

MANAGING DROUGHT in the Southern Plains

**A summary of survey responses
to the webinar series**



Southern Climate Impacts Planning Program
University of Oklahoma
Louisiana State University

Mark Shafer and Rachel Riley

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Louisiana State University**

Lead Authors: Mark Shafer and Rachel Riley

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Introduction

A drought of strong intensity and vast geographical extent has gripped the South Central United States for more than a year. As early as November 2010, the National Oceanic and Atmospheric Administration's (NOAA) Climate Prediction Center predicted that eastern Pacific La Niña conditions would increase the potential for drought formation across the southern United States. In fact, the state of Texas recorded its driest year on record; Oklahoma narrowly avoided that fate with unexpected rains during the Fall of 2011. To respond to these severe ongoing conditions, multiple efforts were launched to engage decision makers in regional, state, and local arenas in a conversation about drought.

To address the different needs in each of these arenas, a four-pronged approach was used: regional workshops, state drought planning, a series of webinars, and supporting local impact reporting. The net effect of these efforts was that interaction between these arenas and between the academic and practitioner communities increased substantially. Many decision-makers have participated in multiple activities, such as state drought planners attending the regional workshops or local Farm Service Agency offices participating in the drought webinars and impact reporting.

While in many instances the response to the drought has remained reactive, these discussions have yielded a treasure trove of information that will form subsequent development of best practices guidelines, improve drought planning, and connect state and local monitoring more closely. A survey of people who participated in the webinar series has highlighted instances where information has been used beyond the core group of those participating directly in one or more of these activities. This report highlights the webinar series and outcomes from the survey that was administered during December 2011.

Description of the Webinars

Communication among agencies and affected sectors is one key aspect of successful drought management. Towards this end, the Southern Climate Impacts Planning Program (SCIPP), in collaboration with the National Integrated Drought Information System (NIDIS), National Oceanic and Atmospheric Administration (NOAA), National Drought Mitigation Center (NDMC), Climate Assessment for the Southwest (CLIMAS), and the region's State Climatologists, launched a bi-weekly webinar series. The series goals include:

- To improve communication among agencies and organizations in the Southern Plains who are being affected by the historic and exceptional drought;
- To provide information on available resources and assistance to help monitor and manage drought;

- To understand the impacts of drought in this region *from the perspective of those who are tasked with managing it*; and
- To document impacts that will help improve the weekly U.S. Drought Monitor assessment and our understanding of how drought impacts evolve and decay.

Webinars are held on the 2nd and 4th Thursdays of each month at 11:00 a.m. Central Time. The content is geared toward a general audience – anyone who has is responsible for managing or assisting others in managing drought and its related impacts. Each webinar includes an overview of the current drought assessment and outlook, summary of impacts across the region, and a topic or resource, such as La Niña or wildfire conditions. During each webinar, attendees are able to vote on the next topic they would like to see as well as suggest new topics. Through the end of 2011, presentation topics included: the historical context and evolution of the 2011 drought; La Niña and prospects for extended drought; flash drought; water resources; and the cattle industry. Subsequent topics that were not reflected in the survey include: seasonal forecasting, wildfire, the U.S. Drought Monitor and wildlife.

More than 250 people have signed up for the webinars, with a typical draw of 60-80 participants on any individual topic. Several participants have indicated that multiple people in their organization participate in the webinar via a single sign-in, so the number directly participating is likely higher. Information from each webinar, including the presentations and a 2-page summary in pdf format, is posted on the [NIDIS Drought Portal](#) in the Southern Plains section, [SCIPP website](#) and linked to the SCIPP [Facebook Page](#). The videos are posted on SCIPP’s [YouTube Channel](#). Participation in individual

Table 1. Number of people participating in the webinars. Number of YouTube views is as of April 30, 2012.

Webinar Topic	Date	# of participants	# of YouTube views
<i>Historical Context and Evolution of the 2011 Drought</i>	September 29, 2011	102	63
<i>La Niña and Prospects for Extended Drought</i>	October 13, 2011	78	52
<i>Flash Drought</i>	October 27, 2011	87	60
<i>Water Resources</i>	November 10, 2011	73	n/a
<i>Water Resources (repeated because of audio problems)</i>	December 1, 2011	50	29
<i>Cattle / Livestock</i>	December 8, 2011	65	51
<i>Seasonal Forecasting</i>	January 12, 2012	60	40
<i>Wildfire</i>	February 9, 2012	70	39
<i>U.S. Drought Monitor</i>	March 8, 2012	52	55
<i>Wildlife Impacts</i>	April 12, 2012	29	3

topics is shown in Table 1. Anyone interested in participating should register via the SCIPP website: <http://www.southernclimate.org> or e-mail scipp@southernclimate.org.

Survey Results

A survey was distributed on December 8, 2011 to 248 people who had registered for the webinar series. As of January 24, 2012, 51 people had responded to the online survey. Of the respondents, the cattle and livestock topic drew the most participants, followed by La Niña and water resources (the water resources webinar was repeated due to audio problems that cut short the first presentation; it was subsequently rescheduled) (Figure 1). Nearly half of the respondents (49%) rated the webinars as very useful; the remainder rated them as mostly useful (35%) or somewhat useful (16%). No one rated the webinars as not very useful.

Respondents were asked about individual parts of the webinars, using the following rating scale: "This could be deleted" (1); "Somewhat Interesting" (2); "Rather Interesting" (3); and "An Essential Element" (4). A plurality of respondents indicated that the drought conditions and outlook (79%) and questions and discussions (44%) as an essential element (Figure 2). All other elements scored highest in the "Rather Interesting" category. The online poll (4%) and questions and discussion (2%) were the only elements where any respondents indicated the topic could be deleted (5%).

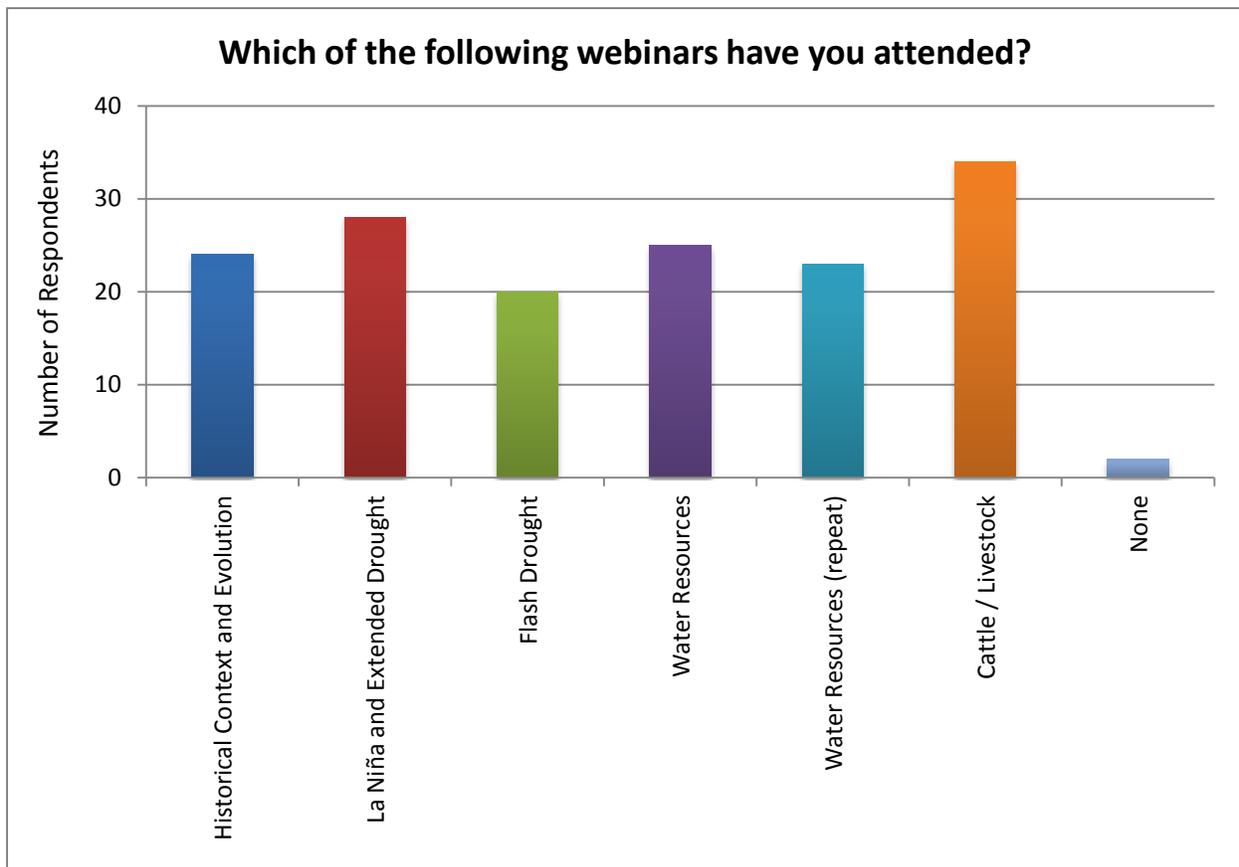


Figure 1. Number of survey respondents who indicated participation in one or more of the webinar topics.

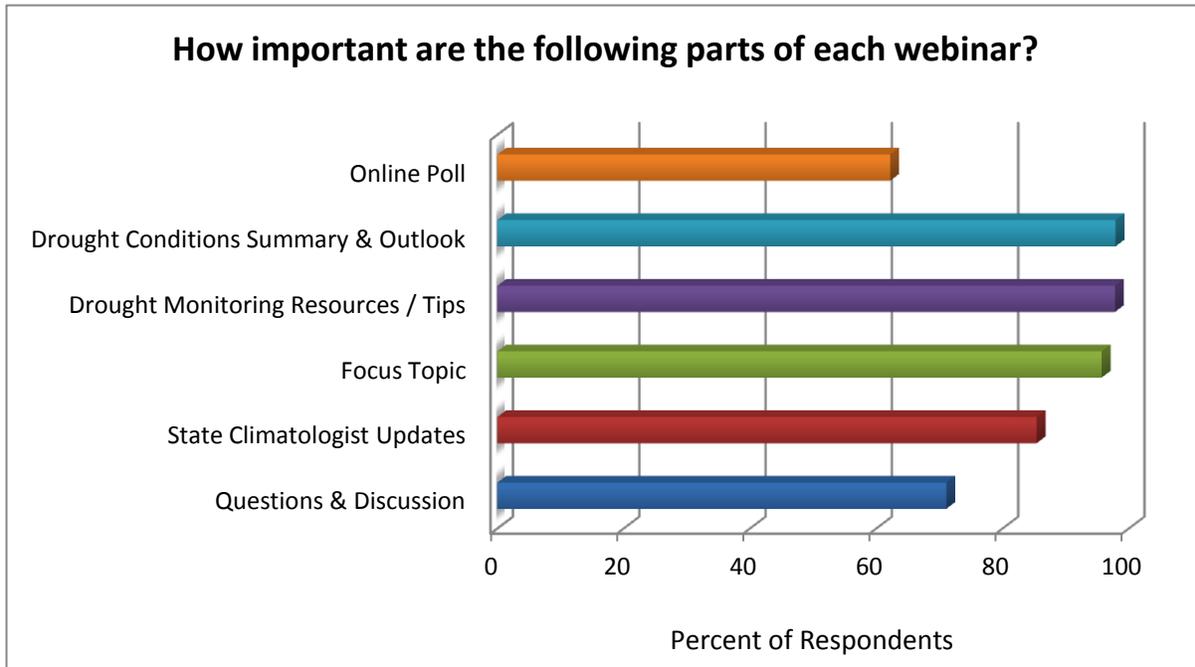


Figure 2. Percentage of respondents who rated webinar elements as “Rather Interesting” or “An Essential Element”.

Questions related to the conduct of the webinar indicated they seemed to be valuable and successful. Ninety-two percent of respondents indicated that the webinars should continue to be held at least monthly (35% opted for bi-weekly). The webinars were designed to last about 30 minutes but they typically last closer to 60 minutes. Respondents did not indicate this to be a problem, with 37% reporting that 60 minutes was acceptable and 43% preferring 45 minutes. Only 12% indicated 30 minutes being preferable while 8% indicated “as much time as is needed to cover the topic”. Sixty-seven percent indicated no difficulties with the technology, while 29% experienced some audio problems, mostly from people other than the presenter not having their phones muted, causing background noise. Others indicated difficulty with the online poll (4%) and logging into the website (4%).

Conveying and Using Information

Several questions asked about how respondents learned about the webinar and have made use of the information. Most respondents indicated that they received notice of the webinars via e-mail, including from professional organizations, colleagues, e-mail listserves (including local National Weather Service offices and various drought councils). Three people signed up following one of the regional drought workshops hosted by NOAA and NIDIS, and one person discovered the webinars through a web search for drought information. Other sources mentioned included NDMC and the U.S. Drought Portal.

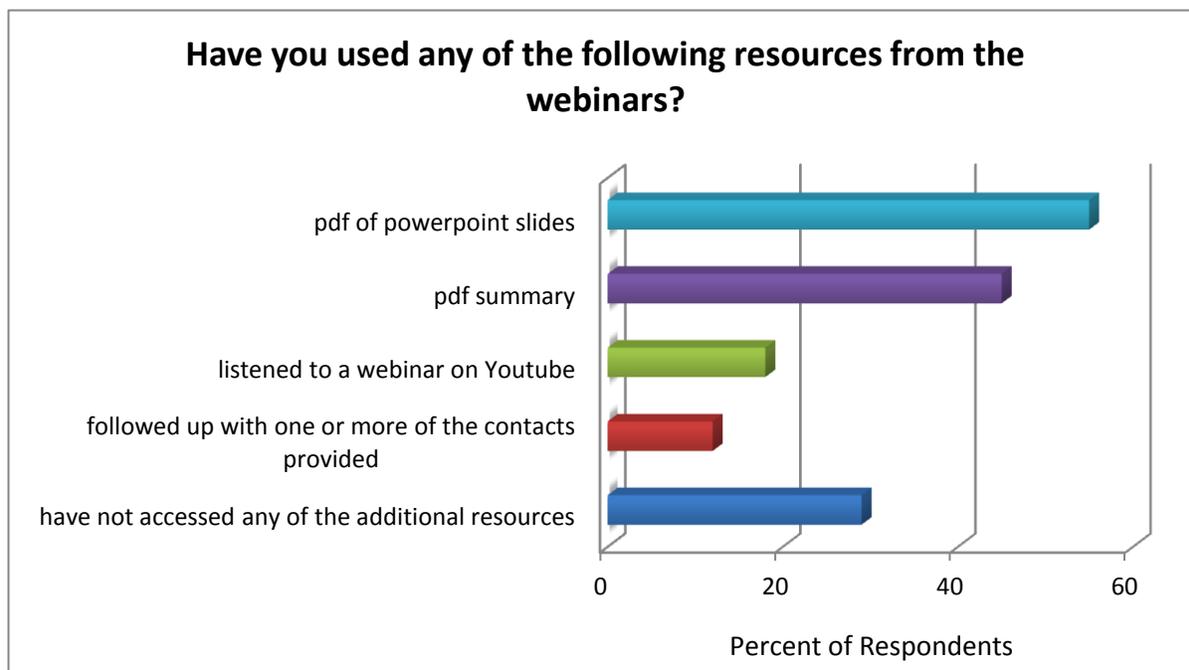


Figure 3. Percent of webinar respondents that reported using each of these resources.

In addition to listening to the webinars, a majority of respondents (71%) indicated that they used one or more resources made available following the webinar, primarily the slides and the 2-page summary (Figure 3). Six respondents (12%) reportedly followed up with one or more of the contacts provided.

Respondents were presented with a list of websites and asked if they consulted any of them following a webinar. Sixty-nine percent said they had accessed the Drought Monitor website, 59% accessed other NDMC pages, and 43% accessed the NIDIS Portal Southern Plains website. Other commonly mentioned sites included SCIPP (39%), the Drought Impacts Reporter (31%), state climatologists (31%) and other NIDIS Portal pages or products (24%).

Attending the webinars and looking up additional information for personal use is only a start, however. Among the webinar’s goals was to improve communication throughout the region. Therefore, we were interested in how people made use of webinar resources or information beyond their personal use. Eighty percent of respondents indicated that they had forwarded information on to another person or organization. Forwarding the webinar announcement (63%) or registration information (18%) were the most commonly cited distribution, with others forwarding the pdf summary (20%), link to the PowerPoint slides (16%) or YouTube video (2%).

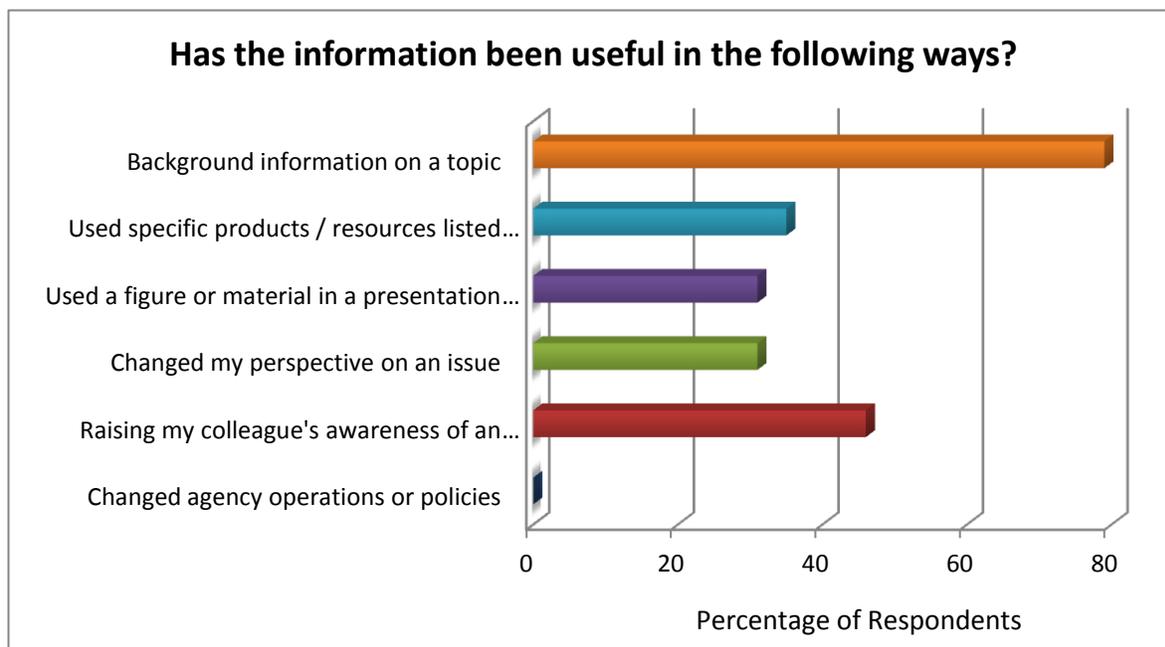


Figure 4. Percentages of respondents who reported ways in which information from the webinar affected their understanding, knowledge, and actions.

The real test in impact of the webinars came from the question “Has the information been useful to you in the following ways?” (Figure 4). As expected, the vast majority (79%) indicated that it was useful for background information, but many respondents also indicated other uses. Particularly encouraging were the high response rates on “changed my perspective on an issue” (31%) and “raising my colleague’s awareness of an issue” (46%). These indicate that the presentations were effective beyond just background information or resources for what is already known.

Nineteen of the 51 respondents cited specific examples of how they used the information. We categorized these responses as either operational decisions, use of materials in presentations, or raising awareness. Of these, use in operational decisions would be considered ‘instrumental use’, meaning that the information had a direct impact upon a decision.

Examples of operational decisions affected by the webinar information, as cited by the respondents, included:

- ❖ I realized the critical role of evaporative loss in the drastic reduction of water storage in Texas after listening to the webinar on flash drought. Discussion on the rapid evolution of the drought in the late spring was an eye opener on the need to try to identify atmospheric circulation drivers that may have had a role.

- ❖ I used the information to influence agency involvement in planning drought mitigation projects along the lower Rio Grande Valley in New Mexico. The area staff is now following the webinar and using the information in agency activities.
- ❖ 1. Personal choices on cattle numbers. 2. Direction of my research program and fellow researchers. 3. Planting and irrigation management of bulk crops and plot ground at our research farm.
- ❖ Webinar information helps me to illustrate my request for extra funding to cover drought conditions.
- ❖ In response to livestock feed needs the La Niña effect and forecast models were used to evaluate operations.
- ❖ This is a great resource for me on a local scale, and I will probably be able to integrate some of the information in our planning mechanisms.

Several respondents indicated use of webinar materials in presentations or publications:

- ❖ Useful in discussions at public meetings on Forest Plan Draft Environmental Impact statement for [an ecologically sensitive site].
- ❖ The information has been used in presentations for Cooperative Extension Service educators and agricultural professionals.
- ❖ I am organizing a meeting later in the year, and the webinar presentation gave me ideas of who should be involved in that meeting.
- ❖ I was working on an article and it helped with facts and contacts.
- ❖ Used some of the figures and material from a presentation in a presentation that I was preparing.

Lastly, there were those for whom the webinars raised their own awareness or they used the information to inform others:

- ❖ I work for a tribe in the environmental department, and work primarily on water related issues. I want to get the tribe to become more knowledgeable on climate and drought related issues.
- ❖ I'm able to share long range weather forecasting information with co-workers, who have an interest in grazing.
- ❖ Useful for my own knowledge - good background information that could be used for water management in the future.
- ❖ Gives me a broader overview of the current situation and information for future planning.
- ❖ Extent of drought beyond my own state
- ❖ Being introduced further to the drought.gov web site made me realize how much good information was there for one stop shopping.

- ❖ Using gained information in colleague discussions
- ❖ Greater awareness of drought status & outlook
- ❖ Raise awareness, provide a lot of information and statistics

Future Plans

These webinars will continue, at least monthly, as long as extreme and exceptional drought remains mired in the region or as long as high interest levels are maintained. First and foremost, this webinar series is a useful way to convey information across a wide region, so that experts in one state can share their experiences with those in another. However, we also recognize that the region is beset by many different types of hazards beyond drought – severe storms, hurricanes, floods, winter storms and more. Just as we have learned from the experience with these drought webinars, there is likely an unmet need for conveying information surrounding these other hazards.

We posed a question on the survey to ask whether or not the topics should be broadened beyond drought (Figure 5). Seventy-one percent of those who responded to the question indicated a preference for keeping these focused on drought, either because of the large volume of material yet to cover or because they are not interested in these other topics. However, nearly one-third of respondents indicated an interest in other topics. Of these, the topics of climate change impacts in the region and extreme weather events were mentioned. Other suggestions were more focus on El Niño and new research. Therefore, this team will look at ways to supplement the existing webinar

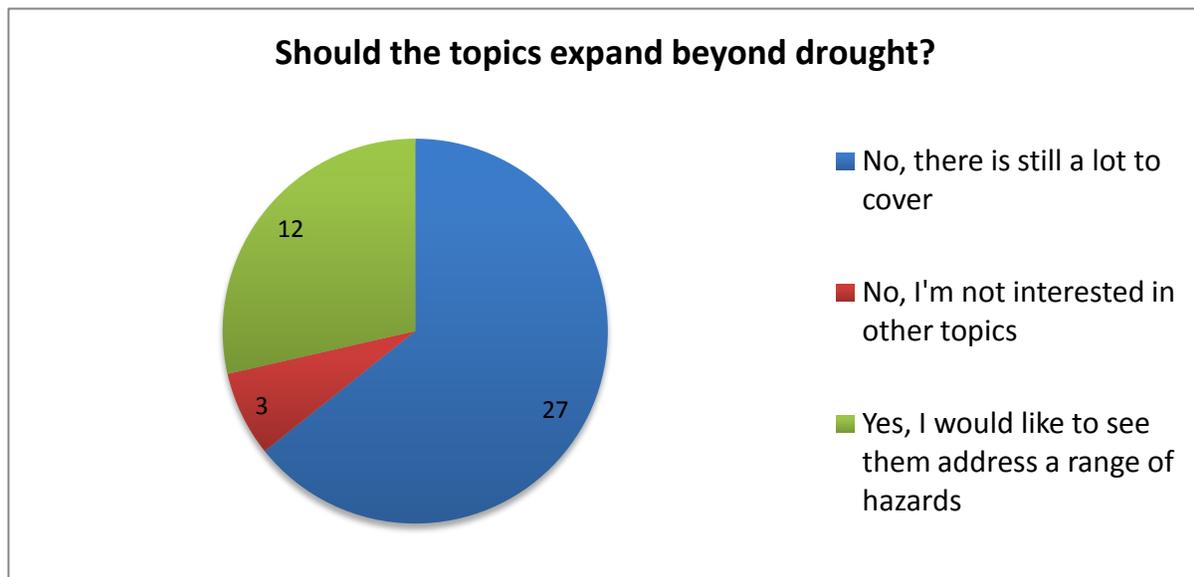


Figure 5. The number of respondents who indicated whether or not the topics should be expanded beyond drought.

series with one that supports these other interests and constituencies.

A question about other methods to support the use of drought information was included. In response to the question "Are there other activities beyond webinars that SCIPP/NIDIS/NOAA should consider to provide information and to help decision-makers prepare for and respond to drought?" there was overwhelming support (78%) for creation of tip sheets on how drought affects different activities. Online tutorials on monitoring and products also ranked highly (58%) with reasonable interest also in in-person instructional workshops (20%) and town-hall meetings (22%).

Some comments offered suggestions for future webinar topics or related activities. These included:

- ❖ Landscape recovery for not only forage but forestry and urban landscapes.
- ❖ Online courses about drought and other natural hazards.
- ❖ NCAR climate models show drought continuing in US and most mid latitude regions through end of century. Possibly focus more on long term planning of ground water issues as dependence on aquifers increases.

Respondents were also given an opportunity to post general comments about the conduct of the webinars or the needs for additional information. Suggestions included:

- ❖ Seek a wider audience for current product
- ❖ Answer the audiences questions and circulate them after any webinar
- ❖ Work with presenters to make sure they don't have their microphone level set so loud it over modulates and distorts their voice.
- ❖ Shorten the drought briefing, as we get that other places as well, and spend more time on the focus topic.
- ❖ Keeping them short makes them easier to participate in, especially if we are on a shift.

Lastly, a number of respondents offered comments indicating that they liked the way the webinars were conducted. In particular, one respondent wrote "Thank you for the involvement of the presenters and their willingness to be prepared and provide quality discussions." That sentiment is echoed here heartily. These webinars would not be possible without the range of expertise of the presenters and their willingness to fit this into an already-burdened schedule as they are, in many cases, responsible for managing their agency operations during the drought. Presenters have included professional associations, water districts, Cooperative Extensions, large federal agencies, and many state climatologists.

As much as any one of these has contributed, the involvement of the National Drought Mitigation Center deserves special recognition. They, particularly Brian Fuchs and Mark Svoboda, have provided the drought overview and outlook on each of these webinars,

developed new products in support of the regional assessment, and assisted with the survey design. Preparing for these webinars every two weeks involves a great deal of time and coordination, yet they have done this for every single one.

Beyond the presenters, we would also like to acknowledge the individuals who participate in these webinars. While drought is a central focus for many of our organizations, there are so many others for whom drought is yet one more thing demanding attention on an already full agenda. For these individuals to take an hour every couple of weeks to join in is a tremendous effort for which we are truly appreciative.