

## GREEN ROOFS DUSTIN WATSON

Recently I had the opportunity to meet Ben Eiben and Mehr Pastakia, horticulturists, from the Furbish Company. The Furbish Company designs, sells, installs, and maintains plant-based building systems. One of the green roofs that they maintain is across the street from our own office on the Natty Boh building. The Natty Boh building utilizes an extensive tray system on a series of green roofs at different levels of the building. An extensive tray system is relatively light, simple to install and allows for uncomplicated access to the roof for any needed roof repairs. The green roof offers a number of benefits including storm water runoff control, improved water quality, reduction of the urban heat-island effects, prolongs the service life of roofing materials, reduces sound reflection and transmission, creates wildlife habitat, and though it is hard to beat the view of downtown Baltimore from up there a green roof also improves the aesthetic environment. Our visit was in November so much of the non-evergreen plant varieties had gone dormant but the evergreen varieties were various shades of green, orange, and red. The picture with the purple flowers was sent to me by David Knipp of Obrecht and was taken in the spring. The other photos were taken during our November visit.



## The Green Team Updates

We have developed a list of continuing education sources for LEED APs and licensed architects. You can find it on the Pipeline.

Dustin Watson  
DDGgreen

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# SUSTAINABLE CITIES

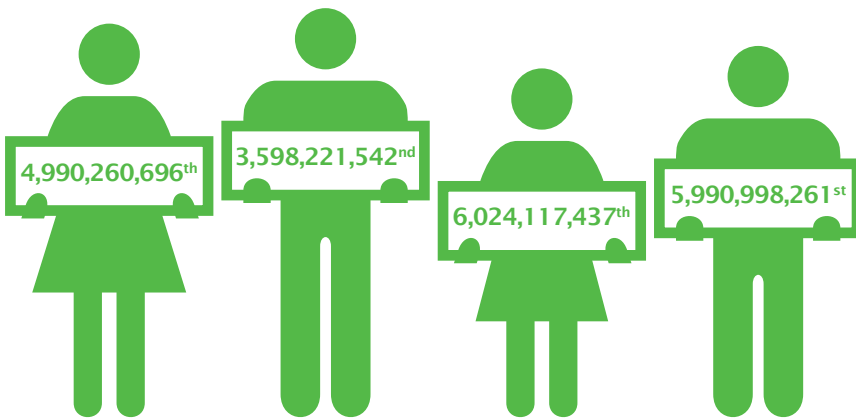
The United Nations (UN) announced the human population of the world hit 7 billion on October 31st of this year. In 2006 the UN announced that over half of the world's population now lives in urban areas. Many people associate this with large mega-cities such as Shanghai or Mumbai. However mega-cities only account for about 5% of the world's population. Most urban populations live in small towns and villages. These towns and villages will become our next cities. The historic draw of cities and an ever growing population produce unique challenges.

# 7,000,000,000+

Historically people have migrated to cities because of economic opportunities, cultural vitality, defense, new technologies and people. Humans are a social species. As William Whyte said, "what attracts people, it appears, is other people." The transfer of knowledge is as pertinent today as it was during the emergence of civilization. Cities serve to connect people and enable them to learn from one another. This knowledge transfer happens faster when people live close to one another. Jane Jacobs understood it well when she said, "Sidewalk contacts are the small change from which a city's wealth of public life may grow." Cities are the gateways of information between countries and cultures and migration to cities occurs because they offer hope and opportunity.

The future challenges presented by the growth in population include resource scarcity, pollution, traffic congestion, limited green space and increases in the cost of living. The challenge for cities is to develop and improve the quality of infrastructure to make cities more livable. Making cities more livable requires streets designed for people, balanced public transportation, mixed use development, squares, marketplaces, outdoor cafes and restaurants, farmers markets, community festivals, appropriate human-scale architecture, compact urban fabric and pedestrian networks.

Our ever growing population and with it our infrastructure and transportation needs are the biggest hurdles in the effort to reduce green house gas emission and the greatest opportunity to effect change. The challenges that will decide our future will be supported on how we answer these questions: How will we grow our cities? How will we choose to get around in those cities? How will we incorporate the natural world into the places we live? Cities offer incredible promise as we try to guide a course toward sustainability.



Check out this website and find out what number you are when you were born out of the 7 billion people on the planet:

<http://www.bbc.co.uk/news/world-15391515>



BOH Green is DDG's sustainability guru. Please send your questions about green practice to:

[BOHgreen@ddg-usa.com](mailto:BOHgreen@ddg-usa.com)

Dear BOH Green,  
The average automobile commuter spent 34 hours stuck in traffic congestion in 2010. How much gas was wasted, or burned while idling, as a result for each diver?

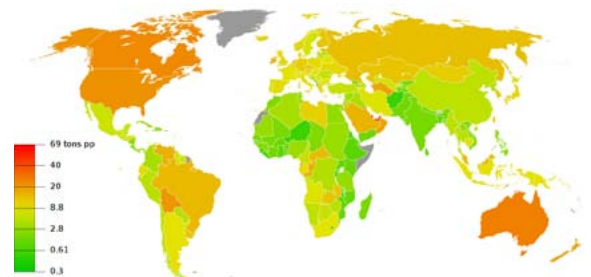


The average U.S. urban commuter wasted 14 gallons of gasoline while idling in traffic congestion in 2010 according to the Texas Transportation Institute's analysis. The study also concluded that this reflects 1.9 billion gallons of waste - or two months of flow from the Alaska oil pipeline.

Source: National Geographic

# DID YOU KNOW?

On a per-person basis, greenhouse gas emissions in cities are often far below the national average, thanks to public transit, density and smaller living spaces?



GHG emission per capita in metric tons per person for each country in 2005.

GNU Free Documentation License. [http://en.wikipedia.org/wiki/File:GHG\\_per\\_capita\\_2005.png](http://en.wikipedia.org/wiki/File:GHG_per_capita_2005.png)



**SAFE & SUSTAINABLE BY THE BOOK**



### THE ICC CREATES THE FIRST NATIONAL GREEN BUILDING CODE

The International Code Council’s approval of the first national green building code this month provides a major leap forward that embodies a fundamental change in the standard of construction. The International Green Construction Code will affect everything and everyone that is involved in designing and constructing a building. Building codes are developed to establish a minimum standard for the protection of the health, safety and welfare of building occupants. As local jurisdictions and state governments adopt these new regulations green building practices will become foundational in building codes. The building codes and green building rating systems are intended to work together continuously refining content, execution and results. All too often we have seen local building codes conflict with a given green building rating system. By incorporating green building standards into the codes some of the conflicts can be minimized. A green building code can advance green building by becoming the standard. There will always be a place for LEED and other green building rating systems because they will continuously advance and create more challenging criteria. The objective of green building codes should be to raise the bar for all development to a greener minimum standard.

## Green Building Rating Systems across the World

With the development of a national green building code by the International Code Council many may wonder what will this do to green building rating systems such as LEED? I believe it will actually strengthen them. We will see a steady increase in the nature and expectations of green performance criteria. Green rating systems such as LEED or the Living Building Challenge are intended to push the envelope in regards to traditional models of building design and construction. Adopting green building standards into local, state and national building codes allows green building rating systems to extend the limits of performance, innovate and spread boundaries toward a more sustainable future. It started with energy efficiency then we raised the bar to high performance and green building. We are now working on sustainable environments with the prospects of carbon neutrality. Increasing our minimum code standards will provide the green building rating systems to push toward our ultimate goal of restorative and ultimately regenerative development.

There are dozens of green building rating systems across the world. The rating systems are intended to independently evaluate and market the sustainability credentials of a building or development. The goals of green building rating systems are to supply a standard for environmental design and efficiency, to encourage market demand for green buildings, and to challenge designers to go beyond the minimum requirements of building codes.



Above: Some of the Green Building Councils and Rating Systems Worldwide



## HOW THE WORLD RECYCLES

Left, Recycling Truck in Mexico City.

Photo by Roy Higgs

Right, Sign in Beijing asking to use less paper towels.

Photo by Dustin Watson



## A LEARNING THERMOSTAT

A good programmable thermostat can have a significant impact on your home energy bill. However it isn't normally viewed as a beautiful object. Typically thermostats are old and have complex interface systems that make it difficult to program and rely on a homeowner's constant tweaking to get to the right temperature. Engineers from Google and Apple have come together to change that.

The result of this collaboration is the Nest learning thermostat. This beautifully designed gadget incorporates a round screen and an interface that is clear and simple to comprehend. The Nest has sensors that activate the screen as you approach it, providing the current temperature and the amount of time it will take to reach the desired temperature. These sensors also allow the Nest to "learn" when you are typically in the home and when you are away. It automatically adjusts when you are away to save energy. It also learns what temperatures the homeowner prefers and after a week begins to make changes as it learns these patterns and preferences.

The Nest can also be controlled by mobile devices through its built in Wi-Fi or can be accessed via a computer anywhere you happen to be. Videos provided online at their web site ([www.nest.com](http://www.nest.com)) describe the simple steps for installation and the operation of the thermostat. Though the initial cost runs \$250 the anticipated energy cost savings will likely pay for it in a little over one season of use as outlined in a white paper study provided online. Buildings account for a large amount of the energy consumed in the US. Thermostats have not kept up with the latest technology and advancement. Nest has made home management cool and will save homeowners a lot of money at the same time.



## KATYDID! KATYDIDN'T!

Katydid, a long-horned grasshopper that lives chiefly in trees and shrubs. (The term long-horned refers to the antennae.) The katydid is named for its mating call, "Katydid! Katydidn't!" The call, in most species made by the male only, is produced by rubbing a scraper on one forewing against the toothed edge of the other forewing.

Katydids commonly grow to be 1 1/2 to 2 1/2 inches (38 to 64 mm) long, but some tropical species exceed 6 inches (15 cm). Many katydids are green and have wings resembling leaves, making them difficult for predators to detect among foliage. Others are gray, tan, brown, or pink. The true katydid, common east of the Rockies in North America, is a leaf-winged katydid. Females of this species also make the characteristic call. The oblong-winged katydid has narrower wings, almost uniform in width throughout their length.

Katydids have long, strong hind legs, and four wings that are folded lengthwise when at rest. The wings are filmy and extend far beyond the body. The insects hear through organs, called tympana, located on the forelegs. In most species, the female has a long, sword-shaped ovipositor, an organ on the rear end of the abdomen, used for depositing eggs. In the angular-winged katydid the ovipositor is short and curves upward.

Katydids eat the leaves of trees and shrubs but seldom do much harm. In early fall the females lay eggs on leaves or twigs, or deposit them in crevices in bark, or in slits made in leaf edges with the ovipositor. In spring the eggs produce nymphs that resemble the parents except for size and lack of wings. The nymphs molt, or shed their coverings, several times as they grow. The insects mature in late summer.

Source: Animal Planet



Listen to the katydid mating call!

# calendar



**NOVEMBER 29 - 30**  
ICSC Retail Green Conference  
Phoenix, Arizona  
[www.icsc.org](http://www.icsc.org)



**NOVEMBER 30 - DECEMBER 3**  
CitiesAlive: The 9<sup>th</sup> Annual Green Roof  
& Wall Conference  
Philadelphia, Pennsylvania  
<http://citiesalive.org>



**DECEMBER 5**  
World Volunteer Day  
[www.worldvolunteerweb.org](http://www.worldvolunteerweb.org)



**DECEMBER 5 - 9**  
Ecobuild America Conference  
Check website for hours  
Washington DC Convention Center  
[www.aececobuild.com](http://www.aececobuild.com)



**DECEMBER 7**  
USGBC Webinar - Greenhouse Gases &  
Green Buildings: Understanding and  
Achieving Key Reduction Goals  
4:00pm - 6:00pm  
USGBC Maryland Headquarters, Hunt Valley  
GBCI LEED specific and AIA 1.5 CEUs  
\$15 Members; \$45 Non-Members  
[www.usgbc.org](http://www.usgbc.org)

**DECEMBER 21**  
USGBC Webinar - LEED New Construction  
Review: Materials & Resources  
8:00 am - 10:00pm  
USGBC Maryland Headquarters, Hunt Valley  
GBCI LEED specific and AIA 1.5 CEUs  
\$15 Members; \$45 Non-Members  
[www.usgbc.org](http://www.usgbc.org)



**DECEMBER 31**  
Baltimore's New Year's Eve Spectacular 2011  
Baltimore Inner Harbor  
9:00pm  
[www.bop.org](http://www.bop.org)



**JANUARY 13 - 14**  
Farm to Institution: Making Local Food  
Economics a Reality - 13<sup>th</sup> Annual  
Conference  
National Conference Center, Landsdowne,  
Virginia  
[www.futureharvestcasa.org](http://www.futureharvestcasa.org)



**JANUARY 16**  
Martin Luther King Parade  
12:00pm - 2:00pm  
Martin Luther King, Jr. Boulevard and Eutaw  
Street  
[www.bop.org](http://www.bop.org)



**JANUARY 26**  
Wintergreen - USGBC Maryland 7th Annual  
Awards Celebration  
The Hotel Arundel  
[www.usgbcmd.org](http://www.usgbcmd.org)



**FEBRUARY 2**  
World Wetlands Day  
[www.ramsar.org](http://www.ramsar.org)



**FEBRUARY 20**  
World Day of Social Justice  
[www.un.org/en/events/socialjusticeday](http://www.un.org/en/events/socialjusticeday)

These events are not being specifically endorsed, and have not been reviewed for content, but are publicly posted events assembled for ease of reference.

If you have an event to submit, please contact Dustin Watson at: [dwatson@ddg-usa.com](mailto:dwatson@ddg-usa.com)

## resources

### WEBSITES TO CHECK OUT:

Furbish Company  
<http://www.furbishco.com>

Sustainable Cities  
<http://sustainablecities.net>

UN Division of Sustainable Development  
[www.un.org/esa/dsd](http://www.un.org/esa/dsd)

National Geographic Population  
<http://ngm.nationalgeographic.com/7-billion>



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managing editor  
dustin watson

associate editors  
val cataffa

green team  
contributors  
rebecca kowalczyk