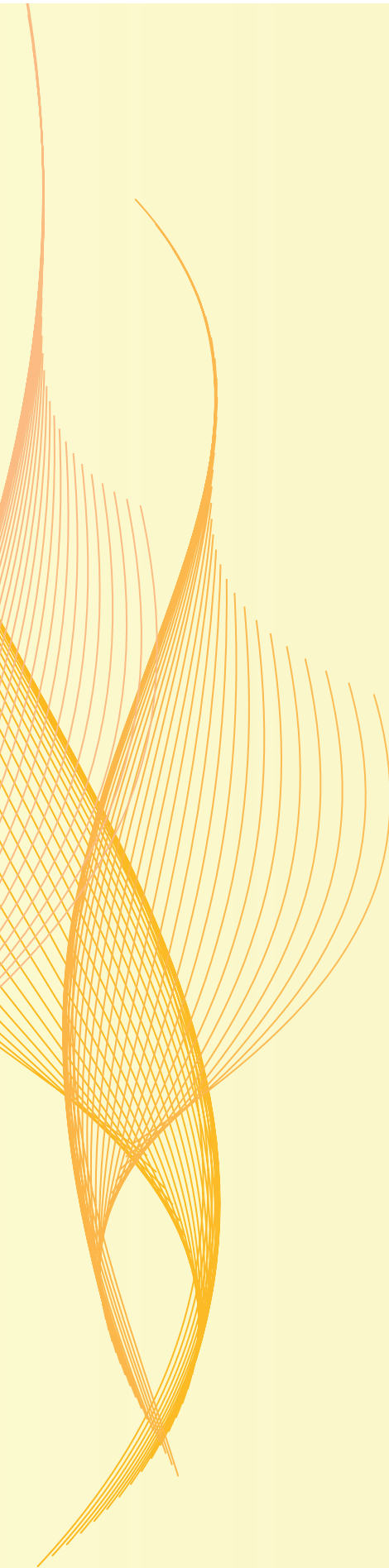
website may be freely accessed by the public. Concurrent with identifying and sharing resources, the Extension Disaster Education Network identifies, aggregates, and creates content on eXtension for the general public. In addition to sharing those resources, EDEN also shares relevant information from its national partners such as National VOAD, Federal Emergency Management Agency (FEMA), and the Department of Homeland Security (DHS).

Wildfire and Drought

EDEN hosts conference calls as disaster response and recovery get under way. One such disaster call this year addressed wildfire. Glenn Nader, eXtension Wildfire Information Network (eWIN) Community of Practice leader from California, led the EDEN call. Held in June, the call's goal was to share resources and identify needs of the affected states.

EDEN delegates contributed to the Wildfire page as early as March 2012 when the wildfire season began. In addition to the resources Texas AgriLife shared in March, newly identified resources were posted to the page under Collected Resources. Extension Services in states affected by the wildfires published web pages with state-specific information and education as well as more general content adaptable by other states. These websites and other sites such as www.FireWise.org are highlighted in EDEN's Resources Collected section of its website.

As the number of states experiencing drought in 2012 continued to grow, EDEN started updating the Drought topic page and offering assistance to POCs. EDEN hosted a conference call



for affected states in mid-July. State representatives shared their needs, which led to EDEN's first call for drought resources. The resulting collection includes university Extension websites, hay hotlines, publications and tools, and blogs and other social media. Because a drought impacts so many different areas, the resources collected are categorized under key and emerging issues. Concurrent with initial updating of the EDEN topic page, an eXtension Drought Resources page was launched July 12. Both websites continue to be updated as new needs and resources are identified.

A few weeks later, the network formed the Drought National EDEN Issue Leader (NEIL) team. Kim Cassel, EDEN POC from South Dakota State University Extension, leads the cross-disciplinary team. Members represent livestock, crops, horticulture (home and landscape), economics, community, and human development areas. The team was represented at each of the three regional drought workshops held in October and hosted by US Department of Agriculture (USDA) and partners in Nebraska, Colorado, and Arkansas. Participants at the workshops identified needs and were introduced to resources currently available. EDEN was also represented at the fourth regional workshop in Ohio on November 27, 2012.

As the drought and wildfires linger, stress on those directly affected increases. With that knowledge, the Drought NEIL hosted two webinars focusing on providing Extension educators with tools to help them recognize the signs of stress in producers and their families, people in related industries,

and Extension colleagues. The webinars were not intended to train Extension educators to be professional counselors, but rather to be able to help individuals talk about the disaster and to recognize when it is time to refer an individual to a professional counselor.

In August 2012, the National VOAD president John Robinson asked EDEN to form and lead the VOAD Drought Task Force. While VOAD members understand and have frameworks for responding to hurricanes, floods, and earthquakes, the VOAD movement had not engaged in a systematic response to droughts and wildfire. The task force is charged with identifying problems and opportunities to serve that align with the VOAD mission, and to design a process of engagement and proposals for action for member organizations and states. National VOAD will partner with other organizations and states to form long-term drought and wildfire recovery committees. In addition, VOAD will share feedback and best practices online.

Conclusion

The Extension Disaster Education Network is a premier provider of disaster education resources delivered through the land-grant and sea-grant systems. EDEN specialists and educators have recognized the critical need for continued drought and wildfire response and recovery in 2012 and beyond. The formation of the Drought and Wildfire NEIL provides Extension with a national team focused on responding to the disaster. 🌾