THE WHITE HOUSE
Office of the Press Secretary

FOR IMMEDIATE RELEASE
May 6, 2014

FACT SHEET: What Climate Change Means for Oklahoma and the Great Plains

Today, the Obama Administration released the third U.S. National Climate Assessment—the most comprehensive scientific assessment ever generated of climate change and its impacts across every region of America and major sectors of the U.S. economy. The findings in this National Climate Assessment underscore the need for urgent action to combat the threats from climate change, protect American citizens and communities today, and build a sustainable future for our kids and grandkids.

The National Climate Assessment is a key deliverable of President Obama's Climate Action Plan to cut carbon pollution, prepare America's communities for climate-change impacts, and lead international efforts to address this global challenge. Importantly, the plan acknowledges that even as we act to reduce the greenhouse-gas pollution that is driving climate change, we must also empower the Nation's states, communities, businesses, and decision makers with the information they need prepare for climate impacts already underway.

The Obama Administration has already taken a number of steps to deliver on that commitment to states, regions, and communities across America. In the past year alone, these efforts have included: establishing a Task Force of State, Local, and Tribal Leaders on Climate Preparedness and Resilience to advise the Administration on how the Federal Government can respond to the needs of communities nationwide that are dealing with the impacts of climate change; launching a Climate Data Initiative to bring together extensive open government data with strong commitments from the private and philanthropic sectors to develop planning and resilience tools for communities; and establishing seven new "climate hubs" across the country to help farmers and ranchers adapt their operations to a changing climate.

OKLAHOMA is part of the National Climate Assessment's U.S. Great Plains Region. The regional phenomena identified by the Assessment may not occur in every state that is part of a particular region. According to the third U.S. National Climate Assessment Highlights report:

"The Great Plains is a diverse region where climate is woven into the fabric of life. Daily, monthly, and yearly variations in the weather can be dramatic and challenging. The region experiences multiple climate and weather hazards, including floods, droughts, severe storms, tornadoes, hurricanes, and winter storms. In much of the Great Plains, too little precipitation falls to replace that needed by humans, plants, and animals. These variable conditions already stress communities and cause billions of dollars in damage. Climate change will add to both stress and costs.

The people of the Great Plains historically have adapted to this challenging climate. Although projections suggest more frequent and more intense droughts, heavy downpours, and heat

waves, people can reduce vulnerabilities through the use of new technologies, community-driven policies, and the judicious use of resources. Efforts to reduce greenhouse gas emissions and adapt to climate change can be locally driven, cost effective, and beneficial for local economies and ecosystem services." (NCA Highlights, p. 76)

Regional Findings of the Third U.S. National Climate Assessment: GREAT PLAINS

- "Rising temperatures are leading to increased demand for water and energy. In parts of the region, this will constrain development, stress natural resources, and increase competition for water among communities, agriculture, energy production, and ecological needs.

- Changes to crop growth cycles due to warming winters and alterations in the timing and magnitude of rainfall events have already been observed; as these trends continue, they will require new agriculture and livestock management practices.

- Landscape fragmentation is increasing, for example, in the context of energy development activities in the northern Great Plains. A highly fragmented landscape will hinder adaptation of species when climate change alters habitat composition and timing of plant development cycles.

- Communities that are already the most vulnerable to weather and climate extremes will be stressed even further by more frequent extreme events occurring within an already highly variable climate system.

- The magnitude of expected changes will exceed those experienced in the last century. Existing adaptation and planning efforts are inadequate to respond to these projected impacts." (NCA Ch. 19: Great Plains)

Selected Findings and Information from the Third U.S. National Climate Assessment Relevant to OKLAHOMA

- **Agriculture:** In 2011, "many locations in Texas and Oklahoma experienced more than 100 days over 100°F, with both states setting new high temperature records. Rates of water loss were double the long-term average, depleting water resources and contributing to more than $10 billion in direct losses to agriculture alone. Increased water withdrawals from the Ogallala Aquifer and High Plains Aquifer would accelerate depletion of the aquifer and limit the ability to irrigate. The projected increase in high temperature extremes and heat waves will negatively affect livestock and concentrated animal feeding operations." (NCA Ch. 19: Great Plains)

- **Rural:** "For rural and tribal communities, their remote locations, sparse development, limited local services, and language barriers present greater challenges in responding to climate extremes. Working-age people are moving to urban areas, leaving a growing percentage of elderly people in rural communities. Older people are at much higher risk of dying during extreme heat events. Pre-existing health conditions also make older adults susceptible to cardiac and respiratory impacts of air pollution and to more severe consequences from infectious diseases; limited mobility among older adults can also increase flood-related health risks." (NCA Ch. 9: Human Health; NCA Ch. 19: Great Plains)

- **Ecosystems:** "Observed climate-induced changes have been linked to changing timing of flowering, increases in wildfire activity and pest outbreaks, shifts in species distributions, declines in the abundance of native species, and the spread of invasive species. Variation in the timing and magnitude of precipitation due to climate change was found to decrease the nutritional quality of grasses, and consequently reduce weight gain of bison in the Konza Prairie in Kansas and the Tallgrass Prairie Preserve in Oklahoma. Results provide insight into how climate change will affect grazer population dynamics in the future." (NCA Ch. 8: Ecosystems; Ch. 19: Great Plains)

- **Tribes:** "The 70 federally recognized tribes in the Great Plains are diverse in their land use, with some located on lands reserved from their traditional homelands, and others residing within territories designated for their relocation, as in Oklahoma. While tribal communities have adapted to climate change for centuries, they are now constrained by physical and political boundaries. Traditional ecosystems and native resources no longer provide the support they used to. Tribal members have reported the decline or disappearance of culturally important animal species, changes in the timing of cultural ceremonies due to earlier onset of spring, and the inability to locate certain types of ceremonial wild plants." (NCA Ch. 19: Great Plains)

Examples of Efforts Underway in OKLAHOMA to Address Climate Change

In **OKLAHOMA**, many efforts are already underway to mitigate and respond to the impacts of climate change, including:

Preparing Communities for the Consequences of Climate Change:

Many important preparedness, resilience, and adaptation efforts are already being led by local, state, and regional entities across the country. Mechanisms being used by local governments to prepare for climate change include: land-use planning; provisions to protect infrastructure and ecosystems; regulations related to the design and construction of buildings, road, and bridges; and preparation for emergency response and recovery. These local adaptation planning and actions are unfolding in municipalities of different sizes, and regional agencies and regional aggregations of governments are also taking actions. And States have also become important actors in efforts related to climate change.

- The U.S. Department of Agriculture's Midwest Regional "Climate Hub" is located in El Reno, Oklahoma. The Hub is designed to deliver science-based knowledge, practical information, and program support for farmers, ranchers, landowners, and resource managers to support informed on-the-ground decision-making related to climate change.

Cutting Carbon Pollution in OKLAHOMA:

In 2012, power plants and major industrial facilities in Oklahoma emitted more than 70 million metric tons of carbon pollution—that's equal to the yearly pollution from nearly 15 million cars. Through the Climate Action Plan and state initiatives, there are many efforts already underway to mitigate and respond to the impacts of climate change in Oklahoma, including:

- ***Investing in Clean Energy***: Since President Obama took office, the U.S. increased solar-electricity generation by more than ten-fold and tripled electricity production from wind power. In Oklahoma, renewable energy generation from wind, solar, and geothermal sources increased by more than a factor of four. Since 2009, the Administration has supported tens of thousands of renewable energy projects throughout the country, including 49 in Oklahoma, generating enough energy to power more than 130,000 homes and helping Oklahoma meet its own goal of generating 15 percent of its electricity from renewable energy sources by 2015.

- ***Improving Efficiency***: Using less energy to power our homes, businesses and vehicles is critical to building a clean and secure energy future. President Obama has made essential investments in research and development for energy efficiency advances, and set new standards to make the things we use every day – from cars to microwaves – more efficient.

    - President Obama established the toughest fuel economy standards for passenger vehicles in U.S. history. These standards will double the fuel efficiency of our cars and trucks by 2025, saving the average driver more than $8,000 over the lifetime of a 2025 vehicle and cutting carbon pollution.

    - Since October 2009, the Department of Energy and the Department of Housing and Urban Development have jointly completed energy upgrades nearly two million homes across the country, saving many families more than $400 on their heating and cooling bills in the first year alone.

    - Nationally, the President's Better Buildings Challenge partners and Better Buildings, Better Plants partners have committed to reduce energy intensity at least 20 percent in over 3 billion square feet of building space.

For more information about the third U.S. National Climate Assessment, please visit www.globalchange.gov or contact engagement@usgcrp.gov.

###