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1 ***Climate Matters: A comprehensive educational resource program for broadcast***
2 **meteorologists.**

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Climate Matters: A comprehensive educational resource program for broadcast meteorologists.

Global climate change is influencing the weather in every region of the United States, often in harmful ways, and these impacts are projected to become more severe over the coming decades. Increases in extreme weather events, and changes in local climate, can have important consequences for human health and safety, agriculture, water resources, transportation, energy supplies, and the resilience of ecosystems. Yet, most Americans view climate change as a threat that is distant in space (i.e., not here) and time (i.e., not now). Whether they recognize it or not, members of the public, policymakers, business managers, and other professionals make important climate-dependent planning decisions (e.g., where to purchase a home, how to ensure the adequacy of water supplies, or how to power a manufacturing plant that is slated for renovation). To manage risk and avoid harm, it is imperative that these decisions be made with the best possible understanding of changing climatic conditions.

Broadcast meteorologists are ideally positioned to educate Americans about the current and projected impacts of climate change in their community. First, they have tremendous reach: Local TV news remains a top news source for American adults, and more than half (58%) say they watch local news primarily for the weather forecast. Plus, the audience for weather on digital platforms is growing rapidly -- by 7.2% in 2012. Weathercasters' audiences are not only large, they are diverse, spanning all educational, income, and racial/ethnic groups. Second, weathercasters are trusted sources of information about climate change, second only to climate scientists and government science agencies. Weather is not political, so weather information is not confused with political opinion. Third, many weathercasters are scientists themselves, having

1 trained in meteorology or other relevant sciences and are highly skilled science communicators.
2 They are expert at appropriately simplifying complex scientific information for the benefit of the
3 public. Fourth, most weathercasters say they are interested in informing their viewers about the
4 local impacts of climate change, and that it is appropriate for them to do so. Fifth and last, when
5 people understand that they have personally experienced climate change, they are more likely to
6 take the issue seriously. Most people who feel they have personally experienced climate change
7 cite changes in weather patterns and seasons in their community as the ways in which they have
8 experienced it.

9 Yet, broadcast meteorologists say they experience significant barriers in reporting on climate
10 change, including a lack of time to prepare and air stories, lack of access to high quality content
11 that can be rapidly used in their broadcasts, social media and community presentations, and a
12 lack of access to climate scientists for advice and interviews.

13 To test the premise that TV weathercasters can be effective climate educators, in 2010 George
14 Mason University, Climate Central, and WLTX-TV (Columbia, SC) developed and pilot-tested
15 *Climate Matters*, an occasional series of short segments intended to make clear the local impacts
16 of climate change. From viewers' point of view, *Climate Matters* was well received; the
17 broadcast segments were something audience members had never seen before – locally relevant
18 information about climate change. From WLTX's point of view – led by Chief Meteorologist
19 Jim Gandy and his news director Marybeth Jacoby – the *Climate Matters* collaboration allowed
20 them to cover the local impacts of climate change in a manner that otherwise would not have
21 been possible. During the first year, they aired more than a dozen stories and posted related web
22 content. Indeed, WLTX is so pleased with *Climate Matters* – now in its 4th year – that it
23 continues to actively use new *Climate Matters* content, and its market share for news has grown.

1 A brief NOAA video of Gandy and Jacoby talking about their experience with *Climate Matters*
2 can be seen here: <http://www.climate.gov/news-features/videos/climate-matters>. To formally
3 evaluate *Climate Matters*, we conducted pre- and post-test surveys of local TV news viewers in
4 Columbia. We found that, after one year, WLTX viewers had developed a more science-based
5 understanding of climate change than viewers of other local news stations. In short, the pilot-test
6 confirmed our two key premises: TV weathercasters can report on the local implications of
7 climate change; and when they do, their viewers learn.

8
9 In 2012, Climate Central expanded the program to 10 broadcast meteorologists and weekly
10 delivery of localized climate change content. With the goal of recruiting 50 additional
11 weathercasters, in 2013 the program was made available to any interested broadcast
12 meteorologist in the U.S. By the end of 2013, over 100 weathercasters had enrolled, including
13 36% of all weathercasters in three Virginia media markets who were specifically invited to
14 participate as part of a statewide pilot test. The number of participating weathercasters
15 nationwide grew to nearly 200 by the end of 2014, including 35 weathercasters from Spanish
16 language TV stations; Spanish translations of *Climate Matters* were made available as of May
17 2014. As of July 2015, over 250 local weathercasters (at 185 stations, in 105 markets) are
18 participating in the program. This rapid growth in enrollment in *Climate Matters* confirms what
19 surveys of TV weathercasters had previously suggested -- large numbers of weathercasters are
20 interested in informing their viewers about the local relevance of climate change.

21 Meteorologists who participate in the *Climate Matters* program receive a wide range of material
22 and resources to help them communicate the science and local impacts of climate change. A
23 team of meteorologists, research scientists, data analysts, journalists, and creative designers at

Climate Central produces a weekly content package on various climate change topics. Each Climate Matters package features customized analyses produced into TV-ready visuals that are localized to specific markets when possible (see an example in Figure 1, and its use by Phoenix Arizona broadcast meteorologist Amber Sullins in Figure 2), a detailed write up on the latest science behind the weekly topic, climate change information from NASA and NOAA, and a round-up of climate science research and news.

Each *Climate Matters* package is produced to be timely and relevant (i.e., newsworthy from a meteorologist's perspective). Packages typically focus on one of five story genres including: breaking news (such as 2014 as the hottest year on record); current large-scale weather or climate events (such as drought in the West); a seasonal trend or event (such as the lengthening frost-free season); a tie-in to a thematic event (such as a holiday); or release of an important climate science report (such as the National Climate Assessment).

Since broadcast meteorologists' role extends beyond the TV weathercast, *Climate Matters* includes online interactives that can be embedded on websites and shared through social media, already crafted tweetable facts, and a range of resources that can be used in community outreach presentations. In addition, Climate Central provides video and production support to meteorologists interested in producing climate change stories and specials.

Climate Matters also offers continuing education opportunities in the form of webinars (10-12 per year) and workshops (one each year at both the AMS Broadcast and NWA Conferences). These events give TV meteorologists an opportunity to learn from and work with climate experts, while earning credits toward AMS and NWA certifications. All events are archived at www.climatecentral.org/workshops-and-webinars.

Climate Matters is a comprehensive climate change resource for broadcast meteorologists. All current and past *Climate Matters* materials are available online at www.climatecentral.org/climate-matters, and in Spanish at www.climatecentral.org/climate-matters-spanish-edition. The *Climate Matters* Facebook page includes examples of how the materials have been used in recent broadcasts by a range of weathercasters: <http://www.facebook.com/climate.matters/videos>.

With funding from the National Science Foundation, we are now conducting surveys and other research activities to better understand the needs of broadcast meteorologists, and news viewers, with the aim of improving both the usability and educational effectiveness of *Climate Matters* materials. We are also conducting a nationwide impact evaluation of *Climate Matters* so as to assess its contribution, if any, to improving public understanding of the local relevance of climate change.

As a resource that is available to all broadcast meteorologists in the United States, *Climate Matters* serves a vital and emerging need in broadcast meteorology. Meteorologists have long played an important role in warning the public about dangerous weather, helping them to prepare, and keeping them safe. With serious new dangers emerging as a result of climate change, meteorologists can play an important new role in helping families, businesses and communities prepare, and stay safe.

Note

Broadcast meteorologists interested in more information about *Climate Matters* should contact the first author at bplacky@climatecentral.org.

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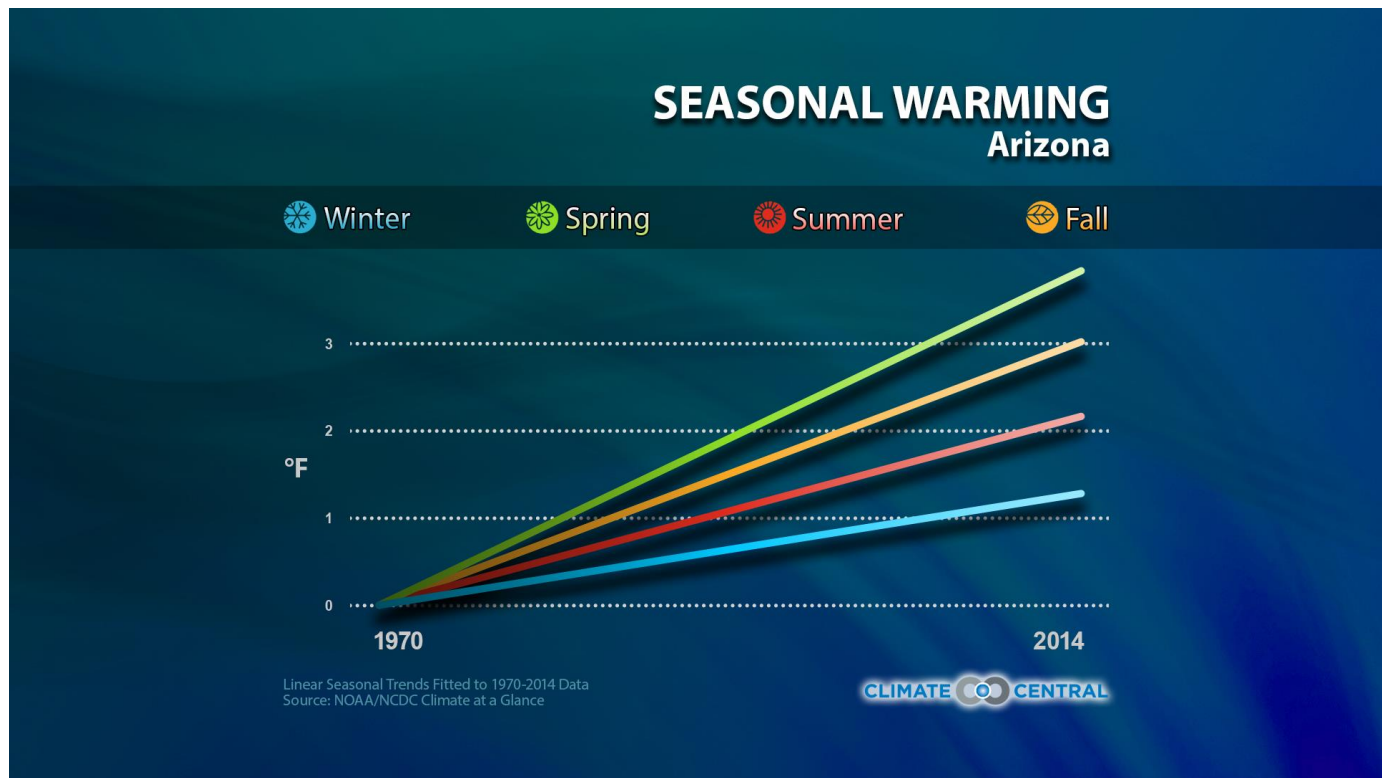
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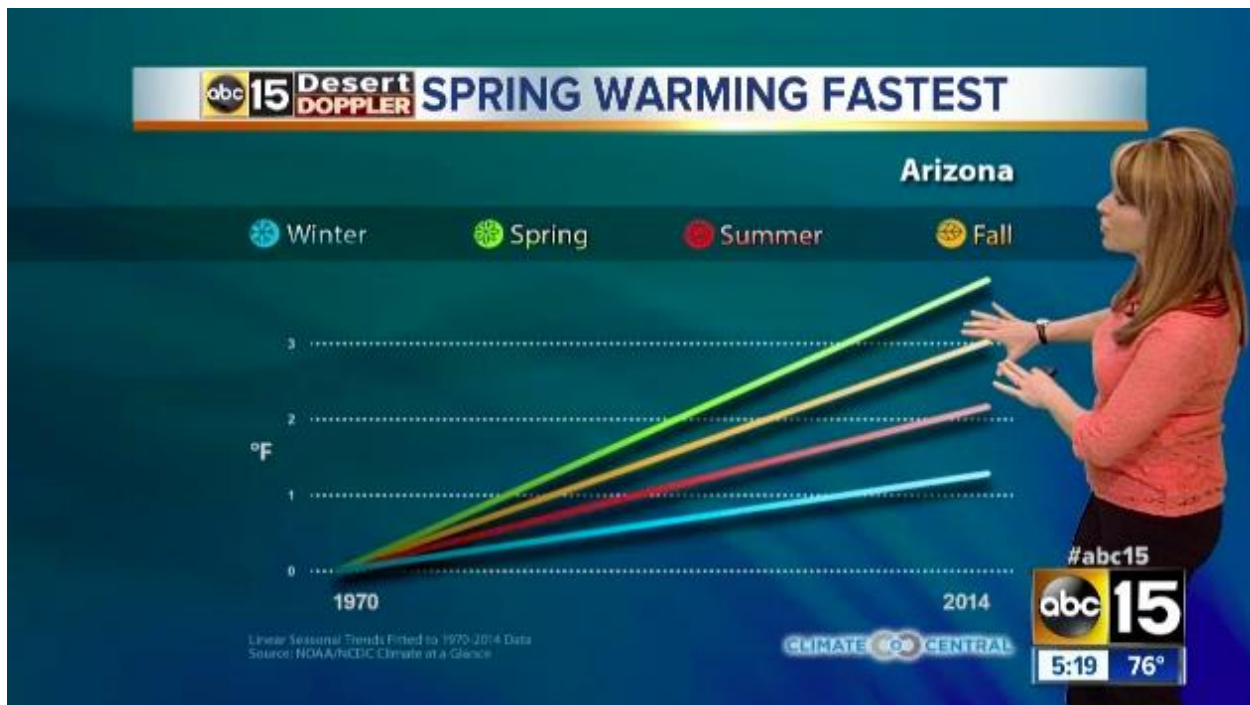
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- 1 Figure 1. An example of a Climate Matters graphic: seasonal warming.
- 2 Figure 2. Broadcast meteorologist Amber Sullins presenting the seasonal warming graphic.
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1 Figure 1. An example of a Climate Matters graphic: seasonal warming.

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1 Figure 2. Broadcast meteorologist Amber Sullins presenting the seasonal warming graphic.