2010 Climate Adaptation Workshop
"Advancing the Regional Discussion on Climate Change Adaptation by the Great Lakes"
Buffalo, NY
Luncheon Keynote: "Climate Adaptation of Great Lakes Cities: A Look at Grand Rapids, Michigan"
Hon. George K. Heartwell, Mayor

Cities are on the frontline of climate change mitigation. So it should come as no surprise that climate change adaptation is not an academic exercise for mayors. It's what we do, even if we may not call it adaptation.

In fact, in the leading circle of climate change mitigation mayors adaptation language has been frowned on. It feels like surrender, like waving the white flag. We have focused on stemming the tide, rolling back the activities that generate greenhouse gasses, maybe even imagining that if every city did its part we might return to the days before Bill McKibben wrote "The End of Nature" and turned our world upside down.

Cities are on the front line of climate change mitigation. One of the most visible manifestations of that effort is the US Mayors' Climate Protection Agreement. When President Bush withdrew the US from the Kyoto Protocols then-mayor of Seattle, Greg Nickles, said, in effect, "You may not care, Mr. President but I do; and I'm willing to bet that mayors all over America feel like I do." Working through the US Conference of Mayors, Nickles drafted a covenantal agreement which mirrors Kyoto. It has twelve work areas that cities which sign on must agree to address and a goal of GHG reduction that is in Kyoto. Mayor Nickles was right and mayors of cities all over this county have signed on. To date there are 1074 signatory-cities.

I don't attend any mayor conferences these days where climate change mitigation or sustainability is not high on the agenda. But recently we've come to recognize that all our efforts can't unroll the changes that have manifested over past two or three decades…but that, arguably, have been underway for over 100 years. So today more mayors are focusing on adaptation. We're actively asking – and beginning to answer – questions like:

- How do we assess our vulnerability to environmental impacts that have no precedent in recorded history?
- How do we plan for extreme weather, extreme heat, significantly rising ocean levels and significantly falling Great Lakes levels?
- What are our infrastructure needs going to be 50 years from now?
- How do we prepare for the health and welfare needs of our citizens?

I'll describe the efforts of one city to address climate change adaptation; the one I know best, Grand Rapids. I'm always proud when Grand Rapids is singled out as one of the leading cities in the country on climate change work. But as you will see, our relatively short list of adaptation efforts will only illustrate how far we all have to go in this arena.

First, let me describe efforts to address extreme weather. Here I'm talking about increased precipitation and violent weather. Last week I was speaking with Des Moines, Iowa mayor Frank Cowney whose city has experienced two-500 year rain events in the past three years. How do you prepare for that? Of course we all know the consequences of inadequate floodwalls and levies when hurricanes hit the lowlands along the Gulf and Eastern seaboard. For an inland city like Grand Rapids our efforts have largely focused on combined sewer separation. Over the past decade and one-half – beginning with a nudge from US-EPA, but accelerating our investments beyond what EPA required – we have invested over $240M (93% local money) in restoring water quality in our Grand River through sewer separation. While this was a water quality initiative it turns out to be an important adaptation effort to prepare us for ever-increasing precipitation now and into the future.

The other concern we have with respect to extreme weather is protecting our power grid. While this is a federal responsibility we have begun exploring distributed generation options at the neighborhood and even household level. Geo-thermal and small wind installations are beginning to spring up and the city is using its EECBG funds to help leverage distributed generation development.

Extreme Heat is the second adaptation challenge. We have begun the work of assessing out vulnerabilities, working with the Red Cross and Salvation Army to identify vulnerable seniors and provide relief options for extreme heat events. Fresh on our minds is the deaths that occurred in several big cities across the nations during the 2009 heat wave. We are working to reduce the use of personal automobiles during high heat events. Our transit authority uses CMAQ funds to provide all-ride-free days on our transit system on ozone action days. We are investing in our first fixed guideway system: a 12 mile bus rapid transit (BRT) line.

We are also very aggressive on using environmental design to address extreme heat. Grand Rapids has the distinction of being home for the conceptual development of the US Green Building Council, given birth at Herman Miller Co. in neighboring Zeeland, MI. Up until very recently we have been able to claim that we have more LEED certified buildings per capita than any other city in America. Our efforts at reducing heat island effect through environmental design also include increasing our urban tree canopy from 36.5% to 40% coverage. 3.5% seems a small number but it represents 185,000 trees. This challenge is more daunting with the infestation of the Emerald Ash Borer that is destroying our Ash trees, representing 15% of all street trees. I'm cutting them down faster than I can replant new trees. I would also cite Chicago's efforts to reduce heat island effect by limiting roof colors to the light end of the color spectrum by building code.

Everything we do to mitigate contributes to slowing the rate of climate change. Grand Rapids has committed itself to a goal of 100% renewable energy for municipal use by 2020. We are currently at 22% and engaged in early development of two wind projects

Finally, let me talk about water levels in the Great Lakes. The concern of port cities with falling lake levels is the future impassibility of their harbor mouths and shipping lanes. The Michigan Climate Action

Plan includes a section promoting short sea shipping as a strategy for reducing GHG emission. Included in the plan are a budgetary emphasis on dredging and the promotion of short sea shipping.

Further, falling Great Lakes levels have the potential to severely impact the recreational economy which is so important, not only to lakeside communities but to cities like mine that is 32 miles inland but totally interdependent for our economy on recreational use of Lake Michigan.

Let me finish by saying that cities have led the way in mitigation in our country. You can see it in the number of cities in the US Mayors' Climate Protection Agreement. You can see it in the efforts of cities large and small to clean the air, to improve transit, to design the urban landscape for environmental enhancement. Cities are where the action is on climate change. Now, look to cities to pave the way for adaptation.