

2008 AICP Symposium Podcast

Making a Difference with Green Community Strategies

Listener Questions - Series 1

APA would like to thank podcast listeners who took the time to ask thoughtful questions, and the panel of speakers from the 2008 AICP Symposium who took the time to write thorough answers:

Lee R. Epstein, Director, Lands Program, Chesapeake Bay Foundation

Nancy McKeever, Sustainable Energy Program Manager, California Energy Commission

Phillip Rodbell, Program Manager for Urban and Community Forestry in the U.S. Forest Service Northeastern Area, Newtown Square, Pennsylvania

Does the concept of “urban farming” (promoting agricultural re-use of underutilized land within cities) have basis as a viable economic and ecological alternative?

Lee Epstein: To my knowledge, inside-the-city farming is mostly urban gardening, where on the relatively large scale of 5-10 open acres of city-controlled land, cities lease or lend quite small plots (less than 1/8 of an acre) to residents who pledge to garden there. Washington, DC and New York City set aside plots of land for this purpose. Actual farming would have to be very, very intensive in order to be economically viable in a highly urban setting, where an acre of land can be extraordinarily valuable – but I guess it could be done. I do know that there have been designs contemplated of vertical farms on the sides of buildings (the Urban Land Institute’s magazine *Urban Land* displayed such designs in an issue several months ago). From my perspective, however, it is probably more environmentally beneficial to use urban land mostly in a very urban way: absorbing more growth there rather than absorbing it out in the countryside. That would probably not provide much room for farms in the city. On the other hand, I am very supportive of well-managed, urban edge agriculture that can supply urban areas with the freshest of local foods and help protect nearby open space and an area’s environmental quality. For more information about vertical farms, visit <http://www.urbanfarming.org/foodchain-locations.htm>

In her presentation, Nancy McKeever commented on how the public will be demanding smaller lot sizes because our demographic profile is becoming older (aging baby boomers)



The speakers field questions from the audience at the 2008 AICP Symposium. From left to right, Moderator Anna Breinich, and speakers Phillip Rodbell, Nancy McKeever, and Lee Epstein.

and smaller. I was wondering if she has incorporated the “Aging in Place” concepts into her planning process. “Aging in Place” looks at how buildings can be built to better accommodate our changing needs. I know that many TND communities build 2-3 story townhomes near the town square - but these units are terrible for seniors and for the disabled.

Nancy McKeever: Aging in Place concepts are a great example of a social benefit that can be derived from the intersection of quality data and effective policy. For example, as regional growth and housing data were assembled in the Sacramento region, the demographic trends became clear, including a growing demand for smaller and more urban housing. The cities and counties of the region are charged with general (comprehensive) planning which includes housing. Each city and county planning department can use the regional level data and land use maps to determine both the amount of housing for older citizens they will need to accommodate and the preferred locations for that housing within their jurisdiction. By providing each city and county with a localized allocation of housing demand by demographic category over a longer time horizon, the ability to provide for housing needs should be improved within each local government and regionally. Similar value is created for improving planning and development of low income housing, serving transit needs, and many other planning activities.

What is the capacity for trees to sequester carbon? Is there a point where it starts to damage trees? Has anyone done research on this? It is often offered as something to combat global warming. Is the carbon released back into the atmosphere when the tree dies?



Audience members ask questions at the AICP Symposium, held at the National Building Museum in Washington, DC.

Phillip Rodbell: Trees will continue to sequester carbon throughout their lifespan. The largest mature trees obviously will hold more carbon. Some research has shown that high carbon dioxide concentrations in the atmosphere may actually increase the rate of sequestration and improve growth, up to a point. Fast growing trees such as poplar will sequester at a higher rate than slow-growing trees, and their use as fuel for power plants has a net benefit to the atmosphere over fossil fuel use. The carbon in wood fiber will be released back into the atmosphere on harvest at a rate dependant on its end use as a forest product. For example, chipped mulch will quickly decompose and release its carbon content into the atmosphere, while wood boards used in house framing could last centuries. For more information, visit: <http://earthobservatory.nasa.gov/Newsroom/view.php?id=30645> or http://news.nationalgeographic.com/news/2001/06/0621_carbonsinks.html

The various software programs that were showcased in the various presentations appear to be great tools. Are the programs affordable for small local and regional governments? What are the costs associated with data collection?

Nancy McKeever: *Note – This response addresses the I-PLACE3S software only.* The I- PLACE3S software has been used by individual cities, small regional governments and large Metropolitan Planning Organizations. It was originally developed as a desktop program which, as the software capacity increased, became too slow for public meetings and unable to manipulate the very large parcel-level land use data needed for high quality planning. Rather than combining parcel data into grids or other less detailed aggregations to continue desktop applications, the I-PLACE3S software was reprogrammed to function on a high-power server system with Internet access. This change enabled the software to 1) manipulate very large parcel-level data sets enhancing the accuracy of the outcomes, 2) provide two-second real time results necessary for effective public engagement in workshops, 3) scale seamlessly from regional level to neighborhood level projects, and 4) be accessed anywhere with only a standard modem.

The software has no direct cost. However, there is a user access fee to cover the costs of the service provider. The fee for I-PLACE3S software is based on the size and complexity of the project,

number of parcels within the planning area (which determines the amount of infrastructure and staffing), the level of technical/help desk support needed, and amount of after-hours workshop support required. For this package of services, annual fees for most California Metropolitan Planning Organizations have ranged from \$25,000 to \$125,000.

Data collection costs are, of course, a function of the state of the available data. I- PLACE3S can use a wide range of data, from parcel to aggregated data, for example Traffic Analysis Zones (TAZs) common to travel modeling. In Sacramento the local and regional governments formed an especially effective data collaborative to gather and maintain GIS data for many valuable uses, including regional transportation, land use, and economic development planning, homeland defense uses, and I- PLACE3S. The multiple uses of the data and shared costs have proven to be cost effective and improved overall quality of individual uses of the data.

Do you see a big difference in these kinds of efforts between newer Sunbelt cities and older “Rustbelt” cities. And if “yes” then why?

Lee Epstein: Not sure what “these kinds of efforts” refers to – better land use planning? Up-to-date stormwater management measures? Protecting and enhancing open spaces and improving how working lands treat water?

Generally speaking, no particular area of the country has a lock on good, progressive stormwater management, planning for smarter growth, etc. For a long time, the newer, Sunbelt cities did these things as poorly – maybe worse than – their older, Rustbelt cousins. There are plenty of examples of cities and townships and counties around the country undertaking reforms, from gritty Chicago’s ambitious open space and green infrastructure plans, to the Phoenix area’s adoption of mixed-use neighborhoods and public transit for its future. There are also plenty of examples where nothing new is happening and the result is a continuing deterioration of an area’s natural assets.

Could the process used for the planning process in Sacramento be used for state-wide planning? If so, what modifications would need to be made to the process to make it successful?

Nancy McKeever: The Blueprint Transportation and Land Use Planning Program, developed between 2001 and 2004 by the Sacramento Area Council of Governments (SACOG), became the basis of a statewide regional transportation and land use planning grant program offered beginning in 2005 by the California Department of Transportation (CALTRANS). To date, \$15 Million have been granted to regional governments throughout the state to conduct Blueprint Planning. Summaries of the past grant products and funding program are found at: <http://calblueprint.dot.ca.gov/>

Also relevant is California’s recent land use and transportation legislation referred to as SB-375(Steinberg). This legislation

was crafted to contribute to the successful implementation of the SACOG Blueprint Plan and 2007 Metropolitan Transportation Plan, built upon the land use map adopted as the outcome of the Blueprint program, and to support the achievement of greenhouse gas reduction goals linked to land use and transportation development choices. SB-375 establishes a statewide requirement to conduct regional level planning focused on achieving greenhouse gas reduction targets to be set by the state. Discussions for incorporating SB-375 type of provisions into the next reauthorization of the Federal Highway Bill are underway.

Do any jurisdictions you know actually use UTC (slide 27 of Phil's slide) as a performance measure in their environment policy/goal? That is, City A uses set a goal of UTC of 35% by 2015 as part of the city's performance/progress measure/metric in achieve its policy of greening the city.

Nancy McKeever: I do not have any examples in hand. The cities of Thousand Oaks, Los Angeles, Ventura, San Diego, and Sacramento have excellent urban tree programs, but I do not know of a performance measure based on percent of urban tree canopy.

During the OPEC energy crisis of the 1970s, the California legislature passed a bill titled: "The Urban Forestry Act of 1978" (Ca. Public Resources Code Sect. 4799.06 - 4799.12) which declared city trees to be energy conserving "valuable economic assets" to cities. More recently, in 1993, based upon more research, the California legislature passed Government Code 53067, which states: "As canopy cover increases the public benefits increase."

Two excellent websites for more information are http://www.fs.fed.us/psw/programs/cufr/research/studies_detail.php?ProjID=8 and http://www.cityofsacramento.org/transportation/urbanforest/uf-media/shading_guidelines_06-05-03.pdf

I was curious how well urban forestry regulations are holding up in court as a legitimate police power. It may be hard for homeowners to understand that "their tree" is regulated. I seem to remember M-NCPPC had a little bout with a local NFL team owner over his cutting some trees that blocked his view of the Potomac river.

Phillip Rodbell: Local tree protection laws have held up very well in courts across the country. Local jurisdictions have a right and responsibility to protect public health, safety, and welfare, and have successfully linked their tree care programs to these basic purposes of police power authority. I believe Takoma Park, MD, has one of the most stringent and enforceable provisions that requires government review before homeowners can remove trees on private property. In this case, property values are considered a public welfare issue. The most contentious laws may be those that restrict tree cutting for views and solar access. In most of these cases, the rights of the many to enjoy the benefits of trees have trumped the rights of a few who seek their destruction for

personal gain in a community setting. You can view existing case law in a publication available through the International Society of Arboriculture: <http://secure.isa-arbor.com/webstore/Tree-Law-Cases-in-the-USA-2nd-Edition-P304C17.aspx>

Lee Epstein: I live and work in this area and am aware of the case. Actually, it was the National Park Service that had imposed a "no removal" requirement as a condition of Redskins owner Dan Snyder's home being built in/near a regulated buffer area. Mr. Snyder cut the trees anyway, and ultimately had to pay a fine and replace them. While belated, no problems with the police power there.

Mr. Rodbell made a statement at minute 15 seconds 10 in his program that "we are loosing trillions of dollars a year in resources." How did he determine that societal cost?

Phillip Rodbell: A study in the journal Nature (Vol 387, 15 May 1997) estimated that the value of global ecosystem services and the "natural capitol stocks" that produce them were on average \$33 trillion per year. On October 10, 2008, the BBC reported the results of a European Union study concluding that "The global economy is losing more money from the disappearance of forests than through the current banking crisis. It puts the annual cost of forest loss at between \$2 trillion and \$5 trillion." For more information visit http://www.uvm.edu/giee/publications/Nature_Paper.pdf or <http://news.bbc.co.uk/2/hi/science/nature/7662565.stm>

It would seem that the green belt and tree plantings require up front planning and plans to maintain the area and trees. Often times water has become short, maintenance is skipped over, and the growth and lush landscape is never realized. What type of long range planning is needed to avoid this reality? Perhaps long term funding and maintenance plans are needed as well.

Phillip Rodbell: The new publication available at APA, Planning the Urban Forest, outlines the planning principles critical to a successful effort. Maintenance planning and funding are core principles. Most highway and greenbelt planting will only be successful if provided a drip irrigation system. This could be a temporary system in place for a minimum 3 growing seasons to ensure plant establishment. This may be a significant up-front cost, but it is cheaper than having to remove and replace all the dead plant materials. For more information, visit <http://www.planning.org/research/forestry/index.htm>



Symposium speakers address the audience.