

Greening the City, One Person at a Time

By Virginia Myers Kelly

The environment is big news this summer.

Flooding has taken out bridges and bike paths in Sligo Creek. Mercury is soaring. "Code red" days, when air quality is so bad people are warned to stay inside, are commonplace.

And this summer a documentary film about global warming joined *X-Men*, *The Last Stand* as one of the top ten most popular movies.

The film, *An Inconvenient Truth*, presents its own last stand — a last chance to address what the film's star, Al Gore, calls a moral imperative to reverse global warming. Carbon dioxide, much of it from fossil fuels, is trapping heat in the atmosphere, causing dramatic climate change. The global ice caps are melting, warm-climate diseases like malaria moving to higher altitudes, violent hurricanes are more common, droughts and wildfires pandemic.

So what do we do? Last month we looked at the City's environmental policies: bio-diesel and hybrid service vehicles, recycling, the tree ordinance, and green building policies. This issue we examine what residents are doing: Thinking globally, acting locally.

Home is where the impact is

One of Takoma Park's best known environmental crusaders is Mike Tidwell, whose home has become a showcase for affordable, clean-energy living. Tidwell, who founded the Chesapeake Climate Action Network (chesapeakeclimate.org), has conducted 34 tours of his home since he converted it to green energy in 2001.

Tidwell and his family are so committed to reducing energy consumption

that their electric meter runs backward. Much of this is due to photovoltaic (solar) panels on the roof, which produce 70 percent of the household's energy. There's also a solar hot water system and a corn stove for winter heat. Even before installing renewable energy systems, the family reduced energy consumption by 52 percent with a high-efficiency refrigerator, compact fluorescent light bulbs, drying clothes on a line, and switching off lights in unoccupied rooms. Tidwell converted his home to green energy for about \$7,500, and with the energy savings his costs come out to \$30 per month.

Anxious to spread the word, Tidwell hands out practical follow-up contacts to visitors. "I consider my house a community laboratory," he says — and an inspiration.

Meanwhile, on Holly Avenue, Bill Hutchins has another sort of lab operating. An architect focused on green building (www.HeliconWorks.com), he experiments with salvaged materials and products made from recycled material as well as energy-efficient utility systems and constructs. The result is a home full of surprises — a stair rail sculpted of scrap metal and pipe, recycled glass bathroom tile from a



Joseph Horgan, a member of Friends of Sligo Creek, relaxes on a green roof that both gives Takoma Park homeowner Nina Garfield expanded outdoor space to enjoy and provides a place for stormwater runoff.

women's cooperative in Vermont, 90 percent recycled structural beams, kitchen counters pieced together from someone else's leftovers. Different kinds of wood create a variety of surfaces for walls and floors.

For energy efficiency, there's a corn stove for winter, supplemented by radi-

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ant floor heat from a biofuel furnace in the basement; the furnace uses renewable vegetable oil rather than petroleum products. Solar panels generate electricity, and a green roof of growing plants reduces stormwater runoff and cools the house at the same time.

On a larger scale, but just outside the city limits, Eastern Village Cohousing (EVC, near the Metro station), was named Green Project of the Year by the National Association of Home Builders, got a design award from Environmental Design and Construction magazine and a green roof award from Green Roofs for Healthy Cities. It also has a Silver LEED (Leadership in Energy and Environmental Design) rating for elements such as recycled-content, rapidly renewable building materials, construction waste recycling, energy-efficient windows and appliances, water-saving plumbing fixtures and other eco-details.

Green on Top

Takoma Park now boasts three green roofs — the one on Hutchins' home, EVC, and a home on Woodland renovated to include a green roof in 2002. Nina Garfield, who owns that home, decided to transform a second-story deck into a green roof when she converted the porch below to an enclosed room. Hutchins was the architect.

"It creates a local ecosystem and creates a cooling effect, explains John Shepley, who installs green roofs and helped plant the one at Garfield's. "The best benefit is that they sequester the rainwater that falls on them," keeping pollution-saturated rainwater from flowing into the Bay. Ed Murtagh, chair of the stormwater committee for Friends of Sligo Creek, says a green roof is like a rain garden, just higher up. FOSC is encouraging individuals to plant both, using state funds recently made available for such projects (see <http://fosc.org/StormwaterMgmt.htm>). "We're trying to use these beautiful

solutions to help the environment," says Murtagh.

Cooking with corn

Both Tidwell and Hutchins have corn stoves, but they are not the only ones. In fact, there are enough families — 45 — in Takoma Park and the surrounding area burning corn in their stoves to merit an "urban grain bin," the new term for a corn silo, set right at the city's Public Works station. A corn co-operative manages purchasing and pick-ups.

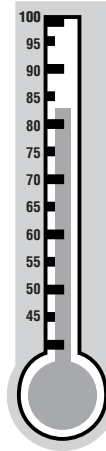
Burning corn is so clean that even when one considers the CO₂ emitted during its farm production, it has far less impact on the atmosphere. Tidwell explains that through no-till planting (which avoids release of CO₂ by turning the soil) and organic fertilization, and considering the CO₂ corn absorbs as it grows, burning corn releases 85 percent less CO₂ than natural gas.

Greasing the gears with biodiesel

Hybrid cars, which use a mix of gasoline and electricity, are more and more common around Takoma Park. Zip cars are also popular, and there are three in the immediate area, used by hundreds of locals who choose to pay an hourly or daily fee to use them, and avoid the cost of owning a vehicle — and the temptation to drive it everywhere.

Biodiesel is also making major inroads. Currently, a biodiesel collective based in Takoma Park purchases and brews fuel made from vegetable oil, rather than petroleum products. Takoma Parker Nadine Bloch, who has been using biodiesel since 1998, says the group is also trying to establish a

Tip of the Month



LOVE THE HEAT

Electric bills are soaring this year, right along with the temperatures. Learn to love the heat. Turn up the thermostat on your air conditioner — just two degrees warmer will keep 2,000 pounds of carbon dioxide emissions from polluting the air, and save you 10 percent off the cost of cooling. While you're at it, clean or replace the AC filter and make sure all the vents are clear of furniture and those piles of dirty laundry that accumulate on the floor.

Or, turn off the AC entirely, and go with ceiling fans, which do double duty by moving warm air around in winter. Take cool baths and go to bed with your hair wet. Spend hours in the grocery store, the library, the matinee — any place that's air conditioned, which is kind of cheating, but not so much.

biodiesel fueling station, either through the city or a private supplier.

Biodiesel comes in three flavors: waste vegetable oil (WVO), from commercial kitchens; straight vegetable oil (SVO), which is fresh; and a mix of conventional diesel and oil. Bloch gets her WVO from Mark's Kitchen. Each uses renewable resources, and 100 percent biodiesel produces almost 80 percent less carbon dioxide. City vehicles fueled by biodiesel use a 20 percent oil mix — though Bloch suggests they could run on 40, 60 or even 100 percent biodiesel. Drawbacks include cold-weather limitations (100 percent biodiesel coagulates in cooler temperatures) and less efficiency (it burns 10 percent faster than conventional diesel).

Bloch suggests that solutions like biodiesel are no final solution, however. "Long term solutions do not include everybody running on non-renewable

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resource-driven individual transport units,” she says. “For me it’s really about shifting the paradigm and that would mean changing our modus operandi from valuing money to valuing time.”

Two wheels, two feet

Avoiding motorized vehicles altogether is an obvious way to cut down on emissions, and Takoma Park has more than its share of public transportation advocates as well as bike commuters and telecommuters who walk across a room to the “office.”

City Council passed a resolution supporting Bike to Work Day, a regional event that included at least 70 Takoma Parkers. The city recently installed 36 bike racks and has five more planned throughout the city. Maple Avenue is set to get bicycles painted on the street to indicate cars must share the lane. And to support public transportation, Takoma Park installed bus schedule and map holders at local stops. There has been some discussion about discounts for city employees on public transportation as well.

Eating for the environment

Related to transportation fuel consumption is food consumption — because the food travels an average 1,200 miles, trucked or flown in from distant farms, before it hits your plate. To avoid this environmental cost, many locals grow their own produce, or walk to the Farmer’s Market and buy the locally grown goods there. The Takoma Park Silver Spring Co-op just launched an initiative to increase locally produced food — signs throughout the store indicate what products are from nearby purveyors. Even the chain groceries carry local produce.

Another popular way to ensure food is locally grown is Community Supported Agriculture, or CSA. Mike Tabor, an environmental advocate and farmer, runs a CSA that includes 15 Takoma Park households, plus a raccoon who likes to help herself to fresh cherries. For a set fee, each member household picks up a box of straight-from-the-farm produce from the front porch of his Takoma Park home, once a

week. Tabor accepts WIC and food stamps, and will trade time working on the farm in an effort to make fresh food available to low-income families.

Besides Tabor’s CSA, there are at least a dozen others that serve the area, with pickup points in D.C. and suburban Maryland. At least one, Even’ Star Farm, delivers “winter” produce, like greens and root vegetables. Deb Lindsley, who has used Even’ Star, not only enjoyed the fresh veggies — she used the membership to teach her young children about where food is grown, by visiting the farm and picking her own produce.

Wrapping it up

The City’s Committee on the Environment established Arbor Day, when hundreds of trees are given to residents; it’s distributed tree care brochures, helped run rain barrel workshops, protected open space, and educated the city through web sites and articles.

There is a new effort to turn backyards into wildlife sanctuaries, through the National Wildlife Federation. More people are considering scrapping their gasoline lawn mowers for push mowers, and many are tearing out lawn altogether in favor of native plants that require fewer resources to maintain.

There are countless small acts that add up — turning light switches, using both sides of the paper, choosing neither plastic or paper but cloth bags for carrying groceries, walking to work.

We’ve recounted some of the more significant ones here. See the sidebar for more resources, and watch for a monthly environmental tip in each issue, to keep us all on track.

Resources

• Chesapeake Climate Action Network

A clearing house of locally relevant news on environmental practice and policy, plus contacts and tips to help you reduce your emissions: Chesapeakeclimate.org

• An Inconvenient Truth

Information about the science of global warming, tips on how to reduce emissions: Climatecrisis.net

• Local Harvest

A directory of food stores, restaurants, farms, farmer’s markets and other food outlets that offer locally grown products: localharvest.org
There are many resources in our area — send us yours and we will share with our readers.