Climate Change is real, it is happening now, and human civilization is responsible.
“Warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. The atmosphere and ocean have warmed, the amounts of snow and ice have diminished, sea level has risen, and the concentrations of greenhouse gases have increased.”
Indicators – Warming Atmosphere

“Each of the last three decades has been successively warmer at the Earth’s surface than any preceding decade since 1850”
"Ocean warming dominates the increase in energy stored in the climate system, accounting for more than 90% of the energy accumulated between 1971 and 2010"
Indicators – Shrinking Ice Caps

“Over the last two decades, the Greenland and Antarctic ice sheets have been losing mass, glaciers have continued to shrink worldwide, and Arctic sea ice and Northern Hemisphere spring snow cover have continued to decrease in extent”
Indicators – Rising Sea Levels

“The rate of sea level rise since the mid-19th century has been larger than the mean rate during the previous two millennia”
Indicators – Rising CO2 Levels

“Carbon dioxide concentrations have increased by 40% since pre-industrial times, primarily from fossil fuel emissions”
Changing weather patterns...

...combined with rising sea levels...

...lead to extreme weather events like Hurricane Sandy.
Predictions for the future

- Temperature increase of 2.2 °C by 2100
- Sea level rise of 0.48 meters by 2100
- Ice-free Arctic
- Ocean acidification
- Major disruptions to weather patterns
Responses

• Prevention – how do we reduce emissions and slow climate change?
• Adaptation – how do we prepare ourselves and our communities for the changes ahead?
• Education – how do we tell people what is happening in a way that results in constructive action?
Prevention

Focus on Energy Efficiency
- Architecture 2030
- Energy Disclosure Ordinances
- LEED/Energy Star, other certification programs
- Future Carbon Taxes?
- Energy Divestment
Adaptation

“Resiliency - the capacity to adapt to changing conditions and to maintain or regain functionality and vitality in the face of stress or disturbance. It is the capacity to bounce back after a disturbance or interruption of some sort.”

How do we make it through the next storm? The next 100 years?

www.resilientdesign.org
The challenge for museums

• Rising Energy Costs – how do we pay for it? How can we implement energy reduction strategies?
• Adaptation/Resiliency – how do we stay open?
• Adaptation/Resiliency – how do we protect our collections?
• Education – what is our role? Our responsibility?