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ONE HUNDRED FOURTEENTH CONGRESS

Congress of the United States

House of Representatives

COMMITTEE ON ENERGY AND COMMERCE
2125 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, DC 20515-6115

Majority (202) 225-2927
Minority (202) 225-3641

MEMORANDUM

July 15, 2015

To: Subcommittee on Energy and Power Democratic Members and Staff

Fr: Committee on Energy and Commerce Democratic Staff

Re: Democratic Field Forum on "Climate Change at the Water's Edge: Annapolis, MD"

Location: U.S. Naval Academy
Alumni Hall (Bo Coppedge Room, 2nd Floor)
675 Decatur Road
Annapolis, MD 21402

On Friday, July 17, 2015, at 11:00 a.m., the Democratic Members of the Committee on Energy and Commerce will hold a Democratic field forum on "Climate Change at the Water's Edge: Annapolis, MD." They will be joined at the U.S. Naval Academy by Members of the Maryland Congressional Delegation.

I. BACKGROUND

The scientific evidence is overwhelming – climate change is real and human activity is the most significant cause. Unfortunately, the political consensus in Washington, DC has not caught up with the scientific consensus. Leaders outside the beltway are all too aware of the devastating impacts of our changing climate and cannot afford the ideological luxury of climate science denial. At the local level, rising sea levels have led to increased flooding in coastal communities and disrupted natural ecosystems from Maryland to California. On the national stage, our best military minds are wrestling with the national security consequences of climate change. Congress must follow their lead and act now to address the environmental, public health, economic and national security consequences of climate change.

Climate change is already having an impact in the United States and could have a much more severe future impact if the country does not take urgent action to cut carbon pollution. The Intergovernmental Panel on Climate Change has recommended that the world limit warming to

2°C by the end of the century in order to avoid the most catastrophic impacts of climate change. Scientists have sounded new alarms about the rapidly closing window for action to achieve this goal.

According to the National Climate Assessment, average U.S. temperatures already have increased about 1.5ºF since 1895, with more than 80% of this increase occurring since 1980.[1] More heavy downpours, wildfires, and heat waves are occurring in parts of the United States.[2] Snow and ice cover has diminished in some regions of the United States.[3] Sea levels have risen about eight inches over the past century, and the ocean itself is becoming more acidic, threatening marine life.[4] The number of strong hurricanes and the overall strength of hurricanes have increased since the early 1980s in the North Atlantic.[5]

II. SEA LEVEL RISE AND OTHER CLIMATE IMPACTS

Climate change is the primary cause of sea level rise.[6] Sea level rise is affecting almost all of our coastlines, driving greater inundation and erosion of sensitive wetlands, estuaries, and beaches during high tides and storm surges.

Globally, the sea has risen by eight inches since 1880. Even more alarming, the rate of sea level rise is accelerating. Since 1992, the rate of sea level rise has doubled.[7] Local changes can be even more severe where the land is sinking and water can penetrate farther inland.[8] Since 1900, the sea has risen by one foot in the Northeast.[9] Higher sea levels were a key factor in the massive destruction caused by Superstorm Sandy. With the sea level rise that has already

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[1] U.S. Global Change Research Program, *Climate Change Impacts in the United States* (May, 2014) at 8 (online at s3.amazonaws.com/nca2014/low/NCA3_Climate_Change_Impacts_in_the_United%20States_LowRes.pdf?download=1).

[2] *Id.* at 7-9.

[3] *Id.* at 22.

[4] *Id.* at 9-10.

[5] *Id.* at 41.

[6] Union of Concerned Scientists, *Causes of Sea Level Rise: What the Science Tells Us,* at 1 (Apr. 15, 2013) (online at www.ucsusa.org/global_warming/science_and_impacts/impacts/causes-of-sea-level-rise.html).

[7] Union of Concerned Scientists, *Causes of Sea Level Rise: What the Science Tells Us* (Apr. 15, 2013) (online at http://www.ucsusa.org/global_warming/science_and_impacts/impacts/causes-of-sea-level-rise.html).

[8] Union of Concerned Scientists, *Causes of Sea Level Rise: What the Science Tells Us,* at 1 (Apr. 15, 2013) (online at www.ucsusa.org/global_warming/science_and_impacts/impacts/causes-of-sea-level-rise.html).

[9] U.S Global Change Research Program, *Climate Change Impacts in the United States,* at 373 (May 2014) (online at nca2014.globalchange.gov).

happened, it is now twice as likely that storms like Superstorm Sandy will cause extensive inundation and flooding, as compared to 1950.[10]

The citizens of Annapolis, and more broadly the State of Maryland, are feeling the mounting threat of climate change first hand. Since 2001, water has reached flood levels an average of 20 or more days a year in Annapolis; before 1971, that same average was less than 5 days a year.[11] In 2009, there were 407 emergency room visits in Maryland due to heat stress, and Marylanders can expect a significant increase in days above 90°F.[12] Overall, costs of severe weather events in Maryland during 2011 and 2012 exceeded $70 million.[13]

Climate change is exacerbating power outages in coastal areas, as higher sea levels lead to more damage from storms. About 100 power plants and substations across the U.S. are located within four feet of local high tide.[14] This power infrastructure is at higher risk from storm surges and coastal inundation, and the costs can be huge. For example, eight million people were without power after Superstorm Sandy in 2012.

III. INCREASING PREPAREDNESS AND RESILIENCE

In his 2013 State of the Union address, President Obama told the nation, "if Congress won't act soon to protect future generations, I will direct my Cabinet to come up with executive actions we can take, now and in the future, to reduce pollution, prepare our communities for the consequences of climate change, and speed the transition to more sustainable sources of energy."[15] When Congress failed to respond, the President announced his Climate Action Plan

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[10] American Meteorological Society, *Explaining Extreme Events of 2012 from a Climate Perspective* (Sept. 2013) (online at www.ametsoc.org/2012extremeeventsclimate.pdf); National Oceanic and Atmospheric Administration, *New analyses find evidence of human-caused climate change in half of the 12 extreme weather and climate events analyzed from 2012* (Sept. 5, 2013) (online at www.noaanews.noaa.gov/stories2013/20130905-extremeweatherandclimateevents.html).

[11] *As the seas rise, a slow-motion disaster gnaws at America's shores*, Reuters (Sept. 14, 2014) (online at www.reuters.com/investigates/special-report/waters-edge-the-crisis-of-rising-sea-levels/).

[12] Council on Environmental Quality, *The Threat of Carbon Pollution: Maryland* (Jul. 2015) (online at www.whitehouse.gov/sites/default/files/docs/state-reports/climate/Maryland%20Fact%20Sheet.pdf).

[13] *Id.*

[14] Union of Concerned Scientists, *How Climate Change Puts our Electricity at Risk* (Apr. 21, 2014) (online at www.ucsusa.org/global_warming/science_and_impacts/impacts/effects-of-climate-change-risks-on-our-electricity-system.html).

[15] The White House, *Remarks by the President in the State of the Union Address* (Feb. 12, 2013) (online at www.whitehouse.gov/the-press-office/2013/02/12/remarks-president-state-union-address).

on June 25, 2013.[16] The plan consists of a wide range of executive actions involving at least 20 federal agencies.

As part of that plan, the President established the State, Local, and Tribal Leaders Task Force on Climate Preparedness and Resilience, to provide recommendations "on how the federal government can respond to the needs of communities nationwide that are dealing with the impacts of climate change."[17] Earlier this month, the Task Force released a progress report on current activities to bolster resiliency in communities across the country, in the face of changing climate.[18] Significant progress has been made in providing better data, tools and guidance for local communities when making decisions and investments associated with climate change. For example, the online Climate Resilience Toolkit was launched in November 2014 to assist local leaders "contend with climate impacts and build healthy and resilient communities."[19] The toolkit "provides scientific tools, information, and expertise to help people manage their climate-related risks and opportunities, and improve their resilience to extreme events."[20]

The Climate Action Plan has provided Maryland with support to increase resilience. For example, Centers for Disease Control and Prevention is supporting efforts in Maryland to better understand the impacts of climate change.[21] This allocation of experts and resources will enable Maryland to predict and monitor health effects, identify the populations most vulnerable to these effects, and develop programs to protect public health.[22]

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[16] Executive Office of the President, *The President's Climate Action Plan* (June 2013) (online at www.whitehouse.gov/sites/default/files/image/president27sclimateactionplan.pdf).

[17] Council on Environmental Quality, *the State, Local, and Tribal Leaders Task Force on Climate Preparedness and Resilience* (Nov. 1, 2013) (online at www.whitehouse.gov/administration/eop/ceq/initiatives/resilience/taskforce).

[18] Council on Environmental Quality, the State, Local, and Tribal Leaders Task Force on Climate Preparedness and Resilience, *Progress Report: Highlighting Federal Actions Addressing the Recommendations of the State, Local, and Tribal Leaders Task Force on Climate Preparedness and Resilience* (Jul. 2015) (online at www.whitehouse.gov/sites/default/files/docs/climate_preparedness_report_updated_070915.pdf).

[19] Council on Environmental Quality, the State, Local, and Tribal Leaders Task Force on Climate Preparedness and Resilience, *Fact Sheet: Recommendations of the President's State, Local, and Tribal Leaders Task Force on Climate Preparedness and Resilience and New Executive Actions, New Climate Resilience Toolkit Unveiled to Help Plan for Changing Climate* (Nov. 17, 2014) (online at www.whitehouse.gov/administration/eop/ceq/Press_Releases/November_17_2014).

[20] U.S. Climate Resilience Toolkit (online at toolkit.climate.gov/content/about-climate-resilience-toolkit).

[21] Council on Environmental Quality, *The Threat of Carbon Pollution: Maryland* (Jul. 2015) (online at www.whitehouse.gov/sites/default/files/docs/state-reports/climate/Maryland%20Fact%20Sheet.pdf).

[22] *Id.*

IV. PANELISTS

The following panelists have been invited to testify:

The Honorable Mike Pantelides
Mayor
Annapolis, MD

Vice Admiral Walter E. "Ted" Carter, Jr.
Superintendent
U.S. Naval Academy

Will Baker
President
Chesapeake Bay Foundation

Dr. Brenda Ekwurzel
Senior Climate Scientist
Union of Concerned Scientists