CIVIC ECOLOGY A COMMUNITY SYSTEMS APPROACH TO SUSTAINABILITY

While Oregon has its landmark Bottle Bill based on cash incentives to encourage recycling containers of carbonated soda and beer, a neighborhood in Pennsylvania is upping the ante with a recycling program that generates money to fund community improvement projects as well as vouchers residents can use in lieu of cash at local businesses.

In Chestnut Hill, a Philadelphia, Pennsylvania neighborhood on the City's northwest edge, one Saturday each month there is a flurry of activity at one of the community's commuter rail stations. Neighborhood volunteers gather to help their fellow residents collect, sort, and bundle items for transport to a local materials recycling center. The Saturday items are not accepted in the City's curbside program, but local residents found a source that would pay for the materials if they were delivered. The money earned from this enterprise goes to the Chestnut Hill Community Association to fund various community projects, such as greening public spaces around the train stations. This self-created community system emerged to help residents of this 10,000 person community address a number of neighborhood issues: reducing stress on landfills, creating a market for currently non-recyclable items, funding local improvements and enhancing community spirit.

This cross sector approach has given birth to a parallel community system whereby weekly curbside recycling is gathered by special City trucks equipped with scales that weigh each residence's contribution. The weight is entered into a database that converts it to vouchers redeemable at local businesses. In this system, incentives to recycle accompany incentives to buy local, enhancing the community's local economic multiplier. But Chestnut Hill's uniqueness is based on more than just its recycling program, this 300 year-old community has developed a systematic approach to building a vibrant and sustainable human ecosystem.

Chestnut Hill's unique quasi-governance body, the Chestnut Hill Community Association, is dedicated to "encouraging a sense of community in Chestnut Hill and improving the quality of life in the community."[1] Open to all residents, business people and representatives of local institutions, the Association is the nucleus of a web of local systems that have enabled this community of 10,000 residents to endure as one of the country's most desirable places to live. The Association's bylaws acknowledge the importance of minding the soft systems of a place - social capital, leadership, long-range planning, and citizen education -- in the creation of a sustainable community. "At first glance, the vibrancy of our shopping district, the charm of our stone houses, and the scope of our parkland attract many to our community, but the vitality of Chestnut Hill has much more to do with the diversity and energy of people who live, work, and visit here. The sense that they are a part of something larger than themselves enriches the day-to-day life of Chestnut Hill and preserves the community for future generations."[2]

Many communities and institutions are realizing that attaining sustainability requires more than green buildings, streets and parks. Planning, constructing, and managing community systems similar to those developed in Chestnut Hill are critical to livability. Energy flows, local food production systems, local-global economic webs, social networks, community governance, resource sharing networks, and integrated land use and transportation are just some of the community systems that, when synergized in a specific place, constitute a

Chestnut Hill Recycling

Chestnut Hill Park Improvement

complex human ecosystem or "Civic Ecology." Nurturing this web of relationships and flows affords communities the means to enhance their local wealth (environmental, economic, and cultural), resilience, and competitiveness, and to take control of designing and managing their future. Civic Ecology ("community software") together with the green buildings, streets, and parks ("community hardware") constitute a complete sustainable community.

This paper describes the principles and benefits of Civic Ecology, as well as a planning process that communities can use to design sustainable, community-scaled systems. This approach uses The Natural Step "backcasting" process to help communities envision a desired future and create integrated systems to achieve multiple benefits.

CIVIC ECOLOGY PRINCIPLES

Communities with a strong or burgeoning Civic Ecology all share several essential qualities, which can be translated into five principles. Specifically, these communities:

1. Employ a whole systems approach. Civic Ecology is the web of flows that animates community life. All great, enduring communities – whether rural farming villages, suburbs, urban neighborhoods, or institutions – have a refined array of locally-based systems that facilitate resource, economic, and social flows. Moreover, these flows cross sectors; that is, economic, ecological, and social systems are intertwined rather than set in opposition.

2. Focus on place. The systems of flows must be focused within the community, and, to the greatest extent possible, must provide locally-produced energy, use local resources, enhance community economic multipliers, and draw upon social capital.

3. Require a new social contract. Presently, paying taxes and voting in exchange for services are viewed as the defining factors of citizenship. Civic Ecology draws upon a community's social capital by requiring active civic engagement in the creation, management, and monitoring of community systems.

4. Match needs and assets. A community's capacity to create a positive future is dependent on the assets and strengths it has developed over time. The whole systems approach seeks to understand problems in terms of their root causes and broader needs. Matching assets to needs is at the heart of creating community systems that will result in an enduring Civic Ecology.

5. Are dynamic. Communities are continuously-evolving organisms. Because of this, Civic Ecology must be designed as a "learning ecology," – a web of systems that adapts based on knowledge gained through constant vigilance and monitoring.

CIVIC ECOLOGY BENEFITS

Communities that develop and nurture their Civic Ecology enjoy five essential benefits:

1. A high degree of control. By creating a shared vision along with the adaptive framework and embedded systems necessary for implementation, citizens maintain more control of their community assets and collective future. Community ownership and control is enhanced by charting progress towards developing systems that rely largely on locally-based resources.

2. Enduring wealth. Because Civic Ecology integrates systems flows across sectors, it is possible for a community to realize the multiple benefits of ecological, economic, and social wealth. The common alternative pits the economic, ecological, and social camps in "zero-sum game" opposition, resulting in economic growth at the expense of ecological and social impoverishment.

3. Community resilience. Integrated systems that are locally created and managed generally result in richness and redundancy. An example is a diverse economic base of locally - owned businesses and local resource inputs that is less affected by rising transportation and labor costs. These businesses are less likely to "up and leave" the community for a better deal elsewhere because they are of the community. This local web contributes to a community's resilience, allowing it to weather the inevitable peaks and valleys.

4. An enhanced sense of place. With globalization, and the increasing homogeneity that accompanies it,

communities that are resilient, distinctively local, open, and adaptive – and ultimately unique – will succeed as valued places to live, work, and play.

5. A deep sense of community: Citizens of communities with a strong Civic Ecology share in learning about their community and envisioning its future. They also collaborate on designing the systems to implement that vision and labor together to keep the community on course. They work with strangers, friends, and occasionally enemies to create a collective future for themselves and the next generation. In doing so, they become citizens in full and experience a true sense of community.

THE PROCESS OF CIVIC ECOLOGY

To begin the process of creating a Civic Ecology, a community must ask itself five essential questions:

1. Where are we now?

2. Where do we want to be in 10, 20, 50 years and beyond?

3. How do we get to where we want to be?

4. How do we know if we are getting there?

5. Who wants to help answer these questions?

These questions can be answered by completing the following **CIVIC tasks:**

Convening, **I**nvestigating, **V**isioning, **I**mplementing, and **C**harting progress.

Convening: Convene a Civic Ecology working group consisting of stakeholders from all sectors of the community: business, non-profits, institutions, governance, citizens, and activists. These stakeholders must be willing to put in the time and effort necessary to see the process through and most importantly, work together on behalf of the community. The group must be trained in systems thinking in order to see their community and its future in a different way: as a web of interrelated systems and flows.

Investigating: In this task, the working group investigates what presently works, what does not work, what systems exist, and what the community needs. This assessment identifies problems and their root causes, as well as leverage points to effect change.

Visioning: As the first step in a process called "backcasting" (see The Natural Step, www.naturalstep.org), the community asks where it wants to be in 10, 20, 50 years and beyond. (For contrast, it may also be useful to predict where the community will be if existing trends are projected into the future-"forecasting".) The outcome of this visioning can take a variety of forms but must always build upon the community's shared core values.

Implementing: Led by the Civic Ecology working group, the community creates community-scaled systems to help realize its vision - and thus "backcasts" from its vision of the future. Some systems may be new, others enhancements of existing systems that seem to be working. In either case, the systems must bring identified assets to bear in satisfying identified needs. The group must also acknowledge barriers, assign responsibilities, and delineate specific tasks and timeframes for implementation.

Charting Progress: In this final, but never-ending task, the working group and community create a series of indicators that, when measured over time, will help the community assess progress towards realizing its vision. Periodic assessments and adjustments ensure that the Civic Ecology is truly a learning ecology.

Civic Ecology's whole systems approach will yield a snapshot of the community's desired future, the "software" necessary to achieve that future, and the ability to chart whether means and ends are in alignment. It provides the fundamental context necessary for making decisions about capital investment in "hardware" (buildings, streets, schools, parks, and utilities), economic revitalization, business growth and retention, main street improvements, and virtually anything related to the common good.

"HOW IS YOUR CIVIC ECOLOGY?"

There are many communities around the US and the world that, like Chestnut Hill, exhibit varying degrees of Civic Ecology. Answering the question, "How is your Civic Ecology?" is the ultimate community building exercise. It requires citizens to learn about their place, its strengths, its weaknesses, and its possibilities. It requires them to do it together, continuously, forever. It also requires new eyes (a whole systems approach) and constant vigilance. As a former resident of Chestnut Hill, I can personally attest that the rewards are many, and will live on through generations of people fortunate enough to participate in a functioning Civic Ecology.

Civic Ecology "Circuit Diagram" for a neighborhood or town
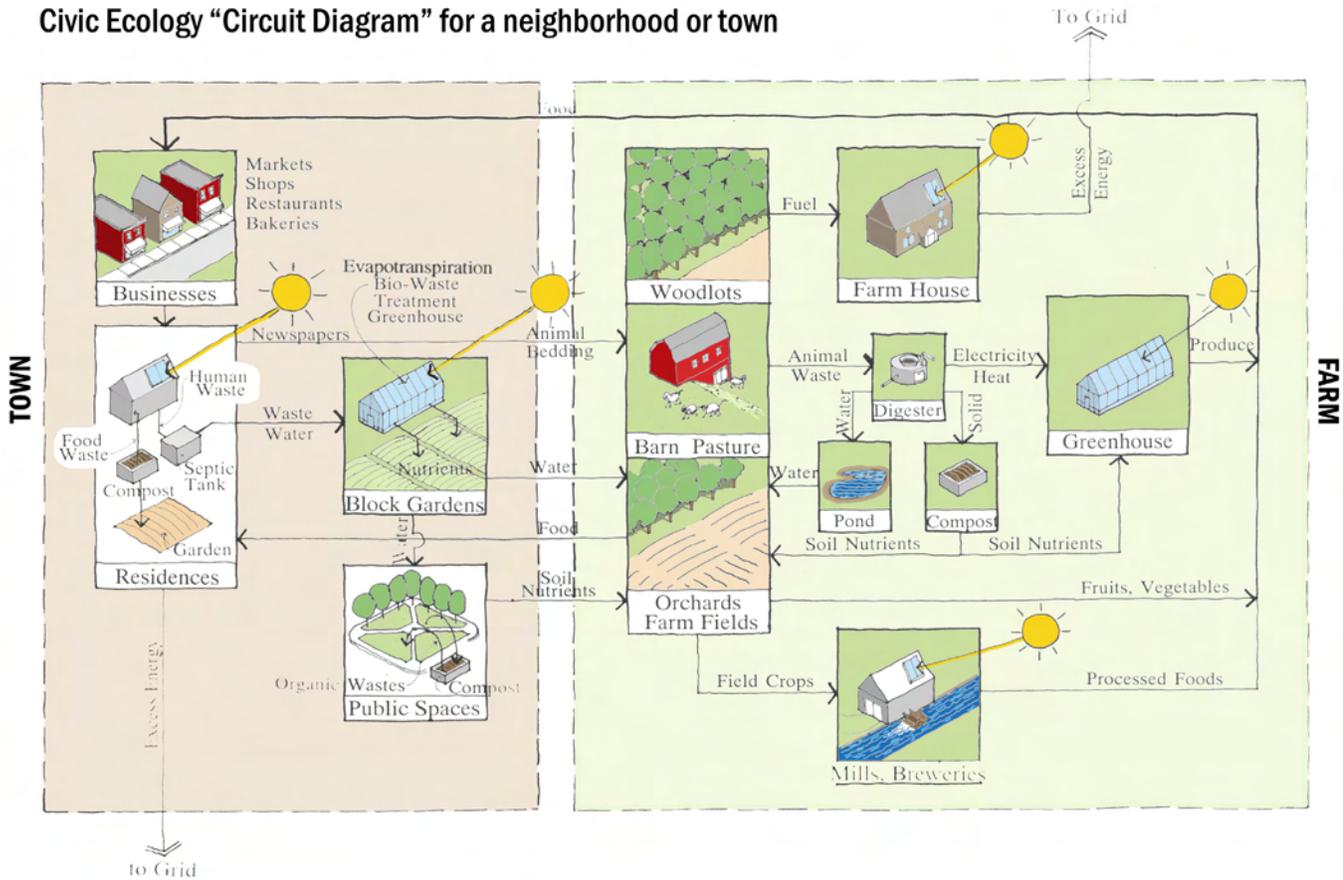
January 3, 2008 by Tim Smith

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(Endnotes)
1. Chestnut Hill Community Association By-Laws, April-May 2007, page 8.
2. "Greetings from Chestnut Hill", Chestnut Hill Community Association website, www.chestnuthill.org. page 1.