

DRAFT RESOLUTION; RESOLUTION NO:

RESOLUTION OF THE CITY OF \_\_\_\_\_ TO THE ADMINISTRATOR OF THE ENVIRONMENTAL PROTECTION AGENCY IN SUPPORT OF REDUCING GREENHOUSE GAS POLLUTION UNDER THE CLEAN AIR ACT

WHEREAS, the decade from 2000 to 2010 was the warmest on record<sup>1</sup>, 2005 and 2010 tied for the hottest years on record<sup>2</sup>, and 2012 was the warmest year on record for the United States and among the ten warmest globally<sup>3</sup>; and

WHEREAS, in 2013 the level of CO<sub>2</sub> in the atmosphere averaged 396 parts per million (ppm), exceeding the pre-industrial level by 40 percent<sup>4</sup>; in 2011 the levels of methane and nitrous oxide — two potent greenhouse gases — exceeded pre-industrial levels by about 150% and 20% respectively<sup>5</sup>; and

WHEREAS, one of the world's leading climate scientists, Dr. James Hansen, stated in 2008: "If humanity wishes to preserve a planet similar to that on which civilization developed and to which life on Earth is adapted, paleoclimate evidence and climate change suggest that CO<sub>2</sub> will need to be reduced from its current 385 ppm to at most 350 ppm"<sup>6</sup>; and

WHEREAS, the Environmental Protection Agency determined that current and future greenhouse gas concentrations endanger public health<sup>7</sup>; and according to the Global Humanitarian Forum by 2009 climate change was already responsible every year for some 300,000 deaths, 325 million people seriously affected, and economic losses worldwide of U.S. \$125 billion<sup>8</sup>; and

WHEREAS, extreme weather events, most notably heat waves and precipitation extremes, are striking with increased frequency<sup>9</sup>, with deadly consequences for people and wildlife; in the United States in 2012 alone, 11 billion-dollar weather and climate disasters occurred, including heat waves, storms, and drought that totalled an estimated \$116 billion dollars in damages and loss of 377 human lives<sup>10</sup>; and

WHEREAS, climate change creates conditions that lead to more destructive storms like 2012's Superstorm Sandy<sup>11</sup> by loading storms with more energy and more rainfall<sup>12</sup>, raising sea levels and causing storm surge to ride on a higher sea surface so that more coastline floods<sup>13</sup>, and warming the Arctic and melting sea ice, which causes changes in the jet stream that are bringing more extreme weather to the U.S.<sup>14</sup>; the risk of extreme storm surges has already doubled as the planet warms, and these events could become 10 times more frequent in the coming decades<sup>15</sup>; and

WHEREAS, climate change is affecting food security by reducing the growth and yields of important crops<sup>16</sup>; and droughts, floods and changes in snowpack are altering water supplies<sup>17</sup>; and

WHEREAS, climate change has been linked to the declines and losses of wildlife populations around the globe<sup>18</sup>; and scientists have concluded that by 2100 as many as one in 10 species could face extinction due to climate change<sup>19</sup>; and

WHEREAS, the world's land-based ice is rapidly melting, threatening water supplies in many regions and raising sea levels<sup>20</sup>, and Arctic summer sea ice extent has decreased to about half of what it was several decades ago<sup>21</sup>, and reached a record low in 2012<sup>22</sup>, with an accompanying drastic reduction in sea-ice thickness and volume<sup>23</sup>, which is severely jeopardizing ice-dependent animals<sup>24</sup>; and

WHEREAS, the U.S. East Coast is a hotspot for sea level rise with rates three to four times faster than the global average<sup>25</sup>; sea level rise is accelerating in pace<sup>26</sup>; the effects of sea-level rise are long-lived<sup>27</sup>; and sea level is expected to rise by three to four feet on average – and possibly 6.5 feet or more – in this century alone<sup>28</sup>, threatening millions of Americans with severe flooding<sup>29</sup>; and

WHEREAS, for four decades, the Clean Air Act has protected the air we breathe through a proven, comprehensive, successful system of pollution control that saves lives and creates economic benefits exceeding its costs by many times; and

WHEREAS, with the Clean Air Act, air quality in this country has improved significantly since 1970, despite major growth both in our economy and industrial production; and

WHEREAS, between 1970 and 1990, the six main pollutants covered by the Clean Air Act — particulate matter and ground-level ozone (both of which contribute to smog and asthma), carbon monoxide, lead, sulfur and nitrogen oxides (the pollutants that cause acid rain) — were reduced by between 47 percent and 93 percent, and airborne lead was virtually eliminated; and

WHEREAS, the Clean Air Act has produced economic benefits valued at \$2 trillion or 30 times the cost of regulation<sup>30</sup>; and

WHEREAS, the U.S. Supreme Court ruled in *Massachusetts vs. EPA* (2007) that greenhouse gases are “air pollutants” as defined by the Clean Air Act and the Environmental Protection Agency has the authority to regulate them<sup>31</sup>; and

WHEREAS, The city of \_\_\_\_\_ prides itself on being a leader in the fight against climate change and for clean air [*insert steps your city has already taken such as developing a climate action plan, signing the Mayors’ Climate Protection Agreement, reducing carbon emissions by X percent, etc.*]

NOW THEREFORE BE IT RESOLVED, that climate change is not an abstract problem for the future or one that will only affect far-distant places but rather climate change is happening now, we are causing it, and the longer we wait to act, the more we lose and the more difficult the problem will be to solve; and we, the \_\_\_\_\_ City Council, on behalf of the residents of \_\_\_\_\_, do hereby urge the administrator of the Environmental Protection Agency and President Barack Obama to move swiftly to fully employ and enforce the Clean Air Act to do our part to reduce carbon in our atmosphere to no more than 350 parts per million.

BE IT FURTHER RESOLVED that the City Clerk shall forward a copy of this resolution  
To the Administrator of the Environmental Protection Agency and President Barack Obama.

## ENDNOTES

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<sup>1</sup> Press Release, National Aeronautic Space Association, *NASA Research Finds Last Decade was Warmest on Record, 2009 One of the Warmest Years* (Jan. 21, 2010), [www.nasa.gov/home/hqnews/2010/jan/HQ\\_10-017\\_Warmest\\_temps.html](http://www.nasa.gov/home/hqnews/2010/jan/HQ_10-017_Warmest_temps.html).

<sup>2</sup> National Oceanic and Atmospheric Administration, *NOAA: 2010 Tied for Warmest Year on Record*, [www.noaanews.noaa.gov/stories2011/20110112\\_globalstats.html](http://www.noaanews.noaa.gov/stories2011/20110112_globalstats.html) (last visited on 3/30/12).

<sup>3</sup> National Oceanic and Atmospheric Administration, *2012 was one of the 10 warmest years on record globally* [http://www.noaanews.noaa.gov/stories2013/20130806\\_stateoftheclimate.html](http://www.noaanews.noaa.gov/stories2013/20130806_stateoftheclimate.html) (last visited on 1/15/14)

<sup>4</sup> CO<sub>2</sub>Now.org, *What the World Needs to Watch*, <http://co2now.org> (last visited on 1/11/14); National Oceanic and

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Atmospheric Administration, Earth System Research Laboratory, *Trends in Atmospheric Carbon Dioxide*, [www.esrl.noaa.gov/gmd/ccgg/trends/](http://www.esrl.noaa.gov/gmd/ccgg/trends/) (last visited on 1/11/14).

<sup>5</sup> Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2013: The Physical Science Basis, Summary for Policymakers*, [http://www.climatechange2013.org/images/uploads/WGI\\_AR5\\_SPM\\_brochure.pdf](http://www.climatechange2013.org/images/uploads/WGI_AR5_SPM_brochure.pdf) (last visited 1/15/14)

<sup>6</sup> J. Hansen et al., *Target atmospheric CO<sub>2</sub>: Where should humanity aim?*, *Open Atmos. Sci.* 2, 217 (2008), <http://pubs.giss.nasa.gov/abs/ha00410c.html>.

<sup>7</sup> U.S. Environmental Protection Agency, *Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act*, 74 Federal Register 66496-66546 (Dec. 15, 2009) (to be codified at 40 C.F.R. ch. 1), <http://epa.gov/climatechange/endangerment.html> (last visited 4/2/12).

<sup>8</sup> Global Humanitarian Forum, *The Anatomy of a Silent Crisis* (2009), [www.eird.org/publicaciones/humanimpactreport.pdf](http://www.eird.org/publicaciones/humanimpactreport.pdf), p.1 of pdf.

<sup>9</sup> Intergovernmental Panel on Climate Change (IPCC), *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation (SREX)* (2012), <http://ipcc-wg2.gov/SREX/>; U.S. Global Change Research Program, *Global Climate Change Impacts in the US: Global Climate Change* (2009), <http://www.globalchange.gov/publications/reports/scientific-assessments/us-impacts/full-report/global-climate-change>; D. Coumou and S. Rahmstorf, *A decade of weather extremes*, *Nature Climate Change* (2012), <http://dx.doi.org/10.1038/NCLIMATE1452>.

<sup>10</sup> National Oceanic and Atmospheric Administration, National Climatic Data Center, *Billion-Dollar Weather/Climate Disasters*, <http://www.ncdc.noaa.gov/billions/events>.

<sup>11</sup> <http://www.marketwatch.com/story/sandy-to-cost-new-york-42-billion-2012-11-26>.

<sup>12</sup> <http://www.pnas.org/content/early/2012/10/10/1209542109.abstract>.

<sup>13</sup> [http://www.usgs.gov/newsroom/article.asp?ID=3256&from=rss\\_home#.UJBC22eHPAU](http://www.usgs.gov/newsroom/article.asp?ID=3256&from=rss_home#.UJBC22eHPAU).

<sup>14</sup> <http://www.agu.org/pubs/crossref/2012/2012GL051000.shtml>; <http://www.pnas.org/content/109/11/4074>.

<sup>15</sup> A. Grinsted, et al. 2013. Projected hurricane surge threat from rising temperatures. *PNAS* doi:10.1073/pnas.1209980110, <http://www.pnas.org/content/early/2013/03/14/1209980110.abstract>.

<sup>16</sup> D.B. Lobell et al., *Climate Trends and Global Crop Production Since 1980*, *Science* 333, 616 (July 29, 2011), [www.sciencemag.org/content/early/2011/05/04/science.1204531.abstract](http://www.sciencemag.org/content/early/2011/05/04/science.1204531.abstract); U.S. Global Change Research Program, *Global Climate Change Impacts in the US: Agriculture* (2009), [www.globalchange.gov/publications/reports/scientific-assessments/us-impacts/full-report/climate-change-impacts-by-sector/agriculture](http://www.globalchange.gov/publications/reports/scientific-assessments/us-impacts/full-report/climate-change-impacts-by-sector/agriculture).

<sup>17</sup> U.S. Global Change Research Program, *Global Climate Change Impacts in the US: Water Resources* (2009), [www.globalchange.gov/publications/reports/scientific-assessments/us-impacts/full-report/climate-change-impacts-by-sector/water-resources](http://www.globalchange.gov/publications/reports/scientific-assessments/us-impacts/full-report/climate-change-impacts-by-sector/water-resources).

<sup>18</sup> C. Parmesan. 2006. Ecological and evolutionary responses to recent climate change. *Annual Review of Ecology and Systematics* 37:637–669,

<http://www.annualreviews.org/doi/abs/10.1146/annurev.ecolsys.37.091305.110100>; A.E. Cahill, et al. 2012. How does climate change cause extinction? *Proceedings of the Royal Society B*, doi:10.1098/rspb.2012.1890, <http://rspb.royalsocietypublishing.org/content/early/2012/10/15/rspb.2012.1890.full.pdf>.

<sup>19</sup> I.M.D. Maclean and R.J. Wilson, *Recent ecological responses to climate change support predictions of high extinction risk*, *PNAS* 108, 12337 (2011), <http://www.pnas.org/content/108/30/12337>, summary at <http://www.sciencedaily.com/releases/2011/07/110711151457.htm>.

<sup>20</sup> Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2007: Synthesis Report* (2007), [http://www.ipcc.ch/publications\\_and\\_data/publications\\_ipcc\\_fourth\\_assessment\\_report\\_synthesis\\_report.htm](http://www.ipcc.ch/publications_and_data/publications_ipcc_fourth_assessment_report_synthesis_report.htm), pp. 30, 49 of pdf.

<sup>21</sup> J. Stroeve et al., *Arctic Sea Ice Extent Plummets in 2007*, *EOS* 89, 2 (January 8, 2008), <http://www.agu.org/pubs/crossref/2008/2008EO020001.shtml>, p. 13 of pdf.

<sup>22</sup> <http://nsidc.org/arcticseaicenews/2012/09/arctic-sea-ice-extent-settles-at-record-seasonal-minimum/>.

<sup>23</sup> Polar Science Center, *Arctic Sea Ice Volume Anomaly, version 2*,

<http://psc.apl.washington.edu/wordpress/research/projects/arctic-sea-ice-volume-anomaly/> (last visited April 3, 2012); R. Kwok and D.A. Rothrock, *Decline in Arctic sea ice thickness from submarine and ICES at records: 1958-2008*, *Geophysical Research Letters* 36, L15501 (2009), <http://www.agu.org/pubs/crossref/2009/2009GL039035.shtml>.

<sup>24</sup> Center for Biological Diversity and Care for the Wild International, *Extinction: It's Not Just for Polar Bears* (2010), [http://www.biologicaldiversity.org/programs/climate\\_law\\_institute/the\\_arctic\\_meltdown/arctic\\_extinction\\_report.html](http://www.biologicaldiversity.org/programs/climate_law_institute/the_arctic_meltdown/arctic_extinction_report.html).

<sup>25</sup> [http://www.usgs.gov/newsroom/article.asp?ID=3256&from=rss\\_home#.ULZ\\_yGeHMmR](http://www.usgs.gov/newsroom/article.asp?ID=3256&from=rss_home#.ULZ_yGeHMmR)

<sup>26</sup> M.A. Merrifield et al., *An Anomalous Recent Acceleration of Global Sea Level Rise*, *Journal of Climate* 22, 5772 (2008), <http://journals.ametsoc.org/doi/abs/10.1175/2009JCLI2985.1>.

<sup>27</sup> A. Levermann, et al. 2013. The multimillennial sea-level commitment of global warming. *PNAS* 110:13745-13750, <http://www.pnas.org/content/110/34/13745.full.pdf>.

<sup>28</sup> Global average sea-level rise projections for 2100 range from 1.5 feet to 6.5 feet, with an average of 3 to 4 feet expected, based on the following studies: A. Grinsted, et al. 2009. Reconstructing sea level from paleo and projected temperatures 200 to 2100 AD. *Climate Dynamics* 34:461–472, <http://link.springer.com/article/10.1007%2Fs00382->

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008-0507-2#page-1; S. Jevrejeva, et al. 2010. How will sea level respond to changes in natural and anthropogenic forcings by 2100? *Geophysical Research Letters* 37:1-5, <http://onlinelibrary.wiley.com/doi/10.1029/2010GL042947/abstract>; NRC. 2012. *Sea-level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future*. National Research Council. National Academies Press, Washington, D.C, [http://www.nap.edu/catalog.php?record\\_id=13389](http://www.nap.edu/catalog.php?record_id=13389); W.T. Pfeffer, et al. 2008. Kinematic constraints on glacier contributions to 21st-century sea-level rise. *Science* 321:1340–3, <http://www.sciencemag.org/content/321/5894/1340>; S. Rahmstorf. 2007. A semi-empirical approach to projecting future sea-level rise. *Science* 315:368, <http://www.sciencemag.org/content/315/5810/368>; M. Vermeer and S. Rahmstorf. 2009. Global sea level linked to global temperature. *PNAS* 106:21527–32, <http://www.pnas.org/content/early/2009/12/04/0907765106.full.pdf+html>.

<sup>29</sup> B.H. Strauss, *Tidally adjusted estimates of topographic vulnerability to sea level rise and flooding for the contiguous United States*, *Environmental Research Letters* 7 (2012), <http://iopscience.iop.org/1748-9326/7/1/014033>, summary at <http://www.sciencedaily.com/releases/2012/03/120314111738.htm>; <http://dels.nas.edu/Report/Level-Rise-Coasts/13389>.

<sup>30</sup> For Clean Air Act facts, see Center for Biological Diversity, *The Clean Air Act Works* (2011), [http://www.biologicaldiversity.org/programs/climate\\_law\\_institute/global\\_warming\\_litigation/clean\\_air\\_act/pdfs/CleanAirActWorks\\_032011.pdf](http://www.biologicaldiversity.org/programs/climate_law_institute/global_warming_litigation/clean_air_act/pdfs/CleanAirActWorks_032011.pdf); and U.S. Environmental Protection Agency, *The Benefits and Costs of the Clean Air Act, 1970 to 1990* (1997), <http://www.epa.gov/air/sect812/>; and U.S. Environmental Protection Agency, *The Benefits and Costs of the Clean Air Act, 1990 to 2010* (1999), <http://www.epa.gov/air/sect812/>.

<sup>31</sup> *Massachusetts v. EPA*, 127 S. Ct. 1438 - 2007 <http://www.supremecourt.gov/opinions/06pdf/05-1120.pdf> (last visited 1/15/14)