

Climate Change – *exceeding geologic speed limits*

By Charles A. Rich

The Earth's surface, active and in flux, is constantly warming up or cooling down. As continental land masses continue their core-induced slipping and sliding to circumnavigate the globe, ocean currents and the atmosphere above do likewise. Add the influence of some recently-recognized man-induced global warming impacts, and we now find ourselves uncomfortably revealing climatic change trends in real time.

Technologies to define these trends are improving daily. We now monitor sea level fluctuation over relatively short periods, no longer having to rely solely upon the geologic fossil record. The latest United Nations report, compiled from reliable references, projects global sea level rising as much as 3 feet as early as 2100 due to progressive increases in the rates of melting polar ice caps. Unfortunately, this phenomenon will (within only the next 85 years) displace tens of millions of people from coastal areas around the world.

We are witnessing a depletion in the Earth's ozone layer and its associated effects upon regional wind patterns in the southern hemisphere that are contributing to a warming of regional ocean currents. Such warming might be accelerating the melting of Antarctic ice. However, the trend receiving the most public no-



tority is the serious episodic rise in heat-trapping atmospheric CO2 levels due to increased global carbon emissions driven by our dependence on fossil fuels.

Today, scientists project CO2 levels ballooning beyond the symbolic 400 ppm concentration, rising up to and through 500 or perhaps even as much as 600 ppm in the not-too-distant future. Although ice core studies and other geo-evidence have taught us that we had elevated CO2 levels several million years back in prehistoric time, we know that such naturally-occurring atmospheric changes were gradual adjustments to Earth's climatic conditions over millions of years - NOT as presently occurring, shockingly accelerated within only a couple of relatively short centuries.

Thus, the 'Breaking News' is the sheer geometric acceleration of the climate change we're now observing – not dwelling on the partisan political controversies and 'frozen deer in the headlights' attitudes over

Hour Children - *helping women & children*

By Eric A. Weinstock

CARICH is a proud member of the Hour Children development team that recently completed construction of the Hour Children Apartment House III located at 36-11 12th Street, Long Island City, NY.

Hour Children's vision is to end the cycle of intergenerational incarceration. Their mission is to help incarcerated and formerly incarcerated women and their children rejoin the community and reunify with their families to build healthy, independent and secure lives. To accomplish this, they provide compassionate compre-



hensive services and encourage all to live and interact with dignity and mutual respect.

The Hour Children Apartment House III includes 2 & 3 bedroom apartments for 18 families. This four-story, 25,000

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SF Facility serves as housing units as well as Hour Children's headquarters.

As part of the approval process by the City of New York, CA RICH reviewed previous environmental reports and performed a Phase II Environmental Site Assessment (ESA) of the property. During that process, a migrating (buried) petroleum spill was discovered coming onto the property from an adjacent site. As a result, a New York State Department of Environmental Conservation (NYSDEC) Spill Case was opened.

CA RICH expeditiously developed a Remedial Action Plan and Construction Health and Safety Plan (RAP & CHASP) to address the Spill issue and other related concerns raised by the New York City Department of Environmental Protection (NYCDEP) during the City Environmental Quality Review, including:

- ◆ Abating asbestos-containing building materials;
- ◆ Demolition of a structure;
- ◆ Exhuming a former underground heating oil tank;
- ◆ Excavation & disposal of petroleum-contaminated soil,

Hour Children Apartment House III during redevelopment



- ◆ Installation of a combined waterproofing membrane and vapor barrier; and
- ◆ Clean topsoil buffer in landscaped areas.

The RAP was designed to seamlessly integrate necessary remediation required at both City and State levels

Completed Hour Children Apartment House III



into site preparation and construction so redevelopment could proceed expeditiously.

Upon completion of soil removal, installation of the combined waterproofing membrane/vapor barrier and placement of clean topsoil, CA RICH expedited a Closure Report to NYCDEP and NYSDEC that was then quickly approved. In addition, upon completion of testing and reporting, the requisite NYSDEC Spill Case was Closed.

CA RICH is pleased to report that the property is now fully occupied. We are proud to have played a small part in helping 18 needy families get back on their feet. A ribbon-cutting ceremony held on May 7, 2014 celebrated this accomplishment.



Sister Tesa Fitzgerald of Hour Children and our own Eric Weinstock at the ribbon cutting ceremony

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its root causes. For example, Long Island was covered with thousands of feet of glacial ice not millions of years ago, but rather as recently (in geologic-speak) as only 10,000 years ago. Its fairly flat topography today is a direct result of those multiple cycles of advancing (cooling) and retreating (warming) glacial ice sheets flowing across the North American continent.

The rates and magnitudes of climate change vary across geologic time. Recent anthropogenic climate changes, while occurring very rapidly in terms of geologic time, cannot be reversed quickly in 'real time'. The damages underway (rising sea level, longer summers, rapidly melting glaciers, ecosystem disruption, thawing permafrost, air pollution, warming ground water, water shortages, etc.) are not readily reversible.

Global temperatures are consistently above average for the past 29 years and last winter was the eighth warmest on record. Increasing weather related disasters, large-scale wildfires, flooding, severe droughts & heat waves,

more intense storms, and even new fish migrations, will significantly alter human habitat along with associated monetary damages in the tens of billions.

Passivity cannot be sustained and we should stop burdening ourselves with inaction because of this inconvenient truth. Instead, we all need to objectively recognize how climate change is affecting our world, seeing it as an existing critical and growing threat to our overall quality of life. To rein in the growth of greenhouse gases, we need to advance sustainable smart growth concepts and consider the feasibility of population restraint.

We must begin to think forward and build in 'resiliencies' beyond the popular concept of sustainability. Yes, more building-related green roofs, smart codes, permeable pavements, modified levee designs & smart seawalls, water & energy conservation, green power: wind, hydro, solar, tidal, nuclear and recycling, are all responsive to the problem, but we need to do far more.

To move a swelling global population projected to 9 billion people by 2050 off of our chronic dependence upon traditional fossil fuel energy models, we must look to ourselves, not our partisan governments. We have to improve building design, increase resource conservation, revalue purchasing & manufacturing priorities as well as the environmental and socioeconomic impact of widening income disparity.

“Passivity cannot be sustained and we should stop burdening ourselves with inaction...”

It's not all gloom & doom. For example, the global renewable energy market alone represents a 6 trillion dollar opportunity. There is also good news on the carbon front: larger companies are investing in renewable energy (Walmart, Apple, Google, etc.), and many businesses now routinely operate with an internal price on carbon (ExxonMobil, etc.). As such, some sort of a consumptive carbon tax may not be far off. And the USEPA has finally developed emission standards aimed at reducing carbon pollution from existing coal-fired power plants – historically our largest source of carbon emissions.

These and other corporate board-room policy changes are rebalancing our energy mix using a systematic market-driven approach. Doing so will effectively, in time, help re-power our industries with renewable and economically attractive sources of clean energy. Attitude adjustments are certainly refreshing, but the elephant in the room is that we must find the will to speed these changes now, not later.



CA RICH wins 5th BABA !

CA RICH, and our Putnam Court Development Team, recently received the 2014 New York City Brownfield Partnership Big Apple Brownfield Award (BABA) for Affordable Housing. Our team includes Dunn Development, SLCE Architects, DP Group General Contractors, Richman Housing Resources, and CA RICH. This is the 5th consecutive year CA RICH has enjoyed this honor.

Putnam Court, in Brooklyn, was formerly a vacant underutilized, blighted property for over 20 years. Through the vision of Martin Dunn, and the talents of the development team working very closely with the New York City Mayors Office of Environmental Remediation, it has now been transformed into a vibrant, seven-story, 59-unit, affordable residential development including supportive housing for 34 formerly homeless adults. Kudos.



Putnam Court Team left to right: Raffael Juth (SLCE Architects), Victoria Whelan (CA RICH), Martin Dunn (Dunn Development), Mike Pilla (DP Group), & Noel Henderson (Richman Housing Resources).

What's new at CA RICH

CA RICH is proud to announce that Project Manager, Victoria Whelan has achieved Qualified Environmental Professional (QEP) Certification by the Institute of Professional Environmental Practice (IPEP). In addition, Victoria has recently received her Professional Geologist Certification by the American Institute of Professional Geologists (AIPG). Achievement of these Certifications signifies her advanced multimedia and multidisciplinary knowledge and strong professional and ethical standards within the environmental consulting industry.

CA RICH is also pleased to announce that Vice President, Eric Weinstock is now accredited by the U.S. Green Building Council (USGBC) as a Leadership in Energy and Environmental Design (LEED) Green Associate. CA RICH has been involved in the redevelopment of several properties that have achieved LEED Certification. Both the Atlantic Terrace project in Brooklyn and the Via Verde project in the Bronx achieved LEED Gold Certification. In addition, many regulatory agencies now require that sustainability be included as design criteria during remedial alternative evaluation.

USEPA has recently developed a checklist entitled "How to Address Changing Climate Concerns in an Analysis of Brownfield Cleanup Alternatives (ABCA)". ASTM recently developed Standard E2893-13 "Standard Guide for Greener Cleanups". The LEED process, training, and experience support these new and increasingly desirable green sustainability criteria.

We welcome Environmental Scientist William Fitchett to CA RICH's technical staff. Bill is presently assisting the Firm's Phase I & Phase II Environmental Site Assessment Group.

*For more information about CA RICH or the **ENVIRONMENTAL BULLETIN**, please call (516) 576-8844 or write to:*

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