



MIDDLE TENNESSEE CHAPTER NEWSLETTER

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Notes from the Chair -Mike Leonard

I am more excited and motivated than ever about the opportunities that lie ahead for Middle Tennessee and the State as a whole – opportunities that will continue to shape our built environment toward sustainability!

Recently, legislation was introduced before the Metro Nashville City Council proposing that government buildings achieve LEED Silver Certification. On March 7, an open meeting was held at the Nashville Public Library where representatives from the USGBC national office gave a brief presentation and fielded questions from the public.

As Michelle Moore of the USGBC national office explained, "...of the 64 other municipalities where LEED legislation has been brought up for a vote, not one has failed." We cannot take this fact for granted. If you live in the Metro area, contact your representative and let them know that you expect your government to be good stewards of your tax dollars and a leader in sustainable design/building practices. At this public meeting, I recognized several of our USGBC Chapter members, but was excited to see several faces I did not recognize as well as several candidates from the Nashville mayoral race. It reminded me that as a Chapter we must continue to expand our "network" and seek opportunities to educate and be educated on building green.

LEED – Local

Around the Chapter theme, LEED-Local, let us focus on the issue of stormwater management and identify "prerequisites" for Middle Tennessee to preserve our landscape and water quality. With development and growth continuing at a rapid pace, stormwater management is becoming a larger and more important issue. As a result, municipalities are assessing fees to fund new infrastructure and programs to deal with the increased quantities of runoff. We cannot (and must not) continue in this pay-as-you-go pattern.

To relieve concerns of downstream flooding and preserve our source of drinking water, which for Nashville is

the Cumberland River, we must be mindful of the quantity and quality of the water that we send off-site by way of stormwater runoff. We can do this by decreasing impervious areas, planting vegetation to absorb and encourage infiltration, and implementing rainwater harvesting systems for re-use as irrigation or toilet flushing. A good local example is the Public Square at the recently renovated Metro Courthouse. The beautiful plaza you see on the surface was once a paved asphalt surface parking lot! The stormwater, heated by the asphalt pavement and combined with grit and dirt it picked up along the way, used to drain directly to the nearby Cumberland River.

Now, with an underground parking structure in its place, the surface is a 2.25 acre greenroof with plant material native to the region and adapted to urban environments. This vegetation not only works to absorb stormwater and slow the runoff rate, but to lower the ambient air temperature. The project also includes a rainwater harvesting system consisting of a 57,000 gallon cistern that recirculates runoff as irrigation water. Not only does this system mitigate the site's previous inequities in quantity and quality of stormwater "first flushed" into Nashville's nearby source of drinking water, but it also curtails the reliance on the City's water supply as a sole irrigation source.



Another local example of successful stormwater management strategy is the pervious asphalt installed at the Metro Howard School Complex. According to the Director of the Metro Codes Department, Terry





Notes from the Chair

- Mike Leonard *continued*

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Cobb, the stormwater “simply disappears” as it flows from the high to low side of the sheet-drained parking lot. Flush concrete edging instead of curbs also allows infiltration of stormwater into planting beds. Pervious concrete pavement works just as well with several local installations.

As we work on projects locally, let’s establish the “prerequisite” to be mindful of what happens to

stormwater run-off when it leaves our project sites, and be creative in ways to reduce quantities through natural, aesthetic, and more effective means.

Think Globally – Act Locally.

Mike

Notes from the Regional Chair - Kim Shinn

Greetings from your South East regional representative on the US Green Building Council board of directors! The South East region is made up of chapters in Kentucky, Southwestern Virginia, North and South Carolina, Georgia, Alabama, Mississippi, Arkansas and Tennessee. There are currently 14 chapters and organizing groups, and 2 affiliates in our region.

As your representative on the Board, I am your voice on issues of policy and direction of the business of the USGBC. To make sure that I am true to that voice, I participate in and stay in contact with the South East Regional Council. The Middle Tennessee Chapter is represented on the Regional Council by chapter board members Ann Olsen and Ken Scalf. If you have a national governance or policy issue that you would like advocated on the national level, please let Ann, Ken, and me know about it.

At the first national board meeting of 2007, we discussed the new national Strategic Plan and strategic goals, which were rolled out in a webcast on March 13. If you didn’t get a chance to participate in the webcast, here’s a quick listing of those goals, all of which are in support of our overall Vision: Buildings and communities will regenerate and sustain the health and vitality of all life within a generation.

Establish Leadership: USGBC will lead and catalyze change to achieve our vision.

Expand and Enhance Community: USGBC will increase the breadth and depth of the green building movement by expanding the engagement of its existing stakeholder groups, engaging new partners and audiences, and educating and empowering them all for the advancement of our Core Purpose.

Increase Speed and Capacity: USGBC will anticipate, meet and drive market demand and capacity to accelerate the realization of its Vision.

Continually Improve USGBC Programs and Services: USGBC will nimbly improve its programs, services and

capacity to deliver and drive market transformation.

Increase Social Equity Through Diversity and Access: USGBC will increase diversity in the green building movement.

Ensure Organizational Sustainability: USGBC will ensure its health, integrity, and culture through application of its Guiding Principles, fostering organizational innovation and strong fiscal management.

The board also accepted the report of the Technical and Scientific Advisory Committee (TSAC) on the technical and scientific basis for a PVC-related credit within LEED. A few years ago, the LEED Steering Committee asked TSAC to investigate this issue. Over the course of their work, TSAC analyzed life cycle assessment, occupational exposure, end-of-life toxicity, risk assessment and combined LCA and risk assessment. The complete report can be viewed on the USGBC website.

In order to apply TSAC’s findings to a decision about credits within LEED, the report points to a series of policy issues raised through TSAC’s research. These issues include:

- How should risks to human health and risks to the natural environment be reconciled?
- Should LEED offer credits for avoiding less desirable materials, or create credit incentives for the use of preferable, often innovative alternative materials or processes?
- Should LEED address individual materials through its credits, or should it focus on areas of impact?

The LEED Steering Committee will develop a set of policy recommendations to address these issues, then engage the board for their revision and/or adoption.

As ever, it is my pleasure to serve you and the rest of the USGBC South East Region. Dream big, design bold, and do good – And turn off the lights when you leave the room!

Kim Shinn



Notes from the Newsletter Editor: Water Efficiency Equals Energy Efficiency - Winston Huff

“California’s Water-Energy Relationship,” a report released in November 2005 by the California Energy Commission, illustrated the relationship between energy and water by stating that 19 percent of the state’s electricity and 30 percent of the state’s natural gas support the state’s water and sewer systems.

In 2001, the state’s total energy use for water-related energy was 250,494 gigawatt-hours (GWh, see Table 1). In 2004, California used 36,970 GWh of electricity generated from nuclear energy, according to the California Energy Commission. Thus, if the state reduced the amount of water-related power by 15 percent, the state would eliminate the need to use nuclear power.

Table 1. Water-related energy use in California in 2001

	Electricity (GWh)	Natural Gas (million therms)	Diesel (million therms)
Water supply and treatment			
Urban	7,554	19	?
Agricultural	3,188		
End uses			
Agricultural	7,372	18	88
Residential, commercial, industrial	27,887	4,220	?
Wastewater treatment	2,012	27	?
Total water-related energy use	48,012	4,284	88
Total California energy use	250,494	13,571	?
Percent	19%	32%	?

Source: California Energy Commission

This brings a new importance to water-efficiency programs. Reducing the amount of water used in California, even in small amounts, will greatly reduce the amount of energy used by the state. Reducing water brings a double benefit to the state’s economy and to the state’s natural water ecology.

The report shows that water uses energy in three ways. First, it takes energy to move water from the source through the treatment facility and to the point of use. Second, heating and treating water at the point of use is typically the second largest user of energy in a facility. Third, moving the wastewater away from the facility, treating it, and returning it back to the source is another user of energy. Reducing the amount of water at the point of use can save energy in all three areas.



For more information on this topic you will have to refer to my article in *Plumbing Systems and Design*, the official publication of the American Society of Plumbing Engineers.

But what about Middle Tennessee? Does this hold true in our region? According to an email from Jim Purcell at Nashville Electric Service (NES), Metro Water and Sewer is their 5th largest customer. They use 1% of the power in Nashville. This does not include the amount of power it takes to pump, heat and treat domestic water, irrigation water and sewer at local facilities. In a typical home, the water heater, clothes washer, clothes dryer, and dishwasher reflect a large percentage of the home’s power cost.

Water is part of a whole system in a facility, and therefore a home can save water and energy with the whole building approach. Buying Energy Star appliances, installing low flow plumbing fixtures and installing an instantaneous water heater will go a long way to save water and energy in the home, community and region. If implemented in our own region, these conservation practices could save enough energy to prevent the construction of a new nuclear power plant or allow the shut down of an old coal power plant. Additionally, thru conservation practices, our wallets, eyes, and lungs will notice a difference.



Step It Up

National Day of Climate Action: April 14

- Bill McKibben, Paul Hawken



Bill McKibben is starting a movement and we are working together to invite your support and participation. Bill wrote early and often about the perils posed by climate change and we both feel it is the single greatest threat to civilization. So far, save for one march last year, there have been no mass protests, no large-scale gatherings of humanity to signal this dilemma and call for its prevention.

On April 14, a new organization called Step It Up 2007 is inviting organizations to hold rallies and events across the country. So far, over 300 events are planned in 39 states.

Please go to <http://stepitup2007.org/> and join one or create an event in your community. It can be as humble as a sign, as entertaining as theater, or as bold as a mass demonstration.

This National Day of Climate Action could be an unparalleled event, drawing together people of every creed, color, and background. If we can create events in every town and city in the U.S., nothing could say more to our Congress and President.

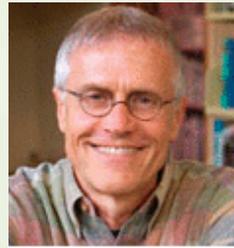
We have all the tools in place to address climate change and avert a disaster, all except one: the resolve and voice of the American people willing to form a movement. That's us. April 14, 2007 is the day. Your community is the place. <http://stepitup2007.org/> is the hub. And we are so grateful.

With our support and hope,



Bill McKibben

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Step It Up 2007
Vermont
stepitup2007@gmail.com



Paul Hawken

Paul Hawken
Natural Capital Institute
California
info@naturalcapital.org

Membership Notes - Michelle Fox

Visit <http://chapters.usgbc.org/middletn/membership.html> to join. Chapter membership allows any individual, regardless of whether or not his or her company is a member, to participate in the chapter and take advantage of local chapter benefits.

We at the Middle Tennessee Chapter of the USGBC would like to invite you to participate in one of the most exciting and growing communities in the world! The first step is to come and participate in our next monthly meeting. You will be able to network with a very diverse group of professionals who are committed to transforming the way communities are designed, built, and operated, and who envision environmentally responsible, profitable and healthy places to live and work.

And if that's not enough for you, the USGBC connects members to resources you can't find anywhere else:

- Monthly member e-newsletter with the latest news on USGBC and LEED.
- Private LEED workshops for your employees
- Free company subscription to the award-winning GreenSource magazine.
- Searchable database of LEED Credit Interpretation Reports (CIRs)
- Members-only reports and research.
- USGBC Member Day prior at Greenbuild.

Plus, you will be able to have a voice in legislative outreach efforts and stay up to date with federal and local government green building programs and incentives. If you are already a member, congratulations! You are helping to lead the way!

Membership Contest: Bring a Guest

Bring a guest to a regular monthly meeting. In order to encourage your participation we are having a fun contest.

- The member who has the most guests attending chapter meetings March-June will receive a gift in appreciation.
- The member who has the most guests who become new members between now and the June meeting will receive a gift as well.

In order to qualify, you must RSVP your guest's name for attendance to the meeting that they will be attending along with your own. The gifts will be presented at the June meeting; we will see you there!

Contact Michelle Fox at mfox@technicalconcepts.com with questions about the contest.



Proposed Sustainable Metropolitan Nashville Legislation

- Ralph P. Velasquez



Undoubtedly some of you have heard about the green legislation submitted by David Briley and Michael Jameson. For those that have not, this legislation, Ordinance No. BL2007-1374, would amend Title 16 of the Metropolitan Code and would revise standards for sustainable building design for new and renovated government buildings and facilities.

http://www.nashville.gov/mc/ordinances/bl2007_1374.htm

This new amendment would set forth a Metro policy that “shall integrate green and/or sustainable building principles and practices into the design, construction, and operations of all Metro government facilities and Metro funded projects....” This would apply to new construction and renovations “in which the total project square footage includes 5,000 gross square feet of occupied space or the total project cost exceeds two million dollars. For existing buildings, this would

only apply to renovations that add 5,000 sq. ft. of occupied space.” The strategy would be developed to achieve LEED silver level rating for each building or facility under this program. Failure to achieve this could either result in the Metro council voting to relieve itself of this requirement after two years or vote to continue pursuit for one additional year. Failure after this additional year grace period would result in Metro revoking the final use and occupancy permit for the building or facility. The permit may be reinstated only when the silver rating is achieved or by resolution of the Metro Council.

At last, after several years of continued national momentum toward municipalities adopting LEED as their standard for the built environment, Nashville may join the rising tide with their own version of green building requirements. The question now before the Metro council and the Nashville public, is how important is the commitment to sustainable building practices within our community? Are we ready to make the jump to the next level? Will the public understand the cost/benefit proposition that this legislation tenders? Will our government leaders be able and willing to take the time,

effort and openness, to understand the implications of this legislation? Time will deliver the answer to our doorstep.

If you are reading this newsletter, you obviously have some level of interest in the concept of building sustainability. What you have to decide is what you do with this proposition. Do you agree or disagree? If you disagree, are you well informed and making that decision based on fact or preconceptions? If after some research, you still disagree, will you voice your opinion or leave it for another? If you agree, what are you going to do about it? Will you make contact with your council member and voice your support? Or will you agree and sit silently by, hoping something you believe in gets approved by the council members, without them having the knowledge of what you believe? The bottom line is the bottom line and you can influence that with your informed knowledge of building sustainability, how it affects your community, your everyday lives and your pocket book. So stop reading this article and do something about it! I have -- how about you?

Reach out to your Metro Council member: <http://www.nashville.gov/council/index.html>

Greening Your Residence: Household Waste Management - J. Mark West

About a year and a half ago my wife and I bought our first home together. We set up all of our utilities, hired a waste disposal service and began contemplating the future together in our new home. The waste disposal service would come every week and take two full 45-gallon cans “away.” It wasn’t long after we had moved in that we started noticing on several occasions that the trash service would only take one of the two cans we had left, or not show up at all on a given week. We quickly grew tired of this particular company’s inattentiveness and decided to “can” them. From that point on, I began hauling my own trash, to a local Davidson County Recycling Center. The process of handling our own waste was in a way enlightening and in another way just plain nasty, but the lessons the process has taught me are worth noting.

Our self-initiated recycling program includes paper, cardboard, plastics, glass, aluminum and metal containers. We have 5 bins set up in our home where we store clean recyclable materials. Outside our home we have three 45-gallon waste cans. What we discovered is prior to recycling is we would produce two 45-gallon (90 gallons) of waste per week, at a minimum, or 360 gallons of waste per month. That is 4320 gallons of waste per year. After we started recycling, we were creating only three 45-gallon cans of waste per month. This equals only 1620 gallons of waste per year, or a **267% reduction** in household waste. Besides the obvious environmental benefit of the waste reduction, instead of paying \$26 per month for waste service (\$312 per year), three cans per trip to the Davidson County Recycling facility are FREE; gas for my truck once a month may cost around \$5 round trip. The

annual savings in waste management costs for my household is about \$250 per year. My monthly Saturday morning trips also gave me a good excuse to take my 2-1/2-year-old boy along for a ride in “daddy’s truck.”

In 2007, somewhat subconsciously, we are aiming to improve these waste numbers even more. My wife has begun experimenting with a composting technique that will benefit our flowerbeds as well as further reduce our waste output. I will have to update you on how all of that goes over the next few months. If you are up for trying it, Google search “composting” on the web and give it a shot for yourself. If you are not up for that yet, give recycling a try - you might be surprised at what you learn about the way you live.



Sponsorship Opportunities - Laura Schroeder

We are well into 2007 and many exciting things are planned and are underway as we work to make USGBC more mainstream within our community. Our Chapter's primary mission is to educate people so they can make informed decisions based on an understanding of basic environmental, health, and economic issues related to building, construction, and future development. Our goal is to spread the word and to reach out to as many of those involved in the many different aspects of the built environment to educate and inform. As part of this outreach and education process, our Chapter offers many different opportunities to gather and learn from invited guests and from each other via our monthly meetings. Our Chapter is off to a very strong start and continues to build momentum. We have many great chapter meetings lining up for everyone as well as fun events such as weeknight socials and the second annual Green Tie Gala. In an effort to continue bringing these opportunities to you, we need your support.

At an early Chapter board meeting, it was decided that both the Sponsorship committee and the Fund Raising Committee would merge and become the Resource Development Committee and specific goals were set for this year. We have elected to consolidate the many sponsorship opportunities from last year into two choices. Each of you may participate as an Annual Sponsor and/or as a Green Tie Gala Sponsor. The Annual Sponsors help support our monthly programming, the Advocacy committee, our Emerging Green Builders, our liaisons to the Regional Council, etc. The Gala Sponsors help to make that year-end celebration possible and such a success.

Please consider participating in one or both of our sponsorship opportunities. If you are interested in more information, please contact me, Laura Schroeder at <mailto:l.schroeder@hawkinspartners.com> or at 615.255.5218. You may also find sponsorship information and forms near the bottom of each page on our website, <http://chapters.usgbc.org/middletn/>

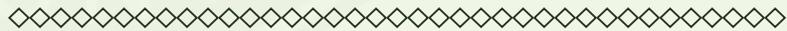
Profile- Green Power Switch - Laurie Parker, NES

The state of Tennessee no doubt has a huge electric bill each month. But, to help with that consumption, it also purchases a large amount of green power. In fact, the state is NES' biggest Green Power Switch® customer.

The state purchases over 400 blocks of green power every month. Those blocks add up to 60,000 kilowatt hours of renewable energy that is produced by the sun, wind, or methane gas. The state buys green power for the Governor's Mansion, downtown office buildings, and Radnor Lake. The 400 blocks a month per year is equivalent to recycling 177 tons of newspaper.

The state of Tennessee is one of 37 NES commercial customers participating in the Green Power Switch program. Those commercial customers represent 70 locations and a total of 1,541 blocks purchased each month. That equals 23 percent of the monthly green power that is sold in the NES service area.

For more information, or to sign up for Green Power Switch, visit www.greenpowerswitch.com.



Local Statistics:

Middle Tennessee Chapter Members	169
Middle Tennessee Accredited Professionals	147
Middle Tennessee Certified Projects	2





Profile – Steve Johnson, Lightwave Solar Electric - Laurie Parker, NES



If Steve Johnson had his way, many south facing roofs in Nashville would have solar panels harnessing the power of the sun. Johnson says, regarding the green movement in Nashville, “There is plenty of energy available if we want to harvest it.”

He started with his own house. In May 2006, Steve installed 20 photovoltaic panels as part of a modular design through the TVA/Nashville Electric Service (NES) program Generation Partners. Now, he’s planning on expanding his system by 50 percent. Currently, it has the capability of generating 1.25 kilowatts per hour on a sunny day.

Johnson says, “The market for solar panels is growing 40 percent a year, which is cutting down on the cost of the panels by about 20 percent every two years” Because of their increase in popularity, you can get more bang for your buck, or in this case, more power. And that is something there is plenty of.

The sun produces **106,000** gigawatts of power per **hour** in Tennessee.
Tennessee uses **98,000** gigawatts of power per **year** (2003).

There is enough energy in one hour of peak sun striking Tennessee land surfaces to power the state of Tennessee for an entire year. Johnson says, “The trick is capturing that power. Solar panels are currently about 13 percent efficient.”

Solar generation is a young industry, and Steve is helping to lead the way here in Middle Tennessee. Last month, he installed 72 panels on the roof of Street Dixon Rick Architecture, and he just finished another Generation Partner installation of the same size at Caldwell Travel in Brentwood.

Johnson says, “Every time I put up a solar panel, I am helping to create green power. We don’t have to get it from another country, and it doesn’t pollute the air we breathe or the water we drink. All those things inspire me about it.”

Other bonus features include the fact that each solar panel has a 25-year warranty and that the federal government provides a 30 percent tax credit. To learn more about TVA’s Generation Partners program, visit www.gpsgenpartners.com.

Would you like to:

- be a member?
- be an accredited professional?
- register and certify your building?

Visit us at www.usgbc.org/chapters/middletennessee/



Local Happenings

MARCH

What: "Sustainable Sites: Landscape Architecture and Naturalistic Design"

Landscape Architect Kevin Guenther of Design Resource will discuss principles of sustainable and naturalistic landscape design. Topics will include design patterns, processes and tools, natural elements and seasons, along with examples of low-impact site developments.

When: Thursday, March 22nd - 11:30am Registration, 12:00-1:00pm Lunch and Presentation.

Where: The Tennessee Engineering Center (in the Adventure Science Center), located at 800 Fort Negley Blvd. Nashville, TN 37203.

Cost: \$15 for USGBC-Middle TN Chapter members. Non-Members, \$20. Lunch will be served.

RSVP: RSVP's ARE REQUIRED. Please do so by Noon, Tuesday, March 20th to Terah Huber at thuber@tmpartners.com or 377-9773.

What: Emerging Green Builders

We will be going over the new 2007 Strategic Plan and goals for the year, and breaking into committees to start working on these goals.

Where: Gould Turner Group, 4400 Harding Rd. Suite 1000

When: Thursday 3/22, 5:30 pm

What: Conference on Higher Education and Sustainability in Tennessee: Putting the Pieces in Place

Where: Belmont University

When: 3/28-3/29

The Conference includes:

- Plenary speakers Wynn Calder and Tom Kimmerer from the University Leaders for a Sustainable Future and the Association for the Advancement of Sustainability in Higher Education, respectively
- Belmont University President, Dr. Robert Fisher, leading a campus leaders' signing of the Talloires Declaration
- A special Sodexo-sponsored luncheon highlighting green dining
- Tennessee speakers addressing such subjects as recycling, green buildings (LEED), climate change, energy conservation and instructional innovations

Register now at the Conference website: <http://campus.belmont.edu/greencampus>

APRIL

What: A new organization called Step It Up 2007 is inviting organizations to hold rallies and events across the country.

When: Friday 4/14

So far, over 300 events are planned in 39 states. Please go to <http://stepitup2007.org/> and join one or create an event in your community. It can be as humble as a sign, as entertaining as theater, or as bold as a mass demonstration.

[More Information](#)

What: Sustainable Arkansas 2007

When: Tuesday 4/17-18

USGBC of Arkansas invites us to attend Sustainable Arkansas 2007, featuring keynote addresses by Ray Anderson and Bob Berkebile, and three session tracks: Commercial Building, Residential Building, and Public Awareness.

Choose between two pre-conference workshops on April 16.

See www.usgbcar.org/SustainableArkansasInvite.pdf and www.sustainablearkansas.com for more information.