CHANGE IT UP MARYLAND!

July/August Guide—

Stay Cool as Maryland Heats Up

CLIMATE COMMUNICATION CONSORTIUM OF MARYLAND

The July/August guide was written by Ashley Strobridge and Colin Nackerman, summer interns with the Climate Communication Consortium of Maryland and undergraduates in George Mason University's Environmental and Sustainability Studies program.

Cover photo credit: "Sky in the lake" by Psycho Delia, Creative Commons license

Special thanks to Julie of Julie A. Images for providing photos for our social media graphics this month. http://www.julieaimages.com/

And a very special thanks to Slim, Danni Starr of the Kane Show and their daughter, MJ for their help as our featured local celebrities this month!

Stay Cool as Maryland Heats Up

While the summer of 2014 has been surprisingly cool, over time, the frequency, duration, and severity of extreme heat events will likely increase due to climate change, especially during the typically hottest months of the year – July and August. Indeed, the U.S. National Climate Assessment cited prolonged periods of heat as one of the types of extreme weather events with links to climate change that are already occurring in the United States.[1] However, there are simple steps you can take to prepare and keep you and your family safe when the temperatures rise.

The messages for August encourage Marylanders to be conscious of the danger of extreme heat, and learn how to take simple precautions to not only keep themselves safe, but also how to care for those who are most vulnerable to the heat – Marylanders who are exercising outdoors, who are pregnant, or who are young, elderly or in poor health. Studies suggest that framing the impacts of climate change as a human health issue increases public engagement.[2] Thus, extreme heat offers an important opportunity to draw connections between the effects of climate change and public health.

The Kane Show radio host Danni Starr and her family tell this month's story about extreme heat. Danni is a Marylander, and a self-described "wife, mommy, and talker." She can be heard from 6 a.m.-10 a.m. weekdays on Hot 99.5, 93.3 WFLZ, Z 104.3, 101.9 Radio Now, and KISS 100. Danni has a 2 ½-year-old daughter and is 7 months pregnant, and is concerned about ensuring that her entire family stays healthy, and safe from the heat. She urges all Maryland families to know the signs of heat exhaustion and stroke, and what they can do to protect themselves. Danni, her daughter, and her husband – a DJ and track and field coach – are all featured in the social media visuals and poster.

Additionally, there are concrete actions that homeowners can take to cool their homes, and lessen their energy costs in keeping cool. Light-colored, or "cool" roofs, are one way to decrease the

Key messages:

- Stay cool as Maryland heats up
- Climate change will likely cause more days of extreme summer heat.
- Extreme heat is especially dangerous for people exercising, pregnant women, young children, senior citizens, and those in poor health.
- Stay safe this summer: Drink water, stay in the shade or air conditioning, and check on your neighbors, especially those who live alone.

The facts:

- Climate change has already roughly doubled the probability of extreme heat events; high heat incidents are projected to continue to rise, including in Maryland (National Climate Assessment; Maryland Commission on Climate Change)
- Extreme heat is the top weather-related cause of death. Excessive heat typically claims more lives each year than floods, lightning, tornadoes and hurricanes combined. (NOAA) According to NOAA and Weather.com, on average, 1,500 people die due to extreme heat in the United States every year.

[1] Melillo, Jerry M., Terese (T.C.) Richmond, and Gary W. Yohe, Eds., 2014: *Climate Change Impacts in the United States: The Third National Climate Assessment*. U.S. Global Change Research Program.

[2] Maibach, E., Nisbet, M., Baldwin, P., Akerlof, K., & Diao, G. (2010). Reframing climate change as a public health issue: An exploratory study of public reactions. *BMC Public Health, 10*, 299-309.

amount of heat energy that is absorbed by homes. See our August fact sheet for ways to cool your roof, reduce your contributions to the "heat island effect," and save on air conditioning.

Extreme Heat and Climate Change in Maryland

Global average temperatures have increased 1.4 degrees Fahrenheit over the last 100 years, with more frequent and severe heat waves linked to rising global temperatures.[3] In Maryland, the average temperature has risen even more — approximately 1.8 F since 1895 (see Figure 1). As the Maryland Commission on Climate Change report explained, the increase in extreme heat events, and heat-related illness, is projected to be substantial, especially from the midcentury onward with summer temperatures rising by as much as 9°F and heat waves extending through the summers.[4] Under the worse-case scenario in which climate-change causing emissions remain high, Maryland is projected to experience an average of 24 days per summer exceeding 100°F.

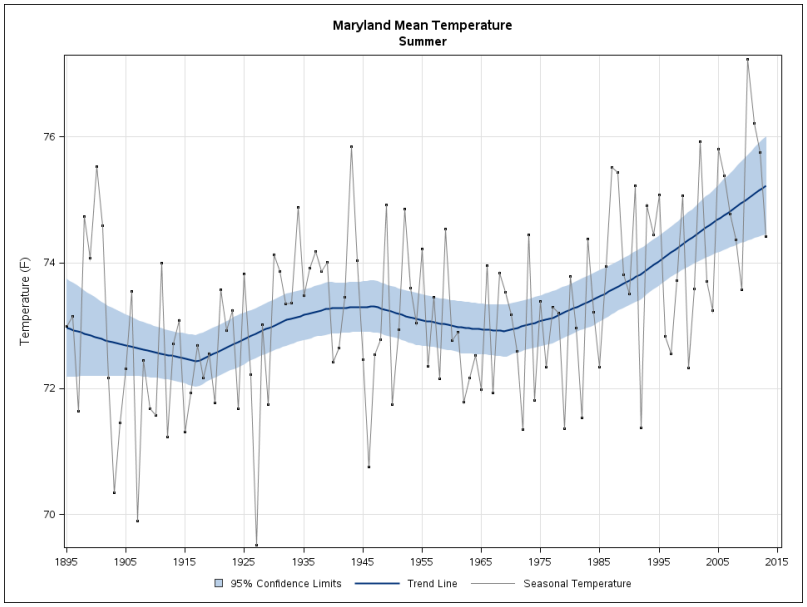


Figure 1. Maryland Summer Mean Temperature 1895-2013. Data retrieved from the National Climate Data Center (NCDC) of the National Oceanic and Atmospheric Administration. Available at from http://www.ncdc.noaa.gov/temp-and-precip/state-temps/

[3] http://www.epa.gov/climatechange/basics/facts.html

[4] Boesch, D. (Ed). (2008). *Chapter Two. Comprehensive Assessment of Climate Change Impacts in Maryland.* Scientific and Technical Working Group, Maryland Commission on Climate Change. Available at http://www.mde.state.md.us/programs/Air/ClimateChange/Documents/FINAL-Chapt%202%20Impacts_web.pdf

Temperature (°F)

Relative Humidity (%)	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136
45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
50	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
55	81	84	86	89	93	97	101	106	112	117	124	130	137			
60	82	84	88	91	95	100	105	110	116	123	129	137				
65	82	85	89	93	98	103	108	114	121	128	136					
70	83	86	90	95	100	105	112	119	126	134						
75	84	88	92	97	103	109	116	124	132							
80	84	89	94	100	106	113	121	129								
85	85	90	96	102	110	117	126	135								
90	86	91	98	105	113	122	131									
95	86	93	100	108	117	127										
100	87	95	103	112	121	132										

Likelihood of Heat Disorders with Prolonged Exposure or Strenuous Activity

Caution | Extreme Caution | Danger | Extreme Danger

Figure 2. NOAA's National Weather Service Heat Index. Retrieved from http://www.nws.noaa.gov/om/heat/index.shtml

It's Not Just the Heat, It's the Humidity, Too

The "Heat Index" is the temperature in Fahrenheit indicating what it really feels like outside as opposed to what the thermometer actually reads. In the summer, the index is frequently higher than the thermometer because it takes into account both the humidity level and the temperature, which together increase the exposure danger to people and pets. It is important to note that exposure to full sunshine can add up to 15°F to the index numbers. Strong winds, particularly with very hot, dry air, can be extremely hazardous. The index chart zone above 105°F (orange or red) shows a level that may cause increasingly severe heat disorders with continued exposure or physical activity.

What Heat Does to Your Health

When in an extremely hot and humid environment, your body's ability to cool down is compromised. Body temperature can rise rapidly in these conditions; very high body temperatures may damage the brain or other vital organs, and if too much fluid or salt is lost through dehydration or sweating, you can even develop heat-related illness, which can be fatal. Each year, Marylanders die from extreme heat. (See Figure 2) The key is to be able to recognize the symptoms of heat exhaustion and heat stroke, and take steps to prevent them. Heat stroke is deadly, but heat

exhaustion is also an important danger to be aware of, as it can easily lead to heat stroke if you do not take care of yourself properly using the steps listed below.

Heat exhaustion symptoms:

- Heavy sweating
- Weakness
- Cold, pale, and clammy skin
- Fast, weak pulse
- Nausea or vomiting
- Fainting

What you should do:

- Move to a cooler location.
- Lie down and loosen your clothing.
- Apply cool, wet cloths to as much of your body as possible.
- Sip water.
- If you have vomited and it continues, seek medical attention immediately.

Heat stroke symptoms:

- High body temperature (above 103°F)*
- Hot, red, dry or moist skin
- Rapid and strong pulse
- Possible unconsciousness

What you should do:

- Call 911 immediately — **this is a medical emergency**.
- Move the person to a cooler environment.
- Reduce the person's body temperature with cool cloths or even a bath.
- Do **NOT** give fluids.

Centers for Disease Control and Prevention, available at http://www.cdc.gov/extremeheat/warning.html

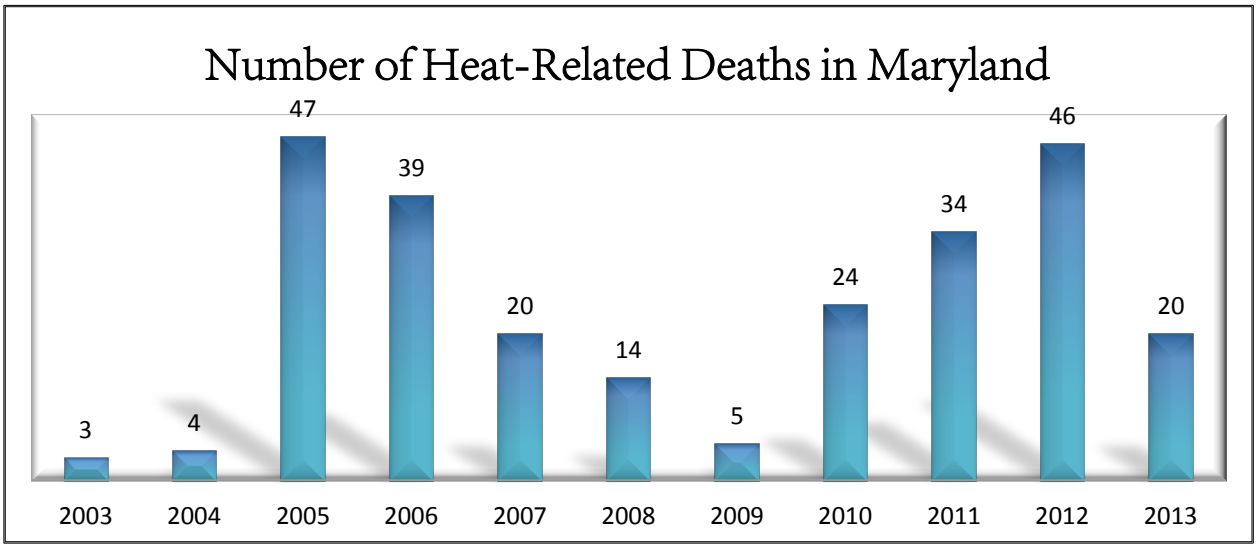


Figure 2. Numbers of deaths due to heat-related illness in Maryland (~June-September) obtained from Maryland Department of Health and Mental Hygiene. Available at http://dhmh.maryland.gov/extremeheat/reports/SitePages/Home.aspx

High heat is a risk for everyone, but it is a particular risk to people who already have other demands on their health. According to NOAA and the CDC, the people most at risk include:

- People 65 and older
- infants and children
- pregnant women
- people with chronic medical conditions (like heart disease or lung problems)
- those taking prescription drugs
- outdoor workers
- people without access to air-conditioning (low income residents)
- people living in cities
- athletes

Generally, the rule of thumb to avoid heat illness is to stay cool, stay hydrated, and make sure that others around you who also may be at risk are also taking precautions. Parked cars can be a particular risk to everyone. A Stanford University School of Medicine study conducted on the temperature range in parked cars showed that a car's interior can heat up an average of 40°F within an hour. Other studies have shown that even with the windows cracked, the interior of a parked car can heat up 20 degrees in a mere 10 minutes. Never leave a pet or child in a parked car, and immediately report any instances, even if a window is cracked. In Maryland it is illegal to leave pets in a parked car when it endangers their health or safety.

Stay cool:

- Wear loose-fitting, light-weight, and light colored clothing.
- Stay in air-conditioning as much as possible, and if you must go outside, take breaks in air-conditioned buildings.
- Take cool showers or baths.
- Stay in the shade; avoid direct sunlight.
- Do not rely on a fan as your only means to cool down.
- Never sit in a parked car when it's hot outside.

Stay hydrated:

- Drink plenty of cool liquids. Iced drinks are not as useful because they slow down drinking.
- Don't wait until you're feeling thirsty; keep drinking throughout the day.
- Avoid caffeinated beverages, like coffee, tea, and soft drinks, and alcoholic beverages because they can actually cause you to urinate more than you're drinking, resulting in dehydration.
- If you must exercise outdoors when it is hot and humid, drink 16-32 ounces, or two to four glasses, of cool liquid per hour.

Watch out for others who may be at risk:

- Check on neighbors and loved ones, especially the elderly and those who live alone.

Getting Help Staying Cool

- **Cooling Centers:** If you don't have access to air conditioning, you can always find a local cooling center in your area. Go to the following website to find contact information on where to find your local Maryland cooling centers: http://dhmh.maryland.gov/extremeheat/Documents/Maryland-CoolingCenterContacts.pdf
- **Public Fountains and Pools:** Waterfront Park in Baltimore and Silver Spring Plaza in downtown Silver Spring offer free fountains that children and adults alike can play in to cool down, and if you want something a little more extensive, try the Water Park at Bohrer Park in Gaithersburg, which has a walk-in pool and a spiral waterslide. There are also various other public pools throughout Maryland with daily admissions fees starting at $2 and ranging upward from there. Please find your local county's webpage for more information on finding the closest pool to you.
- **Low Income Assistance:** If you need help paying for air conditioning, contact the Low Income Home Energy Assistance Program (LIHEAP) for help with your utility bills so you can stay cool in the hot summer months. You can reach them by phone at this number: (202) 401-9351, or by email at LIHEAPconsumers@acf.hhs.gov. There is also utility assistance for Maryland residents through the Maryland Energy Assistance Program. Find information on MEAP, including applications, contact information, and how to qualify here: http://www.dhr.state.md.us/blog/?page_id=4326. You can also call 1 (800) 352-1446.

Keeping Cities Cool

In cities, dark surfaces such as asphalt store heat from the sun's rays during the day and release it throughout the day and evening, creating an urban heat-island effect that causes cities to become hotter than suburban and rural areas. In cities there are fewer trees, parks, and green spaces, which cool the air, and more dark, exposed surfaces like rooftops and roads, which store heat from the sun and increase the temperature of the air. Ways to reduce the heat-island effect include installing a cool roof by painting your rooftops white or silver, planting more trees and greenery, or creating green roofs. You can also take civic action and encourage your city and community governments to take these steps as well.

Figure 4. Example of a green roof. Photo courtesy of CitiesAlive at greenroofs.org

So what is a green roof? Green roofs are those that have plants growing on them, supported by layers of filters and soil. Green roofs provide insulation for a building, cutting down on heating and air conditioning costs by providing a cooling effect in the summer, and a warming effect in the winter. Green roofs also filter rain water, which cuts down on the storm-water run-off

problems that occur in cities where there is little greenery. For information on installing green roofs in Maryland, please see: http://www.greenroofs.org/index.php/find-greenroofprofessional.

Figure 6. Volunteers at Civic Works installing a cool roof in Baltimore City. Photo courtesy of Civic Works.

What is a cool roof? A cool roof is one that is lighter in color and more reflective of light than a traditional roof. This reflectivity means that a cool roof stays cooler, and doesn't heat up your home, or the surrounding area, as much as a traditional roof does. According to Steven Chu, Nobel prize-winning physicist and former U.S. Energy Secretary, lightening roofs and roads in urban environments would offset the global warming effects of all the cars in the world for 11 years. There are several types of cool roofs, from a white painted coating (for flat roofs); to tiles or asphalt shingles for pitched roofs that look no different than traditional dark roofs, but they contain pigments that reflect solar energy in the infrared spectrum, and so stay up to 100F degrees cooler than dark roofs.[5]

If you are interested in installing a cool roof in Maryland, or simply want to know more, you can call the Energy Outreach department at Civic Works, a non-profit in Baltimore, at this number: (410) 929-6139. You can also reach Civic Works by email at: info@retrofitbaltimore.org. Also, please see our fact sheet on the different types of cool roofs for more information on which cool roof would be best suited to your particular roof type.

What Marylanders Think

In a survey of Maryland residents conducted in the summer of 2013, many people identified threats to their health as one of the most important consequences of climate change.[6]

- Just over half of Marylanders say that heat stroke (52%) will become a more frequent problem due to climate change.
- A large majority of Marylanders (79%) say that over the past year, extreme weather posed a health risk to people in their community, with 38% describing the threat as moderate or major.

[5] Energy Star: http://www.energystar.gov/certified-products/detail/roof_products

[6] Akerlof, K., Maibach, E. W.,& Mitchell, C.S. (2013). Public health, energy and climate change: A survey of Maryland residents, summer 2013. Fairfax, VA: Center for Climate Change Communication, George Mason University; Baltimore, MD: Maryland Department of Health and Mental Hygiene.

Getting Started

☐ **a. Look for the monthly toolkit before the beginning of each month.** You will be sent an email with links to the toolkit, and files with your own organization's logos appended to the graphic materials.

Monthly Toolkit Locations

climatemaryland.org

climatechange.maryland.gov

☐ **b. Ensure your communication staff have copies of the toolkit files, and instructions for their use.**

☐ **c. Adapt text, such as press releases, for your own organization's use, and identify a list of media contacts for the release.** If you need assistance generating a media list, please let us know at CCCoM@gmu.edu.

☐ **d. Follow the monthly calendar of activities provided in the toolkit.**

☐ **e. Implement any additional coordinating activities.**

☐ **f. Track your activities.** Use this online form to submit your examples to the Consortium.

Contact Us

CCCoM@gmu.edu

703.993.6667

Getting Help

As always, if you have questions about the use of this guide and the monthly toolkit materials, please contact us, we are here to help.

Calendar of Activities

July/ Aug	**Social Media** *Hashtags: #StayCoolMD, #CoolRoofs, #GreenRoofs, #MDPlantsTrees, #MDclimate, #changeitupMD, #ActOnClimate, #climatechange*
Week 1	**Emphasize climate change's role in hot weather and the need to stay cool during extreme heat.** **Twitter:** • *#StayCoolMD! Summer months are heating up, and will likely get hotter with climate change! #ActOnClimate #MDClimate (link to factoid)* • *#ClimateChange will likely lead to more intense and frequent extreme heat days, know your strategy to #StayCoolMD #MDClimate*
	Facebook: [Download visuals from toolkit files] Send messages to your members and other stakeholder organizations. Ask them to Like and share your messages. • *Beat the Heat MD! July and August are the hottest months of the year, and likely to get hotter with the effects of climate change! So know how to stay cool:* *1. Wear loose-fitting, light-weight, and light colored clothing* *2. Stay in air-conditioning as much as possible* *3. Take cool showers or baths* *4. Stay in the shade; avoid direct sunlight* • *Stay Cool Maryland! #ClimateChange will likely lead to more intense and frequent extreme heat days, so know your strategy to Beat the Heat!*
Week 2	**Emphasize Tips for how to stay cool in extreme heat** **Twitter:** • *In extreme heat, drink water, even when you're not thirsty! #climatechange #ActOnClimate* • *Extreme heat is the #1 weather related killer in the U.S. and MD. Stay safe and #actonclimate. #climatechange http://1.usa.gov/1ehFi4b* • *#StayCoolMD Never leave a pet or child in a parked car on a warm day! #ActOnClimate #climatechange http://1.usa.gov/1qycU3z* • *In extreme heat, know where to go: Cooling centers, public fountains, public pools! #climatechange #staycoolMD #ActOnClimate* • *In extreme heat, find your local cooling center: http://1.usa.gov/1kb3U6l #ActOnClimate! #climatechange*

• *As summer heats up, stay in the shade, and wear light and loose-fitting clothing! #ActOnClimate #climatechange*

Facebook: [Download visuals from toolkit files] Send messages to your members and other stakeholder organizations. Ask them to Like and share your messages.

- *Stay cool Maryland! In extreme heat events, drink plenty of water, even when you're not thirsty.*
- *Extreme heat is the #1 weather related killer in the U.S. and in MD. Stay safe this summer by knowing the signs of heat stroke and heat exhaustion. http://1.usa.gov/1ehFi4b*
- *Stay cool Maryland! Never leave a pet, child, or anyone in a parked car on a warm day! http://1.usa.gov/1cpukaW*
- *Stay cool Maryland! Know where to go: Cooling Centers, public fountains, public pools! Beat the Heat Maryland! http://1.usa.gov/1qycU3z*
- *Stay Cool Maryland! In extreme heat, stay in the shade, and wear light and loose-fitting clothing! Beat the Heat Maryland!*

Week 3

Emphasize ways to prevent extreme heat and the heat island effect

Twitter:

- *Did you know? Cities are 5-22 degrees hotter than rural areas. Find out how to counter the city heat island effect http://1.usa.gov/1m6c0Zt.#changeitupMD #ActOnClimate*
- *Did you know? Installing a cool roof can keep your home and neighborhood cooler during the summer. #MDCoolRoofs #ActOnClimate #changeitupMD (link to fact sheet)*
- *Did you know? Green roofs help keep your home cooler in the summer and warmer in the winter! #MDGreenRoofs #ActOnClimate http://1.usa.gov/1rSC7XD*
- *Did you know? You can counter the heat island effect by planting trees. http://1.usa.gov/1kbll6T #ActOnClimate #MDPlantsTrees*

Facebook [Download graphic from toolkit files] Send messages to your members and other stakeholder organizations. Ask them to Like and share your messages.

- *Did you know? Cities are 5-22 degrees hotter than rural areas. Find out how to counter the city heat island effect: http://1.usa.gov/1m6c0Zt Change it up Maryland!*

	• *Did you know? Installing a cool roof can keep your home and neighborhood cooler during the summer. Cool Roofs for Maryland! Change it up Maryland! (link to fact sheet)* • *Did you know? Green roofs help keep your home cooler in the summer and warmer in the winter! Green Roofs for Maryland! Find out more: http://1.usa.gov/1rSC7XD* • *Did you know? You can counter the heat island effect by planting trees. Trees and vegetation lower surface and air temperatures by providing shade and through evapotranspiration. http://1.usa.gov/1kbll6T*
	Instagram: Ask your members to take photos of themselves on a green roof or cool roof, or planting trees, with the appropriate sign reading either #GreenRoofs, #CoolRoofs, or #MDPlantsTrees
Week 4	**Record your month's activities, and send them to us at CCCoM@gmu.edu or record them online at** https://docs.google.com/forms/d/1HE_ArJe8YxKMfOP_SobS5DBqaX2eMzFyEsNlt6C8t7I/edit

Facebook Graphic Visuals

Danni Starr and her family are featured this month in the social media visuals and posters. See climatemaryland.org for those materials.

Posters

The Consortium will provide digital versions of both 8.5x11 and 11x17 posters that will be labeled with your organizations logo and website URL. Placing the posters in public areas like libraries, coffee houses, and university campuses will increase the reach and frequency of exposure of these messages in places that may attract audiences that are harder to reach by other means. The posters may also provide backdrops for media photography in coverage of any associated stories.

What Next?

We are asking member organizations to communicate at least once – or better yet, multiple times, in multiple ways – using these materials.

Appendix A—Message and supporting citations

Extreme heat waves: **Climate change will likely create more extreme heat waves in Maryland. Heat waves are especially dangerous for our young children and senior citizens, and anyone with health problems.**

Supporting citations

Health risks due to heat stress are very likely to increase. Heat waves are projected to greatly increase risks of illness and death before the end of the century, with an average of 24 days per summer exceeding 100°F in the worst scenario. – Boesch, D. F. (ed.). (2008). *Global warming and the free state: Comprehensive assessment of climate change impacts in Maryland. Report of the Scientific and Technical Working Group of the Maryland Commission on Climate Change.* Cambridge, MD: University of Maryland Center for Environmental Science. Retrieved from http://www.umces.edu/sites/default/files/pdfs/global_warming_free_state_report.pdf and http://www.mde.state.md.us/programs/Air/ClimateChange

Heat is the leading cause of deaths related to weather in the United States. – U.S. EPA. (April 2010). *Climate change and health effects.* Washington, DC: Office of Air and Radiation, U.S. Environmental Protection Agency. Retrieved from http://epa.gov/climatechange/Downloads/Climate_Change_Health.pdf

Heat waves increase death rates, especially in the elderly, and other susceptible populations, such as children, the mentally ill, those with pre-existing conditions like heart and lung diseases, and those who have occupations that expose them to heat stresses. -- McMichael, A. J., Woodruff, R. E., & Hales, S. (11). Climate change and human health: present and future risks. *The Lancet, 367*(9513), 859–869.

What Marylanders say

More than half of Marylanders say that heat stroke (52%) will increasingly become a health problem in the state because of climate change. -- Akerlof, K., Maibach, E. W., & Mitchell, C. S. (2013). *Public health, energy and climate change: A survey of Maryland residents, summer 2013.* Fairfax, VA: Center for Climate Change Communication, George Mason University; Baltimore, MD:

Maryland Department of Health and Mental Hygiene.

Appendix B—Survey Data, Summer 2013

Table 1 | *Personal health risks*

Below is a list of potential risks to people's health. How much of a risk do you feel each currently poses to your own health? *(Heat Waves)*

		STATE	WESTERN	CENTRAL	SOUTHERN	EASTERN
Heat waves	No risk at all	**15.1%**	19.5%	15.7%	13.7%	11.3%
	Minor risk	**30.1%**	34.4%	29.4%	29.8%	33.1%
	Moderate risk	**35.4%**	28.0%	34.5%	38.7%	37.4%
	Major risk	**16.3%**	12.5%	17.5%	15.4%	15.8%
	Don't know	**3.0%**	5.7%	3.0%	2.4%	2.3%
	Unweighted n	2092	545	663	412	472

Table 2 | *Changes in severity of community health risks*

For each of these potential health risks, would you say it has become more or less of a problem over the past several years in your community? *(Heat Waves)*

		STATE	WESTERN	CENTRAL	SOUTHERN	EASTERN
Heat waves	Much less	**5.7%**	6.8%	6.3%	4.4%	5.1%
	Somewhat less	**6.2%**	15.6%	4.8%	6.1%	6.5%
	Remained the same	**46.3%**	43.4%	44.4%	49.3%	52.1%
	Somewhat more	**26.5%**	23.2%	25.6%	29.2%	25.5%
	Much more	**9.0%**	4.6%	11.3%	6.4%	6.8%
	Don't know	**6.4%**	6.4%	7.6%	4.6%	4.1%

	Unweighted n	2092	544	659	414	475

Table 3 | *Community harms from extreme weather*

Have extreme weather events in your community made each of the following more or less common over the past several years, or have they stayed about the same?

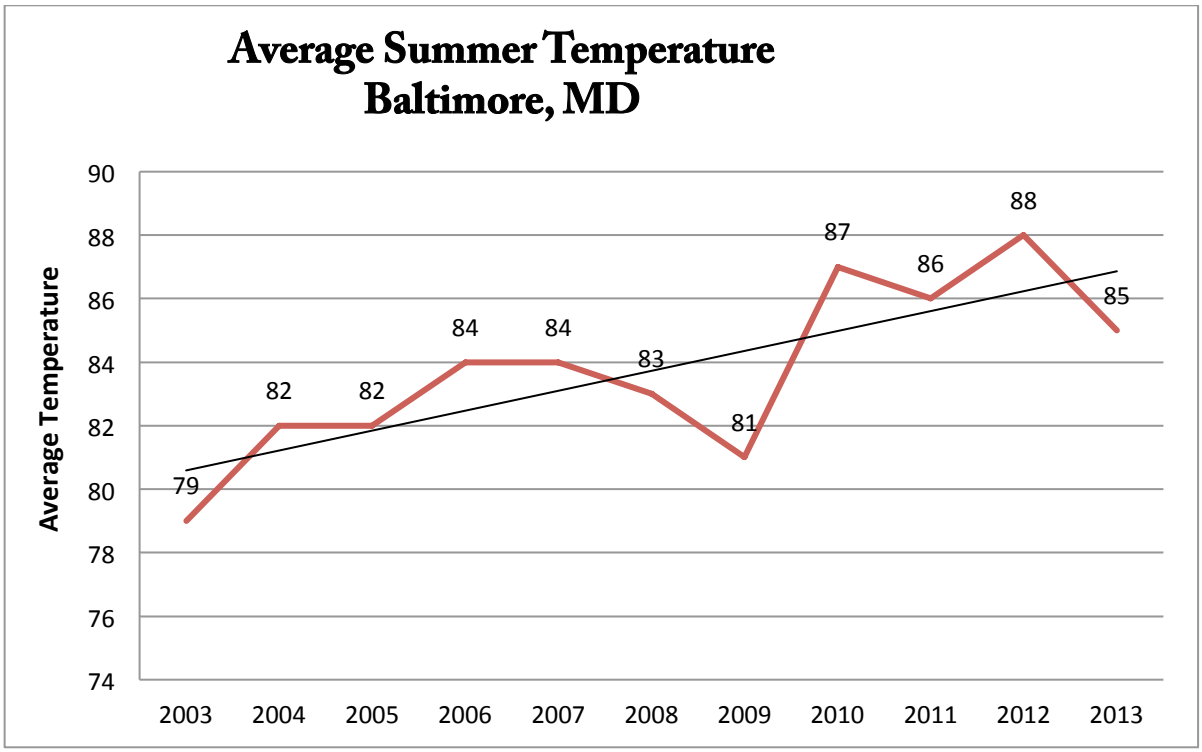
		STATE	WESTERN	CENTRAL	SOUTHERN	EASTERN
Human injuries/deaths	Much less common	**11.9%**	11.8%	14.2%	7.7%	12.4%
	Somewhat less common	**6.9%**	6.4%	5.5%	9.5%	7.0%
	Stayed about the same	**38.7%**	45.0%	40.4%	31.2%	51.5%
	Somewhat more common	**14.3%**	12.7%	15.5%	12.6%	13.7%
	Much more common	**4.9%**	8.2%	5.3%	3.5%	2.9%
	Don't know	**23.3%**	15.9%	19.0%	35.5%	12.5%
	Unweighted n	2114	550	664	419	481

Table 4 | *Types of health problems affected by climate change*

Which — if any — of the following health problems will become more common in Maryland in the future because of climate change? *(Heat stroke, sunburn)*

		STATE	WESTERN	CENTRAL	SOUTHERN	EASTERN
Heat stroke	No	**48.3%**	60.0%	46.9%	47.5%	48.6%
	Yes	**51.7%**	40.0%	53.1%	52.5%	51.4%
	Unweighted n	2126	551	671	421	483
Sunburn	No	**52.5%**	55.3%	50.4%	55.6%	51.6%
	Yes	**47.5%**	44.7%	49.6%	44.4%	48.4%
	Unweighted n	2126	551	671	421	483

Appendix C—Baltimore Summer Temperatures



Average Summer Temperature in Baltimore, MD (2003-2013). Data compiled from Wunderground.com