



July 30, 2013

Submitted via email to [Mathew.Noble@iowa.gov](mailto:Mathew.Noble@iowa.gov)

Iowa Department of Homeland Security & Emergency Management (HSEMD)  
7105 NW 70th Ave.  
Camp Dodge - Bldg. W-4  
Johnston, Iowa 50131

**Re: Comments on Iowa's 2013 Draft State Hazard Mitigation Plan**

Dear Mr. Noble:

These comments regarding Iowa's State Hazard Mitigation Plan (SHMP) are submitted by the Natural Resources Defense Council (NRDC), the Iowa Environmental Council, and the Environmental Law and Policy Center (ELPC). NRDC works on behalf of more than 1.4 million members and online activists, using law and science to ensure a safe and healthy environment for all living things. The Iowa Environmental Council actively works in public policy to give Iowans a voice on environmental issues, protect Iowa's natural resources, and provide a safe and healthy environment for all Iowans. The Environmental Law & Policy Center (ELPC) works to protect public health and the environment in Iowa and the Midwest, with offices and members in Iowa and throughout the Midwest. NRDC, Iowa Environmental Council, and ELPC appreciate the opportunity to comment on Iowa's 2013 draft State Hazard Mitigation Plan.

Iowa is vulnerable to the impacts of climate change, including extreme heat, changes in storm intensity that can cause flooding and compromise water quality, changes in seasonal precipitation patterns, and higher overall temperatures that may foster new agricultural pests and pathogens. Climate change poses a significant threat to public safety and will increase the damages caused by natural disasters. As affirmed by numerous international and national scientific bodies, including the Intergovernmental Panel on Climate Change (IPCC),<sup>1</sup> the National Research Council (NRC),<sup>2</sup> and the U.S. Global Change

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<sup>1</sup> S. Solomon et al. (eds.), *Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* (2007), available at [http://www.ipcc.ch/publications\\_and\\_data/ar4/wg1/en/contents.html](http://www.ipcc.ch/publications_and_data/ar4/wg1/en/contents.html).

Research Program (USGCRP),<sup>3</sup> the impacts of climate change are already visible, and the risks to people, property and natural resources posed by climate change are expected to only grow in the future. Other professional organizations or governments that have adopted policies or resolutions noting the importance of responding to the risks posed by climate change include: the National Academies of Science of 13 nations;<sup>4</sup> the US American Planning Association<sup>5</sup>; and the American Public Health Association<sup>6</sup>, among many others.

We commend Iowa for mentioning in its SHMP that “climate change may be causing more frequent and severe storms” and for noting that climate change data is included in specific hazard profiles when available.<sup>7</sup> However, the draft plan does not specify what climate change data or projections have been incorporated, if any. As currently written, the plan acknowledges a discussion within the State Hazard Mitigation Team (SHMT) of climate change only regarding extreme heat, and does not specify what climate change data was considered. In addition, the plan does not indicate whether climate change projections are taken into consideration regarding several relevant hazard profiles in the draft SHMP, including animal/crop/plant disease, dam/levee failure, drought, flash flood, grass/wildland fire, human disease, river flooding, or thunderstorms. We urge the State of Iowa to expand its incorporation of climate change when planning for hazard mitigation. Instead of relying only on historical trends, Iowa’s planners must look to the growing body of climate change studies to understand, anticipate and mitigate future hazards.

Indeed, we believe that all states must adequately address climate change considerations in hazard mitigation plans as a condition of receiving non-emergency disaster mitigation assistance under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S. C. §§ 5121-5207.<sup>8</sup> In FEMA’s requirement for states to have a FEMA-approved hazard mitigation plan before they are eligible for any hazard mitigation assistance grants, FEMA mandates an analysis of the probability of future hazard events.<sup>9</sup> This probability analysis must take into account both the historical record of hazard events as

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<sup>2</sup> National Research Council, Committee on America’s Climate Choices, *America’s Climate Choices* (2011), available at <http://dels.nas.edu/Report/Americas-Climate-Choices/12781>.

<sup>3</sup> U.S. Global Change Research Program (USGCRP), *Global Climate Change Impacts in the United States* (2009), available at <http://downloads.globalchange.gov/usimpacts/pdfs/climate-impacts-report.pdf>.

<sup>4</sup> Joint Science Academies’ 2008 Statement, at <http://www.science.org.au/policy/climatechange-g8+5.pdf>.

<sup>5</sup> APA 2011 *Policy Guide on Planning and Climate Change*, available at: <http://www.planning.org/policy/guides/pdf/climatechange.pdf>.

<sup>6</sup> Reference in APHA Executive Director Dr Georges Benjamin’s testimony at: <http://www.apha.org/about/news/briefing0224.htm>.

<sup>7</sup> Iowa Department of Homeland Security and Emergency Management, Draft State Hazard Mitigation Plan 2013, Section 1.3 at 4, available at [http://www.iowahomelandsecurity.org/disasters/hazard\\_mitigation.html](http://www.iowahomelandsecurity.org/disasters/hazard_mitigation.html) (hereinafter “Iowa Draft SHMP”).

<sup>8</sup> Natural Resources Defense Council and National Wildlife Federation, *Petition Requesting That the Federal Emergency Management Agency Comply with the Stafford Act and Disaster Mitigation Act of 2000 By Approving Only State Hazard Mitigation Plans That Adequately Address Climate Change; Amend Its Regulations to Confirm that Climate Change Must Be Addressed in Hazard Mitigation Plans; and Provide Agency Guidance to States Regarding How to Address Climate Change in Hazard Mitigation Plans* (Oct. 2012), available at: <http://switchboard.nrdc.org/blogs/rhammer/FEMA%20Petition%20-%20FINAL%20-%2010-2-12.pdf>

<sup>9</sup> 44 C.F.R. §201.4(c)(2)(i) (2012)

well as the projected future impacts of climate change. Climate change has already moved the baseline hazard conditions to which planning must respond. If we do not apply all available resources, including climate models and impact projections, to predict to the best of our ability the full scope of extreme weather events that are now feasible, the consequences could be catastrophic.

### **Climate change may increase heavy rainfall, flooding, and waterborne illness**

The concentrated, heavy precipitation events caused by climate change could result in more severe and frequent floods across the country, and especially in Iowa. This precipitation trend is evident in weather patterns already. Annual precipitation across the nation has increased on average by about 7 percent over the last century; furthermore, the amount falling in the heaviest 1 percent of downpours has increased by about 20 percent.<sup>10</sup> These trends, however, vary regionally, and Iowa has seen a 35% increase in extreme precipitation frequency in the 64 years from 1948 to 2011.<sup>11</sup> Climate change affects water availability in terms of timing, quantity and location for water users, leading to too much water in some places, too little in others, and degraded water quality in many. Beyond floodwater submersion, disruptions in the seasonal timing of rainfall have led to supersaturation of soils from heavy rains. In Iowa in the 1980s and 1990s, the estimated crop loss and damage from excess soil moisture was five times greater than direct flood damage.<sup>12</sup> Researchers project that the trend toward more frequent heavy precipitation could continue in future, doubling the associated losses in US corn production by 2030.<sup>13</sup> Both the IPCC and USGCRP identify water management as a sector with a high risk of severe impacts from extreme events, with large implications for water infrastructure.<sup>14</sup>

In Iowa, annual average precipitation has increased by 4.2 inches over the last century – the second-largest increase in the entire Midwest.<sup>15</sup> Climate model projections indicate that winter and spring precipitation in Iowa could increase by 30%, while summer precipitation could decrease by 10% to 35% by the end of the century.<sup>16</sup> While overall summer precipitation is projected to decrease, more extreme rainfall events in the summer are expected in the State. Iowa and the Midwest region have already

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<sup>10</sup> USGCRP, *supra* note 3, at 32.

<sup>11</sup> Madsen T, Willcox N. 2012. *When It Rains, It Pours: Global Warming and the Increase in Extreme Precipitation from 1948 to 2011*. Environment America. Available online at: [www.environmentamericacenter.org](http://www.environmentamericacenter.org).

<sup>12</sup> *Id.*, at 13.

<sup>13</sup> C. Rosenzweig, et al., "Increased crop damage in the US from excess precipitation under climate change," (2002), *Global Environmental Change* 12:197-202.

<sup>14</sup> USGCRP, *supra* note 3, at 41-44; Intergovernmental Panel on Climate Change (IPCC), *Special Report: Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation* 16 (2012), available at <http://www.ipcc-wg2.gov/SREX/>.

<sup>15</sup> Midwest Regional Data Center, "Climate Change and Variability in the Midwest," available at [http://mcc.sws.uiuc.edu/climate\\_midwest/mwclimate\\_change.htm#](http://mcc.sws.uiuc.edu/climate_midwest/mwclimate_change.htm#)

<sup>16</sup> S. Moser, K. Hayhoe, and M. Wander, *Climate Change in the Hawkeye State: Impacts on Iowa's Communities and Ecosystems*(2004), 3, prepared for the Union of Concerned Scientists, available at [ucsusa.org/assets/documents/clean\\_energy/climate\\_change\\_in\\_iowa\\_long\\_final\\_and\\_formatted.pdf](http://ucsusa.org/assets/documents/clean_energy/climate_change_in_iowa_long_final_and_formatted.pdf)

experienced roughly 31% more heavy precipitation events in the past 50 years.<sup>17</sup> Humidity levels in Iowa have increased substantially in the last 35 years, which is a condition that fuels convective thunderstorms.<sup>18</sup> The recent FEMA analysis of climate change and the National Flood Insurance Program shows that, in the intermediate flooding increase scenario, the majority of counties in Iowa should expect between a 30% and 60% increase in special flood hazard areas by 2100 over current conditions.<sup>19</sup>

Because increases in overall and extreme precipitation from climate change could lead to increased river flooding, more levee/dam failures, and more flash floods, Iowa must explicitly include climate projections in the SHMP hazard profiles. While river flooding is already ranked the number one priority hazard in the Iowa draft SHMP, the State may be even more vulnerable to flooding than suggested in the plan. Because of climate change, Iowa should prepare for more disastrous flooding events like those experienced in 1993 and 2008,<sup>20</sup> and continue to monitor new research on potential flooding ranges due to climate change. The State may need to calculate more estimated losses from flooding than indicated in the plan and take stronger measures to protect lives and property. One recent study estimated that river flooding in the upper Midwest in 2009 incurred over \$20.3 million in health-related costs including hospitalizations, emergency department and outpatient visits for treatment of injury and illnesses, and tragic loss of life.<sup>21</sup>

In addition to lost lives and property destruction, extreme precipitation events and floods can cause water quality and public health problems, providing opportunities for waterborne pathogens to proliferate.<sup>22</sup> Cities with combined sewer systems are particularly vulnerable, as sewage may intermix with stormwater during heavy rains. Pathogenic parasites such as cryptosporidium and giardia, bacteria such as E. coli and salmonella, and viruses such as hepatitis A can all be found in contaminated waters.<sup>23</sup>

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<sup>17</sup> Iowa Climate Change Impacts Committee (ICIC), "Climate Change Impacts on Iowa 2010" (2011), 6, available at [http://www.iowadnr.gov/portals/idnr/uploads/air/environment/climatechange/complete\\_report.pdf?amp;tabid=1077](http://www.iowadnr.gov/portals/idnr/uploads/air/environment/climatechange/complete_report.pdf?amp;tabid=1077)

<sup>18</sup> *Id.*, at 10.

<sup>19</sup> Federal Emergency Management Agency, *The Impact of Climate Change and Population Growth on the National Flood Insurance Program through 2100* (June 2013), D-14, available at [http://www.aecom.com/deployedfiles/Internet/News/Sustainability/FEMA%20Climate%20Change%20Report/Climate\\_Change\\_Report\\_AECOM\\_2013-06-11.pdf](http://www.aecom.com/deployedfiles/Internet/News/Sustainability/FEMA%20Climate%20Change%20Report/Climate_Change_Report_AECOM_2013-06-11.pdf).

<sup>20</sup> Iowa Draft SHMP, *supra* note 7, at 31.

<sup>21</sup> Knowlton K, et al., "Six Climate Change-Related Events in the United States Accounted for about \$14 Billion in Lost Lives and Health Costs," 30(11) *Health Affairs* 2167-2177 (2011).

<sup>22</sup> Mark E. Keim, "Building Human Resilience: The Role of Public Health Preparedness and Response as an Adaptation to Climate Change," 35 *Am. J. of Preventive Med.* 512, (2008), available at <http://trig.squarespace.com/storage/Keim.pdf>.

<sup>23</sup> Natural Resources Defense Council, *Rising Tide of Illness: How Global Warming Could Increase the Threat of Waterborne Diseases* (July 2010), available at [http://www.nrdc.org/health/files/GWillness4pgr\\_08.pdf](http://www.nrdc.org/health/files/GWillness4pgr_08.pdf); Jonathan Yoder et al., "Surveillance for Waterborne Disease and Outbreaks Associated with Drinking Water Not Intended for Drinking – United States, 2005-2006," *MMWR Surveillance Summaries* 57(SS09) 39 (2008), available at <http://www.cdc.gov/mmwr/preview/mmwrhtml/ss5709a4.htm>.

Millions of cases of waterborne gastrointestinal illnesses occur annually in the United States.<sup>24</sup> An estimated two-thirds of those cases are associated with extreme rainfall events that can wash pathogens into drinking water supply sources and simultaneously compromise treatment capacity with high water volumes.<sup>25</sup> Since climate change is likely to increase the frequency and intensity of these extreme precipitation events, they could compound both direct flooding and indirect public health consequences and associated costs. However, these health-related costs are not as yet included in the estimates in the draft SHMP. The State would be able to more effectively mitigate flood hazards if the draft SHMP considers the full range of effects and associated costs of climate change in addition to historical events data.

### **Extreme heat, crop disease and pests, and wildfires may intensify due to increasing temperatures from climate change**

In North America, increasing trends in precipitation extremes over the last half century are projected to become more concentrated in many regions, with longer dry periods in between.<sup>26</sup> Rising temperatures, particularly more frequent and intense heat waves that can exacerbate drought conditions, are directly linked to increased morbidity (illnesses) and mortality (premature deaths) due to extreme heat. Increased heat extremes have already been documented in the U.S., with 2012 being the warmest year experienced since recordkeeping began in 1895.<sup>27</sup> A recent study published in the *Proceedings of the National Academy of Sciences* concludes that climate change strongly contributed to the recent heat waves and extreme summer temperatures.<sup>28</sup> These heat extremes are projected to become even more frequent, with “summertime mean temperatures that occurred historically only 5% of the time are projected to occur at least 70% of the time everywhere in the 48-state region” of the continental U.S.<sup>29</sup>

While the draft SHMP mentions that climate change was discussed among the SHMT, the plan does not make clear what data was referenced or how that factored into the probability and risk analysis for

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<sup>24</sup> J.M. Colford Jr. et al., “A Review of Household Drinking Water Intervention Trials and an Approach to the Estimation of Endemic Waterborne Gastroenteritis in the United States,” 4 (Suppl. 2) *J. of Water and Health* 71-88 (2006); M. Messner et al., “An Approach for Developing a National Estimate of Waterborne Disease due to Drinking Water and a National Estimate Model Application,” 4 (Suppl. 2) *Journal of Water and Health* 201-240 (2006).

<sup>25</sup> F.C. Curriero et al., “The Association Between Extreme Precipitation and Waterborne Disease Outbreaks in the United States, 1948-1994,” 91(8) *American Journal of Public Health* 1194-1199 (2001) (68% percent of waterborne disease outbreaks were associated with extreme rainfall events above the 80<sup>th</sup> percentile).

<sup>26</sup> USGCRP, *supra* note 3, at 44.

<sup>27</sup> National Oceanic and Atmospheric Administration, National Climatic Data Center, “State of the Climate National Overview – Annual 2012,” <http://www.ncdc.noaa.gov/sotc/national/2012/13> (last visited Mar. 14, 2013).

<sup>28</sup> James Hansen et al., “Perception of Climate Change,” *Proc. of the Nat’l Acad. of Sci.* (Aug. 6, 2012), available at <http://www.pnas.org/content/early/2012/07/30/1205276109.full.pdf+html>.

<sup>29</sup> P.B. Duffy & C. Tebaldi, “Increasing Prevalence of Extreme Summer Temperatures in the U.S.,” 111 *Climatic Change* 487, 491 (2012).

extreme heat. Iowa's average annual temperature has increased about 0.9°F over the last century,<sup>30</sup> and the State could see roughly 10 to 20 more days per year above 95°F by mid-century.<sup>31</sup>

The scientific community has identified several public health risks from climate change that are highly likely, including heat-related illnesses and premature mortality due to increased extreme heat events, greater air pollution and associated health effects, as well as proliferating pollen and associated allergies.<sup>32</sup> Extreme heat can lead to illness due to dehydration or heat stroke, and it can also contribute to a range of cardiovascular, respiratory and cerebrovascular illnesses.<sup>33</sup> Many of these illnesses can lead to premature death. For example, during a 1995 heat wave in Chicago, over 700 deaths were attributable to extreme heat.<sup>34</sup> In addition to heat illnesses, warmer temperatures and longer, more intense heat waves are also associated with increased stagnant air and increased concentrations of air pollutants, such as ground-level ozone. Poor air quality, especially exposure to ozone, has been shown to be accompanied by increases in allergies, hospital admissions for asthma and other respiratory diseases, and ultimately, mortality.<sup>35</sup> Warmer temperatures due to climate change are also anticipated to increase the prevalence of infectious diseases such as malaria, West Nile virus, and Lyme disease.<sup>36</sup>

The health-related costs of just a few types of climate-related events can run into the billions. One US study that looked at cases of actual 2002-2009 events estimated \$12 billion in total health-related costs and \$455 million in direct medical costs from heat waves, river flooding, ozone pollution, and infectious disease outbreaks.<sup>37</sup> The State can reduce these harmful impacts of extreme heat on human health through effective hazard mitigation and preparedness.

In addition to the extreme heat hazard profile, climate change projections also need to be factored into the probability estimate and risk analysis for the hazard profile on crop disease. Climate change may create more vulnerability to agriculture and livestock in Iowa. Increased monthly rainfall, more moisture and warmer temperatures leads to favorable conditions for a variety of pests, pathogens and invasive

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<sup>30</sup> Midwest Regional Climate Center, *supra* note 15

<sup>31</sup> USGCRP, *Draft National Climate Assessment* (Jan 2013), 620, available at <http://ncadac.globalchange.gov/download/NCAJan11-2013-publicreviewdraft-chap18-midwest.pdf>

<sup>32</sup> Keim, *supra* note 22, at 508

<sup>33</sup> Environmental Protection Agency, *Excessive Heat Events Guidebook* (2006), available at [http://www.epa.gov/hiri/about/pdf/EHEguide\\_final.pdf](http://www.epa.gov/hiri/about/pdf/EHEguide_final.pdf) (developed collaboratively with NOAA, CDC, and FEMA).

<sup>34</sup> Steven Whitman et al., "Mortality in Chicago Attributed to the July 1995 Heat Wave," 87 *Am. J. of Pub. Health* 1,515, 1,515 (1997), available at <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1380980/pdf/amjph00508-0117.pdf>.

<sup>35</sup> K. E. Pinkerton et al., on behalf of the American Thoracic Society Environmental Health Policy Committee, "An Official American Thoracic Society Workshop Report: Climate Change and Human Health," 9 *Proc. Am. Thorac. Soc.* 3, 4-5 (2012), available at [http://ehs.sph.berkeley.edu/krsmith/publications/2012/2012\\_PATS.pdf](http://ehs.sph.berkeley.edu/krsmith/publications/2012/2012_PATS.pdf); Michelle L. Bell et al., "Climate Change, Ambient Ozone, and Health in 50 US Cities," 82 *Climatic Change* 61-76 (2007), available at <http://sage.wisc.edu/pubs/articles/M-Z/Patz/BelletalCC2007.pdf>.

<sup>36</sup> The Center for Health and the Global Environment, Harvard Medical School, *Climate Change Futures: Health, Ecological and Economic Dimensions* at 32-52 (Paul R. Epstein & Evan Mills eds., 2005), available at [http://coralreef.noaa.gov/aboutcrp/strategy/reprioritization/wgroups/resources/climate/resources/cc\\_futures.pdf](http://coralreef.noaa.gov/aboutcrp/strategy/reprioritization/wgroups/resources/climate/resources/cc_futures.pdf).

<sup>37</sup> Kim Knowlton et al., "Six Climate Change-Related Events in the United States Accounted for about \$14 Billion in Lost Lives and Health Costs," 30(11) *Health Affairs* 2167-2177 (2011).

species, posing challenges for Iowa's agriculture. Extreme heat also creates stress on livestock, reducing summer milk production, impairing immune and digestive functions, and increasing mortality rates of cattle.<sup>38</sup> The draft SHMP does briefly reference the possibility that "if warmer winters persist [new diseases and pests] could expand their ranges to include Iowa."<sup>39</sup> However, the plan needs to cite specific climate projections, incorporate that data into risk analysis, and then plan for various temperature and precipitation scenarios regarding pests.

Along with increasing temperatures, changes in precipitation patterns and evaporation may also increase the incident of drought in the Midwest.<sup>40</sup> Extended dry periods have already become more frequent in parts of the United States. These dry periods, combined with higher air temperatures, lead to more frequent and intense droughts due to decreased soil moisture and increased evapotranspiration.<sup>41</sup> The State should monitor research on climate impacts on regional drought, and the implications for Iowa's agriculture and water needs.

### **Integration of climate change into the State Hazard Mitigation Plan**

Many of the risks associated with climate change can be mitigated by forward-looking hazard mitigation planning at the state level. The IPCC's recent report on managing the risks of extreme events and disasters highlights that "local response to climate extremes will require disaster risk management which acknowledges the role of climate variability and change and the associated uncertainties and that will contribute to long-term adaptation."<sup>42</sup> At a minimum, the State can address climate change in its SHMP through its state risk assessment, mitigation goals, and capability assessment.

- *State risk assessment*

Climate change now means that past events are no longer accurate indicators of future risk. When considering climate impacts, the severity, frequency, and affected areas of hazards may change. Climate change projections have significant implications for the State's vulnerability assessment, hazard profiling, and analysis of potential losses. A state vulnerability assessment that relies on both historical event data and climate change projections will lead to more accurate predictions and effective hazard mitigation. The risk assessment should describe how climate change data is incorporated into the hazard profiles, vulnerability analysis, and estimation of losses.

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<sup>38</sup> ICCIC, *supra* note 17, at 15-17.

<sup>39</sup> Iowa draft SHMP, *supra* note 7, at section 1.3 at 10

<sup>40</sup> USGCRP, *supra* note 31, at 619

<sup>41</sup> USGCRP, *supra* note 3, at 41 - 44.

<sup>42</sup> IPCC SREX, *supra* note 14, at 300.

- *State mitigation goals and capability assessment*

Climate change can be more fully integrated into the hazard mitigation goals and objectives of the SHMP. The level of resilience needed in structures and planning should be calibrated to the increased levels of risk imposed by climate change. For example, both Objective 2, “Prevent and reduce property damage from all hazards”<sup>43</sup> and Objective 6, “Improve disaster resistance from long-term property losses, disruption of communities, and damage to structures”<sup>44</sup> should reference resilience to climate change risks.

Under Objective 3, “Enhance public education through programs that expand public awareness,”<sup>45</sup> the State of Iowa can integrate climate change understanding into education campaigns to promote preparedness for disasters. Climate change research on Iowa impacts is another important mitigation measure that could fit under Objective 4, “Build support capacity and commitment to prevent or reduce risks from all hazards.”<sup>46</sup> Since watershed studies are categorized under this objective, collaboration with climate researchers to better understand Iowa’s climate change vulnerabilities should also be included here.

Regarding the capability assessment, Iowa’s Department of Homeland Security and Emergency Management (HSEMD) should take a leadership role in the State to ensure that climate change is properly integrated into hazard mitigation planning. This may include coordinating interagency groups or advisory councils that can establish a statewide climate change vulnerability assessment and recommend new best practices for hazard mitigation. The State should also provide technical assistance to help local governments include climate change in local vulnerability assessments and identify mitigation opportunities. Through the allocation of pre-disaster grants, the State can further encourage local governments to consider climate impacts in local hazard mitigation activities.

As the State’s hazard mitigation planning efforts move forward, it will be crucial to ensure that risk assessments for hazards are not only based on historical data alone, but also incorporate the latest climate projections. It is critical that the State articulates concrete and measureable goals and actions to ensure that climate change is adequately integrated into state hazard mitigation planning. By establishing a clear understanding of necessary actions and responsibilities to address climate change impacts, the State will be more successful in building resiliency and ensuring public safety. We appreciate your consideration of our comments.

Sincerely,

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<sup>43</sup> Iowa draft SHMP, *supra* note 7, at section 1.4 at 10

<sup>44</sup> *Id.*, at section 1.4 at 14

<sup>45</sup> *Id.*, at section 1.4 at 11

<sup>46</sup> *Id.*, at section 1.4 at 11



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