

“A LOT OF FIRSTS”

HOW TO SHRINK AN URBAN CARBON FOOTPRINT



The city of Portland, Oregon and the surrounding Metro region are making headway on emissions reduction measures, including residential energy efficiency, food scraps composting, water conservation and green buildings.

Bill Lascher

A LOT of firsts come out of Portland,” says Michael Armstrong, the senior sustainability manager for the Bureau of Planning and Sustainability in the City of Portland, Oregon. One was becoming the first municipality in the U.S. to adopt an official response to global warming. Portland already updated its response to global warming 10 years ago, when surrounding Multnomah County came in as a partner. By 2008, despite an uptick in population, greenhouse gas emissions in the region had

Promotion of biking, including construction of bike boulevards and requiring long-term bicycle parking at multifamily units, is part of the sustainability plan.

fallen two percent below 1990 levels.

But that is just the beginning. In late 2009, Portland’s City Council and the Multnomah County Commission came together again on a Climate Action Plan that outlines 100 initiatives in eight categories that should put the region on track to slashing carbon emissions over the ensuing half-century. A one-year progress report on the plan issued in December said more than half the initiatives were on schedule. Already completed goals include green building policies with third-party certi-



fication of energy, water and waste conservation strategies, construction of two miles of sidewalks on major arterials and requiring long-term bicycle parking in multifamily projects.

FOOD WASTE DIVERSION

Other initiatives are underway, like a plan for curbside food waste collection. A year into a 2,000 home, four-neighborhood pilot, managers of the food scrap program are analyzing data as they prepare to roll the program out citywide by the beginning of 2012. Participants place any kind of food waste — including meat and dairy — into the same bin they use for green waste. Some packaging, like pizza boxes and paper napkins, but not paper plates or compostable takeout containers, can also be included.

The four haulers serving the neighborhoods in the pilot area — Waste Connections, Waste Management, Heibert Garbage and Allied Waste — take collected materials to an Allied Pacific composting facility in Benton County, Oregon (permits are still pending for a facility that will handle the citywide roll-out). According to Portland Recycles! Coordinator Arianne Sperry, each ton of food waste diverted

Curbside food waste collection is being piloted in four neighborhoods, with citywide service rolling out in the beginning of 2012.

through the program prevents the production of enough methane to equal the atmospheric impact that would be caused by a ton of carbon dioxide emissions. She adds that a citywide program could eliminate as many as 15,000 tons of carbon dioxide equivalent annually.

The city of Portland isn't alone in trying to tackle food waste. At Portland International Airport, as many as 10 tons/day of food waste are produced from aircraft kitchens, concessionaires and nearby hotels, says Port of Portland Aviation Environmental Compliance Manager Stan Jones. A recycling and compost program Jones manages diverts about 30 percent of that from going to landfills. Though he's struggling to raise that rate further — airport tenants and airlines don't have many incentives to actually sort their food waste and recyclables — Jones says it took five years for the airport to get to where it is (see *Airport Food Court Composting*, August 2008), and the port's commissioners have been supportive of his work to devise new strategies to improve recycling at the airport.

FOOD POLICY

Food policy is part of the climate change discussion for the first time and

will be integrated into the Portland Plan, the 25-year comprehensive plan taking shape this spring, says Steve Cohen, who manages the City of Portland's food policy and programs. Walkable "20-minute-neighborhoods" with healthy, affordable food easily accessible will be part of that plan. Food deserts still dot the city, though, especially in lower-income neighborhoods like inner North Portland's Boise-Eliot or Southeast's Lents. Full service grocery stores, community gardens, even bulk-buying from community supported agriculture (CSA) are all part of that conversation.

Though food is not directly within the sustainability action area, Cohen says, "food is a gateway to sustainability." No longer does he have to "bang on doors" to convince public officials to pay attention to food issues. "City officials get it."

Those officials will need to change zoning codes to address farmer's markets and community gardens, and neighbors who want to sell home-



Food deserts still dot the city, especially in lower income neighborhoods. This urban farm in the Boise-Eliot neighborhood provides residents with fresh produce.

grown food to neighbors. None of these areas are defined in current code, and eliminating these gray areas will be a necessity. Both the city and the county, meanwhile, have projects in place to identify areas within their boundaries where they can incentivize local agri-

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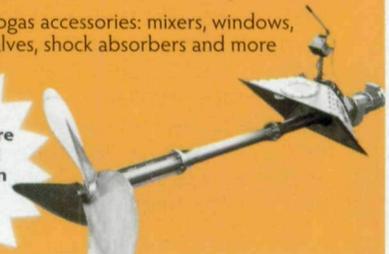
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Bioswales like this one in Portland's Kenton neighborhood use vegetation to filter storm water runoff and play a key role in the city's Green Streets program.

culture. Land — especially fallow land — is at a premium, says Cohen, so solutions have to be creative, like when the city partnered with Nepalese and Bhutanese immigrants and the non-profit Mercy Corps to develop a CSA.

Multnomah County, meanwhile, adopted a four-point Food Action Plan in December to develop a sustainable local food system. The plan includes dozens of specific action items, many of which are aimed at getting the community to cooperate on a range of goals, such as increasing urban agriculture through incentives, land trusts and other strategies; supporting small and mid-sized farms by increasing local purchasing and strengthening local agricultural infrastructure and distribution; developing a seed library; and broadening acceptance of supplemental nutritional assistance and other government aid for food.

Overall, the Portland Plan covers nine action areas. Included in the plan's sustainability goals are better integration of natural and urban environments; promotion of biking, walking and transit; and expansion of its "Green Streets" program, a storm water management program that develops sidewalk bioswales planted with native vegetation that filters runoff.

METRO FACILITIES

In general, plans truly abound in the web of local jurisdictions that govern greater Portland. In addition to climate and recycling, various jurisdictions

have planned for bike boulevards, urban forests, parks and streetcars, among other areas that may have sustainability elements, like community health and watershed management. Even the local zoo, run by Metro, a three-county-wide regional government, has a 10-year-master plan that doesn't want for sustainability targets. The plan is separate from, but complementary to, the five-pronged sustainability plan Metro adopted last December that addresses greenhouse gas emissions, toxics, waste, water and habitat goals.

Metro Sustainability Coordinator Molly Chidsey said some of its facilities were already well on their way to meeting their targets. The aforementioned zoo, for example, composts all herbivore waste into a soil amendment known as "Zoo-Doo." Metro's headquarters, meanwhile, boasts a recycling rate around 56 percent.

Metro's 2010 plan refines goals set in 2003. The jurisdiction now aims for an 80 percent greenhouse gas emission reduction by 2050; by 2025 Metro plans to recover all waste for recycling or composting, reduce water use to 50 percent below 2008 levels, and link parks and trails to watershed and public health goals. "All of our public facilities are a great opportunity for us to have

GAS STATION REPURPOSED AS COMMUNITY CENTER

A NEIGHBORHOOD community center in Portland, Oregon is opening later this summer in a former ARCO gas station that was classified as a brownfield site. The June Key Delta Center is trying to meet the Living Building Challenge Standards, which are somewhat akin to widely-known LEED building guidelines, but are more extensive. Where LEED measures building efficiencies by tallying up "points" for features like bike racks and solar panels, Living Buildings have to go much further to prove their efficiency by achieving benchmarks in health, water, siting, energy use, materials, equity and beauty. "What the Living Building Challenge does is say these balanced tradeoffs aren't good enough, we need to be thinking more about restorative, or at least a zero-impact building," says Mark Nye, the project's architect.

Though the project still needs to secure the last funding for its energy and water features, Nye says they'll include a ground-source heat pump, photo-

voltic arrays, roof coatings that are rated to potable standards for runoff, a rainwater collection system and an innovative system that will allow the center to treat blackwater and transfer it to an outdoor bioswale. The only limitation



A former gas station is being converted into a neighborhood community center. Green building features include photovoltaic arrays, rainwater collection and an innovative system that allows the center to treat blackwater and transfer it to an outdoor bioswale.

will be proving to local permitting authorities that the treated water doesn't endanger Portland's water supply. If they can do so, the project will sever ties with the sewer system.

A number of partnerships have helped the project flourish, with investments and grants from brownfield redevelopment initiatives, the City of Portland and Multnomah County, energy conservation nonprofits, labor unions and other supporters. The project has even provided a "classroom" for pre-apprenticeship programs from the Oregon Tradeswomen and Constructing Hope. "We're not the big Pearl [District] people, the [South] Waterfront people, we're just Mom and Pop doing this all basically on our own," says Chris Poole-Jones, the project

manager for the Portland Alumni Chapter of Delta Sigma Theta, an African American Sorority that is building the center. "We're really the ultimate green because we didn't tear down anything. We're taking an eyesore and making it an awesome building."

some sort of educational message,” Chidsey says.

Parks and the zoo also require focus by Metro on water conservation. Upgrades of pumps and irrigation systems cut down on water use, saving money in the process. Moreover, Chidsey adds, expanding Metro’s focus beyond climate and energy allows Metro to pursue a more comprehensive definition of sustainability. “Our approach in implementing the plan is really to not only meet these really ambitious environmental targets but, while we’re doing that, to keep an eye to the economic bottom line and also the social bottom line.” That meant writing requests for proposal in a way that addresses wages, benefits and community service contributions, as Metro did when it sought proposals to manage its Central Transfer Station (that contract went to Recology in April 2010). In that agreement, previously temporary workers paid at minimal wage are now permanent and full-time. They also are now paid \$11.50/hour and receive additional health benefits.

TRIPLE BOTTOM-LINE, COMMUNITY ENGAGEMENT

Such triple-bottom-line sustainability drives groups like Verde, which focuses on building “environmental wealth” among low-income communities and people of color, says Alan Hipolito, the organization’s executive director. Verde starts businesses that train and employ people of color to provide environmental services. They include landscaping, a nursery, and weatherization. Verde also advocates for broader green business opportunities for marginalized populations. “If [environmental organizations] all adopted policies around workforce diversity for their vendors or targeted certain amounts of spending to minority-owned businesses, then in the end in the aggregate they would have a meaningful economic impact on these communities,” he adds.

Meanwhile, says Hipolito, Portland must choose between two competing models of sustainability. One focuses only on environmental and economic performance, which, he says, only meets the needs of an environmental professional class that includes some nonprofits, public agencies and developers; the other chases a triple-bottom-line focus that also includes a social equity focus. Metro has included triple bottom-line priorities in its plan, and there are social equity components to the Portland Plan.

One example of a triple bottom line approach is the June Key Delta Center (see sidebar). An African American sorority is expected to open that com-

munity center as the first building in Oregon to meet the “Living Building Challenge,” thanks to the help of a minority-owned contractor and long before the Oregon Sustainability Center — planned as a net-zero hub for green businesses and environmental nonprofits — achieves the same goal.

Community engagement also became a prominent topic at last fall’s EcoDistricts Summit in Portland. That conference brought planners, architects, economists, academics, community organizers and policymakers to-

gether for the second year in a row to discuss a concept of district-scale sustainability. The event was coupled with the EcoDistricts Initiative, launched in 2009 by the Portland Sustainability Institute (PoSI) in partnership with the city, to advance the region’s sustainability agenda at the neighborhood scale by integrating building and infrastructure projects with community and individual action.

The initiative is in the midst of developing five pilot projects in Portland. Each EcoDistrict pilot identifies a dif-

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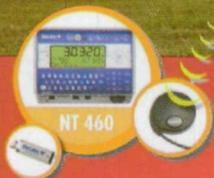
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ferent neighborhood in the city that will act as a sort of laboratory for area-wide — as opposed to building by building — sustainability planning. The projects will experiment with neighborhood-wide management associations consisting of various community stakeholders; district heating and waste remediation strategies; and encouragement of transit-oriented development. Though pilot neighborhoods have been selected, one of the key questions at last fall's conference was how involved residents and tenants will be in developing EcoDistrict's priorities, and not just landowners, institutions and local government.

Meanwhile, by all accounts, one of Portland's most widely-cited examples of triple-bottom-line success has been Clean Energy Works Portland. Funded with a \$20 million U.S. Department of Energy grant and started in June 2010, Clean Energy Works advised 500 homeowners in Portland on energy upgrades and also arranged for financing and assistance finding qualified contractors. Twenty percent of the contracts Clean Energy Works Portland arranged went to woman- or minority-owned businesses, and half of those employed were people of color. The program was such a success that last month it was expanded statewide. Now known as Clean Energy Works Oregon, the program plans to provide capital to revamp another 6,000 homes.

While the Portland region's sustainability programs aren't without their challenges — for example, designs for an autocentric interstate bridge still dominate transportation infrastructure discussions with little hope for a light rail connection across the Columbia River to Vancouver, Washington — there is much forward progress. Projects like Columbia Biogas' proposed anaerobic digester (see "Anaerobic Digest," February 2011) could turn food waste to electricity and provide jobs and district heating to Northeast Portland. The ongoing evolution of food carts and other entrepreneurial businesses that repurpose underutilized spaces are examples of the private sector seeing market opportunities.

"Thank goodness," Armstrong says. "So many of the things we need to do to reduce carbon emissions also have community and personal benefits. What a happy thing that is. Next to all the doom and gloom of climate change this is really fortunate."

Bill Lascher is a freelance journalist who specializes in telling stories about the intersection of the environment with policy, science and social, political, economic and technological forces.

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