

# Planning for Healthy Trees

## Careful forethought is required if a community wants to plant and maintain a sustainable urban forest

*This article was reprinted with permission from American Forests Magazine, Spring 2008.*

**P**LANNING and maintaining trees in a community requires more than just a hole in the ground and occasional watering. The American Planning Association invited nine experts and representatives from AMERICAN FORESTS, International Society of Arboriculture, and U.S. Forest Service to a symposium to help it delineate principles to guide planning for urban and community forestry. The resulting document divided ideas into general, planning, and design principles and outlined some general rules under each. Below we highlight those findings.

### General Principles

Urban and community forestry has grown from the original view of it as an aesthetic amenity that softens the urban landscape to a solution to pressing urban environmental problems. The symposium described five general principles to govern its use in planning:

- Put trees at the beginning of the planning process.
- Know where you came from to know where you're going.
- Seek out private partners.
- Invest in trees; it makes economic sense.
- Make urban forestry financially sustainable.

### Put Trees at the Beginning of the Planning Process

Because trees play a vital role in helping communities solve numerous problems simultaneously they need high-priority attention in the planning process. That way it's more likely they'll get proper recognition for how they serve vital functions from manag-

ing stormwater and improving urban air quality to improving property values, enhancing quality of life, and lowering building energy demand.

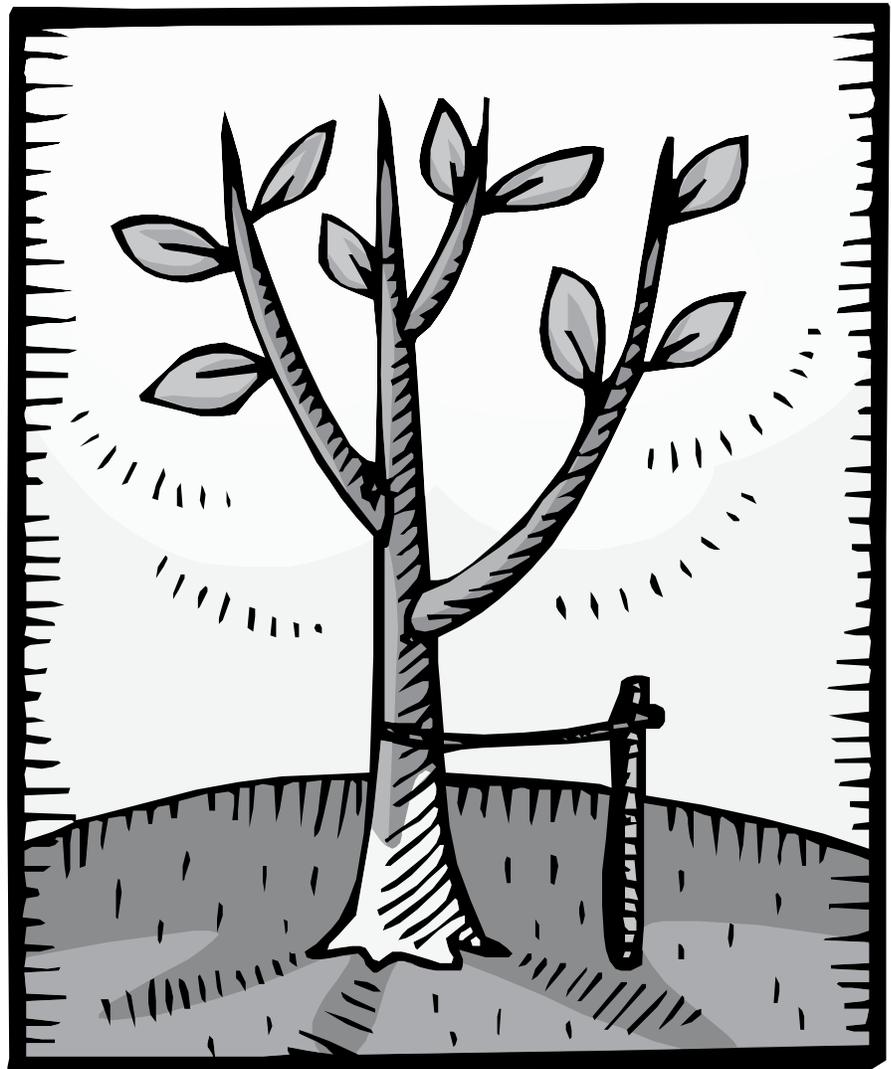
Urban forestry is "big-picture" – a science about the "forest," not just the "trees" – and so must focus on ecosystems that support the forest. That requires a hard look at urban planning policies that support and maintain the trees' health. This can be done by setting goals for the amount of canopy cover a city wants to achieve and maintain. Baltimore,

Maryland, worked with the state Department of Natural Resources to set a canopy goal that also would help improve water quality in Chesapeake Bay, a focus of regional concern and an ongoing multistate cooperative agreement.

By **JIM SCHWAB**

### Know Where You Came From to Know Where You're Going

With environmental issues, it's imperative that you document a community's past experiences to understand what has succeeded or failed and why. To do this, planners need professional foresters and GIS professionals to analyze changes in the urban forest over recent decades. By working together to document the history of the local urban forest as an ecosystem – rather than a collection



of trees – foresters and planners can advance public understanding of those parts of the forest where people live and those that come in contact with buildings.

### Seek Out Private Partners

In most cities, the majority of the urban forest canopy consists of trees on private property. Although the community has more direct control over municipal lands like parks, these are not the only places where trees appear. To successfully maintain the urban forest and stretch those limited dollars, communities need the continuing support of homeowners, businesses, and leagues of dedicated volunteers in organizations such as local tree trusts.

In Urbana, Illinois, for example, the city splits the costs of trees with homeowners and provides them advice on planting and tree care. Taken to the block or neighborhood level, these programs can get block clubs and community organizations interested in improving the livability of their city.

Business partners can be powerful contributors who offer financing, plant and maintain trees on commercial property, and support civic groups involved in forestry. Nurseries, home and garden suppliers, and tree care firms have a direct stake in urban forestry; others may want to offset environmental impacts especially as climate change policy makes carbon credits a commodity.

Other options: print, broadcast, and electronic media. In the Internet age, the potential for creative use of all media types is greater than ever before. You also can involve schools and colleges or universities in your long-term communications strategy, for example, through curriculum development and Cooperative Extension initiatives.

### Invest in Trees; It Makes Economic Sense

It's becoming easier to put a number on the value of trees, either directly – through property values – or indirectly – through preferences for leafy green shopping districts

or through environmental benefits. These include filtering air pollution, reducing the sediment in streams, better managing stormwater, and reducing energy needs due to tree shading. Communities are realizing that green infrastructure is an economical long-term investment that reduces the need for much greater expenditures in gray infrastructure.

### Make Urban Forestry Financially Sustainable

If urban forestry makes economic sense, there is no reason not to put it on a sound financial footing. Most programs will probably always rely heavily on general fund allocations, but other options exist. Olympia, Washington, for example, uses a capital improvement plan fund derived from real estate excise taxes and utility taxes, with interest, to underwrite its program, while Salem, Oregon, funds its care of street trees through the municipal portion of the state motor fuel tax. It also funds some tree preservation through fines and donations.

Development fees can help underwrite tree programs in newly developing areas of a community. Communities also can dedicate a portion of revenue from a tax increment-financing district to urban forestry improvements; those improvements add proven value to new economic development.

### Planning Principles

The American Planning Association-led session came up with six principles the group felt planners should follow:

- Incorporate tree ordinances in the development code.
- Collaborate with developers, environmentalists, and others to draft ordinances.
- Include an urban forestry evaluation checklist or guidelines.
- Include enforcement personnel in ordinances.
- Take an adaptive management approach to resources.
- Plan for long-term tree maintenance.

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### **Incorporate Tree Ordinances in the Development Code**

A major problem cited by participants at the symposium was that too many tree ordinances are stand-alone laws that are not incorporated into zoning and subdivision or other development codes and go unnoticed by the development community. While the reasons why this can happen are many, participants agreed that planners, foresters, and elected officials must work to ensure that adopted ordinances are consistent with national and state environmental and development laws and other regional and local codes. Conflicting code provisions undermine the effectiveness of the community's original intent: trying to protect the urban forest.

### **Collaborate with Developers, Environmentalists, and Other Stakeholders to Draft Ordinances**

Planners don't need to know enough about trees to decide exactly what species is right in a particular setting, or how best to preserve an entire grove on a development site. Foresters and arborists can supply that knowledge but likely do not know the fine points of site design. Landscape architects can serve as a bridge in many cases, but all these professionals, including engineers who must fit infrastructure into development sites, must collaborate to determine what each needs to make the process of tree preservation and planting successful.

### **Include an Urban Forestry Evaluation Checklist or Guidelines**

Developers generally prefer clear guidelines even when they involve more stringent requirements, so communities should simplify the task of compliance by summarizing requirements in checklists or visual design guides that allow developers to understand more easily what is expected. These regulations should involve tree experts, landscape architects, and planners to maximize the likelihood of a successful outcome.

### **Include Enforcement Personnel in Ordinances**

One way virtually to guarantee a community's urban forest will fail is to enact a program of tree planting and preservation on development sites without the means for effective oversight. Enforcement personnel are a necessity. When drafting tree and development ordinances, planners should advocate adequate budgeting to support positions they feel are needed to implement effective ordinances.

Columbus, Georgia, revisits development sites every two years after completion because the trees are expected to be kept alive "in perpetuity." It ensures that trees are not badly placed or compromised by power lines, water mains, sanitary sewers, and other infrastructure. And its Public Works Department has an urban forestry and beautification division with 80 people handling both urban forestry and right-of-way maintenance; 20 of those are tree specialists.

### **Take an Adaptive Management Approach to Resources**

Because learning about the urban forest is an ongoing process, there will always be a need to find ways to incorporate new findings into urban forest management. Applying new knowledge helps improve accuracy in predicting how an ecosystem will respond to new managerial approaches. A major benefit of this adaptive management is that it allows change to take place gradually instead of having to make large, sudden changes.

### **Plan for Long-Term Tree Maintenance**

Long-term success is undermined when programs are subjected to short-term budget cuts. Deferred maintenance results in tree die-offs. But long-term maintenance is more than convincing local elected officials to maintain forestry as a budgetary priority. Planners and foresters should act creatively to bolster the stability of their budgetary resources for trees



and adopt longterm planning and investment procedures to stabilize maintenance over time.

### **Design Principles**

The symposium also decided on four ideas to guide the design process:

- Use urban forestry to support other planning goals.
- Include green infrastructure in the local comprehensive plan and link it to other elements.
- Recognize that the natural environment helps create livable neighborhoods.
- Make the place right for trees, then pick the right trees.

### **Use Urban Forestry to Support Other Planning Goals**

Urban forestry lends itself to supporting so many other planning goals that establishing those connections is largely limited by one's own imagination. Among many other possibilities, trees can help create a sense of place, promote community aesthetics, create walkable neighborhoods, improve traffic safety through planting in parkways, calm traffic by limiting fields of vision along residential and some commercial streets, and advance environmental goals

for air and water quality and energy conservation. Trees can be central to economic development. Fort Worth, Texas, included tree planting in its design guidelines for new downtown businesses as part of an effort to revive the central business district.

**Include Green Infrastructure in the Local Comprehensive Plan and Link It to Other Elements**

A community’s comprehensive plan must reflect an understanding of the various benefits provided by its green infrastructure. Those benefits and values should also be reflected throughout the rest of the comprehensive plan, with links to elements that pull it all together such as housing or transportation.

**Recognize That the Natural Environment Helps Make Neighborhoods Livable**

What makes a place like Savannah, Georgia, appealing is in large part the sense of place created by its trees and their massive canopy cover. The benefits of trees in making a neighborhood livable extend beyond creating a distinct sense of place. They humanize the built environment by providing shade on hot summer days, cool places to relax on otherwise sunlit lawns, and filters for excessive heat buildup in many urban buildings. Despite urban myths about trees hiding lurking criminals, researchers have shown that having greener surroundings for inner-city apartment buildings means crime rates generally at least 40 percent lower than for buildings with no greenery at all.

**Make the Place Right for Trees, Then Pick the Right Trees**

The wrong tree in the wrong place with inadequate care is almost doomed to failure, and its failure often will serve to undermine public support for urban forestry as a productive investment. Communities must be willing to support the work of tree professionals who can choose appropriate sites and soils for specific tree species. And they must support that work throughout all phases of the development process.

**Good Planning = Effective Use of Knowledge**

Considering the site-specific nature of many of these decisions, it is nearly impossible to prescribe a precise solution in an ordinance. Performance standards or broad design guidelines are more likely to work, but enforcement usually requires a tree professional to review site plans and monitor progress. In the larger picture, however, planners and foresters must consider tree choices and locations in light of overall performance

goals for the urban forest and more generally for the green infrastructure in their community. We don’t have all the answers, but new tools for scientifically measuring results continue to advance our understanding of the urban forest. It is the role of good planning to make effective use of this new knowledge.

**About the author**

*Jim Schwab is senior research associate with the American Planning Association. The full report will be available July 1 from APA.*



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