

1. INTRODUCTION

My name is Gregory Ballard, and I am the Mayor of Indianapolis, Indiana, the 11th largest city in the country.

Thank you to Representative Hall and Representative Bucshon, and to the full U.S. House of Representatives' Committee on Science, Space and Technology, for inviting me to testify at today's hearing on the 2012 drought.

My testimony is focused on how the drought has impacted the City of Indianapolis, our residents, and our business community. I will also briefly discuss our information needs.

2. PLEASE DESCRIBE THE WAYS IN WHICH THE CURRENT DROUGHT HAS IMPACTED THE CITY OF INDIANAPOLIS, SUCH AS THE IMPOSITION OF ANY RESTRICTIONS, BANS OR OTHER LIMITATIONS.

The drought of 2012 in Indianapolis is one of historic proportions. Currently, rainfall in the city is more than 8 inches below normal levels. Between June 1 and July 17, Indianapolis International Airport only received nine hundredths of an inch of rain. This marks the driest stretch in Indianapolis since 1908. What has made this drought so devastating is that it began very early – in mid-May.

The drought was made even more difficult by the extreme temperatures. Summer 2012 in Indianapolis has been one of the hottest since the 1930s, with six days over 100 degrees so far and many more over 90 degrees.

In fact, on June 30, 2012, I issued a local disaster emergency declaration for Indianapolis and Marion County due to the drought and severe fire threat. In conjunction with that declaration, I signed an Executive Order banning the use of personal fireworks displays between June 30, 2012 and July 9, 2012.¹

During the last week of June 2012 and first week of July 2012, Indianapolis' local not-for-profit water utility Citizens Water, which operates the city's water supply, was delivering record amounts of water amidst the record-breaking heat. Citizens Water is a subsidiary of the local non-profit utility Citizens Energy Group (CEG).

Lawn irrigation primarily fueled this elevated demand. Citizens Water estimated that 30-40 percent of their water load was for lawn irrigation, causing water withdrawal rates to soar at the community's three reservoirs, Morse, Geist and Eagle Creek.

Morse Reservoir, which feeds two of our four water treatment plants, saw the biggest impact, with water levels falling six feet between June 1 and July 19, causing some sections of the 1,500-acre lake to go dry.

¹ <http://image.exct.net/lib/fe51c757c6400/m/3/6+30+12+EXECUTIVE+ORDER+2+2012.pdf>

In response to these fast water withdrawal rates, Citizens Water asked its customers to stop watering their lawns voluntarily on July 6, 2012.² The voluntary ban resulted in a modest 20 million per gallon per day reduction in water usage. On July 13, 2012, as levels at Morse Reservoir continued to drop, I enacted mandatory restrictions under a Water Shortage Warning as outlined in the city's water conservation ordinance.^{3,4}

The water use restrictions mandated on July 13 included a ban on watering lawns, washing vehicles, using water to clean outdoor surfaces such as sidewalks or driveways, filling empty swimming pools, or installing new landscaping, amongst other restrictions. Water hydrants were authorized solely for fire suppression unless otherwise directed by Citizens Water.

Some businesses that depended on water to operate were exempted from the ban. Examples included nurseries, automatic or manual commercial car washes, golf courses and parks.

These water usage restrictions have been very successful. In less than a week, water usage dropped another 58 million gallons a day, for a total reduction in water usage of about 80 million gallons a day since the voluntary water use reduction was put in place. This represents a one-third reduction in total water usage.

According to Citizens Water, the reduction in demand and some much needed recent rain have stabilized levels at area reservoirs, but we are still nearly 9 inches below normal rainfall levels, so recovering from this drought could take months.

Citizens Water also developed other water management strategies that take into consideration public health and safety concerns, such as having an adequate water supply for firefighting and addressing the needs of the elderly, children, hospitals, and impoverished residents.

The response to the water use restrictions speaks very well for the Indianapolis community. Not only did the City of Indianapolis adopt the mandatory water use restrictions, but most suburban communities served by Citizens Water have also adopted the Indianapolis restrictions.

The Water Conservation Ordinance is being enforced through progressive penalties currently being administered by the Indianapolis Department of Code Enforcement (DCE). In addition to inspection resources, DCE expended a significant amount of management and administrative resources dealing with the drought.

Besides limiting water consumption, there are currently very few mitigation practices for reducing losses associated with drought.

² <http://www.citizenswater.com/AboutCitizens/News.aspx?nid=244>

³ <http://www.indy.gov/eGov/Mayor/Documents/7%202011%2012%20Mayor%20Ballard%20Delcares%20Water%20Shortage%20Warning%20In%20Marion%20County.pdf>

⁴ <http://image.exct.net/lib/fef51c757c6400/m/3/EXECUTIVE+ORDER+NO+4+2012.pdf>.

The role of the Indianapolis Division of Homeland Security (DHS)⁵ was to keep the population of Indianapolis aware of the drought conditions and to understand the physical symptoms and risks related to the extended heat and dry spells we are experiencing. DHS engages in significant coordinating activities with local, state, regional and national organizations in order to provide emergency management services for Marion County.

As part of their response, DHS coordinated a press conference with the Indiana Department of Homeland Security, Citizens Water, IPL, and the Marion County Public Health Department to bring attention to the need of protecting our most vulnerable populations and also to conserve water and electricity.

It was also during this time that law enforcement began increased enforcement when it comes to the use of fireworks and unattended cigarettes; to encourage local monitoring of water levels in towers for pressure and fire fighting; to work with local media to get the word out; to encourage electrical conservation; and also to ensure that at-risk populations are also receiving relevant and timely information and guidance on drought conditions.

DHS has found that establishing strategic partnerships with various agencies, including providing advice as subject matter experts (*i.e.* when creating policy and procedure), has enhanced its response efforts not only during drought conditions but also through other disasters and throughout crisis management in general.

Analysis by the National Weather Service (NWS) suggests the State of Indiana will see minimal drought improvement in August. Some improvement is likely by fall but moderate to severe drought could persist. NWS climate models indicate risk is still there for below normal rainfall between August and October 2012.

3. PLEASE COMMENT ON THE WAYS SUCH RESTRICTIONS HAVE IMPACTED CITIZENS OF YOUR CITY.

At this time, we do not have comprehensive, consolidated information on the monetary impact of this drought to residents, to government, or to businesses in Marion County. Droughts can also precipitate decreased tourism revenues, increased food prices, and overall decreased tax bases for local governments.

According to Citizen's Water, some residential customers expressed displeasure with the restrictions. The City of Indianapolis received over 1,000 inquiries, reports or complaints through the Mayor's Action Center (MAC), a dedicated call center for the residents of Marion County, during the first week of that the conservation measures were in place. Of those calls, 300 were informational inquiries. The remaining calls were from residents complaining about residents or businesses watering their properties.

⁵ The Division of Homeland Security (DHS) is one of four divisions of the City of Indianapolis Department of Public Safety, along with the Indianapolis Metropolitan Police Department, the Indianapolis Fire Department, and Animal Care & Control. The mission of DHS is to reduce the loss of life and property and protect our city's critical infrastructure from all types of hazards – natural or manmade – through a comprehensive program of mitigation, preparedness, response, and recovery.

What we have experienced at the Indianapolis Department of Parks and Recreation with regard to the 2012 drought may serve as a useful proxy to the impact seen by the greater community – both home owners with lawns to maintain, as well as to local businesses seeing changes in their cost and revenues in the face of a unusually hot and dry summer.

While city pool revenues at Indy parks are up, we have lost a number of seasonal staff due to the demands of the job in high temperatures and without any rain days. Ordinarily, pool staff would have at least one day every couple of weeks when rain would force the pool to close, allowing staff to recover. Forty-five days of 90-100 degree plus temperatures in a row has taken a toll on the 16-18 years olds who keep our pools running. As a result, Indy parks will be required to reduce hours at an indoor pool to shift staff to outdoor pools until the season ends.

Indy Parks has also had to cancel a number of free concerts due to a policy that requires us to cancel a show if the heat index hits 100. Cancelling free concerts can negatively impact revenue in two ways: decline in gate admissions and difficulty in promoting other revenue generating concerts. We probably won't know the long term impact until the end of the season.

The city's golf courses are definitely struggling. While course usage remains relatively high, the unplanned expense of all of the irrigation last year and this year is making it difficult for them to stay in the black. One of our courses is facing an extra hurdle as well. The entire course is irrigated by a retention pond, and there simply is not enough water right now. Last week, they turned their water pumps on the side to get an extra 8 inches of water out of the pond, but it's not enough. If the pond runs dry, that course will face serious financial hardships due to replacing lost turf.

Maintenance is another balancing act. We won't know the full impact until the end of the season, but Indy Parks is irrigating sports fields too, and much like golf courses, we had not planned for the extra expense. Mowing at park properties is down but the irrigation plus the expense of replacing lost trees, landscaping, etc. probably won't equal out to a financial win.

4. PLEASE COMMENT ON HOW THESE DECISIONS HAVE AFFECTED THE BUSINESS COMMUNITY.

The City of Indianapolis does not have comprehensive data on the impact of these decisions on the business community or on economic development, but there certainly have been significant, anecdotal business impacts. Many businesses complained to the city because they felt that the business exemptions provided in the water ban language were inconsistent.

Others businesses voiced general concerns over the impact of water use restrictions. These include: pool companies; lawn care and landscaping businesses; irrigation repair companies; construction companies; painting companies; power washing companies; car dealerships that detail their own vehicles; and contractors and builders.

According to local media outlets, the ban on personal fireworks reduced seasonal fireworks retail sales in Indianapolis by about 90%.⁶ This is quite a significant impact for a 4-6 week annual business window.

⁶ <http://www.indystar.com/article/20120706/NEWS05/207060339/Indianapolis-fireworks-retailers-income-fizzles-customers-follow-ban>

5. PLEASE EXPLAIN WHAT KIND OF INFORMATION IS USED TO MAKE SUCH DETERMINATIONS.

With the general awareness that Indianapolis and the Midwest experienced a mild 2011-2012 winter, and through the gathering of additional information, DHS was aware that summer 2012 was expected to be much warmer than prior summers.

Repeated and constant conditions that called for the activation of DHS' Extreme Heat Plan first prompted the division to seriously evaluate the potential risk of drought conditions.

As Indianapolis began to experience much warmer temperatures and saw a deficiency in rainfall or moisture conditions, information provided by the National Weather Service DHS began to paint a picture of much more comprehensive and wide-spread drought conditions.

DHS' coordination effort began through daily monitoring of the weather by the city's Emergency Operations Center and also by our partners with the National Weather Service. DHS also used WebEOC,⁷ a web-enabled crisis-management system that allows for real-time information sharing with its partner agencies, including public and private organizations throughout Marion County.

Citizens Water has a very comprehensive long-term water supply planning process that focuses on regional supply planning, water conservation, identifying new sources of supply and more efficient use of current supply sources.

As mentioned earlier in my testimony, Citizens Water engaged the Department of Code Enforcement (DCE) and the Mayor's Office in discussions when they felt that initial water conservations measures were warranted, approximately 3-4 weeks prior to the July 13th water ban declaration. These ongoing discussions centered on the severity of the conditions, implementation policy, and resource availability. After the water ban was activated, Citizens Water and DCE had nearly 2 days to coordinate messaging and identify potential issues/inquiries relating to the ban.

The Indiana Department of Homeland Security and National Weather Service also keep us informed on current water conditions in Indiana. Information is shared through maps of the U.S. Drought Monitor, State Severity Indices, etc. It is through all of this information that the State warned that a major drought will persist for the rest of summer in Indiana.

The State of Indiana uses a warning system that does aid us locally on decisions regarding human and environmental health and welfare during drought. It is through a water shortage warning that we begin to prepare for a coordinated response.

Citizens Water used its Drought Management Guidelines to mitigate the impact of the drought and ensure long-term water supply for the community. The utility's guidelines call for frequent communications with utility customers, coordination with city government, and water conservation measures triggered by operating parameters such as reservoir and river levels.

⁷ http://esi911.com/esi/index.php?Itemid=30&id=14&option=com_content&task=view

The guidelines used by the water utility uses various triggers to determine enhanced water conservation efforts necessary in response to progressing drought conditions. One of these triggers in the drought management guidelines for Indianapolis is based on the drought status for the area as published on the U.S. Drought Monitor web site, which is part of the National Integrated Drought Information System. These status updates are made weekly to the U.S. Drought Monitor website, and are checked by Citizens Water as they are updated.

The designation of “drought status” on the U.S. Drought Monitor website was used in media communications to help condition customers to water reduction efforts, to emphasize the seriousness of the drought situation, and most likely helped with the cooperation by the vast majority of customers with complying with the lawn irrigation ban once that was enacted.

6. WAYS IN WHICH THIS INFORMATION COULD BE IMPROVED OR HOW ADDITIONAL DATA COULD BETTER INFORM THIS DECISION-MAKING PROCESS IN THE FUTURE

The sooner we know about drought conditions, the sooner we begin planning public information and preparing our leaders and the community for water conservation. However, the expected accuracy of the prediction would likely have to be quite high before it would result in an earlier implementation of mandatory restrictions.

Improvements in drought prediction tools would have the potential to provide earlier information that could be used in water supply and demand planning and decision-making related to appropriate responses. It certainly would help with communicating the needs related to voluntary reductions and would hopefully promote greater response to voluntary requests.

7. COMMENTS ON THE COMMITTEE’S DRAFT NIDIS REAUTHORIZATION LEGISLATION

Mayor Ballard supports better, more timely and more accurate drought reporting and prediction services.