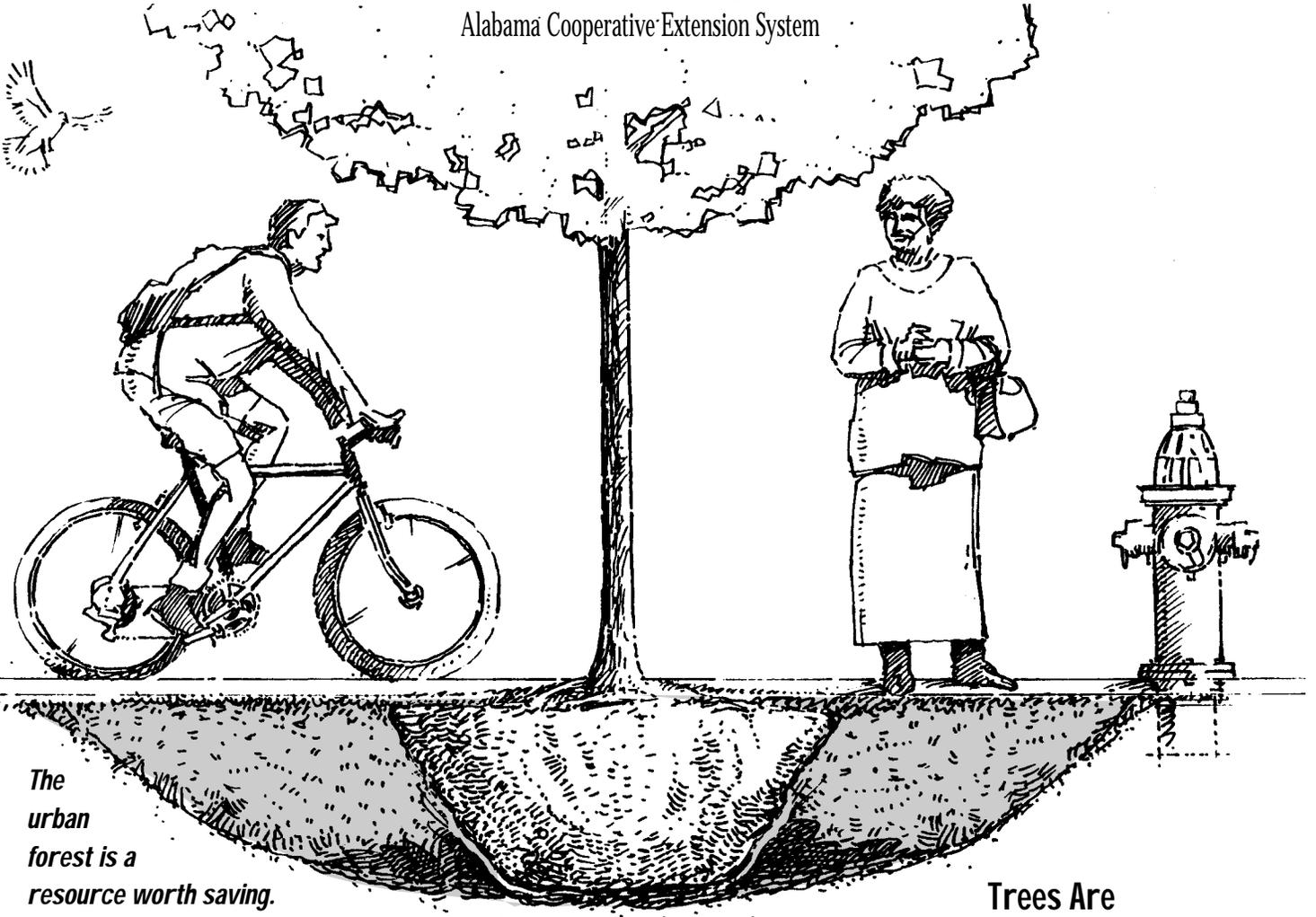


Planning And Implementing An Urban Forestry Program

Alabama Cooperative Extension System



The urban forest is a resource worth saving.

Urban forestry is the management of trees in an urban environment. This publication is designed to provide citizens with the knowledge and resource references needed to initiate an urban forestry program in their community. Remember as you read and study this material, there are no absolutes involved—only thoughtful, organized suggestions. Communities will differ in their visions for their cities, so there are many different means to the same end.

Use the following processes in developing your urban forestry program.

1. Recognize that trees are valuable assets.
2. Assess support for a tree program in your community.
3. Develop a tree commission, committee, or board.
4. Assess resources and needs.
5. Develop a tree ordinance.
6. Consider hiring a professional urban forester.
7. "Get on" with the program.
8. Keep the community involved.
9. Keep the program going.

Trees Are Valuable Assets

Not only do trees add aesthetic qualities to our environment, they also have life-giving, psychological, and financial values we should be aware of and appreciate. Communication of these qualities should bring the value of our urban forests into sharper focus.

Trees have aesthetic values that are clearly evident. Colors, shapes, sounds, and textures of trees are experienced by most of us every day. However, trees have a more tangible value too.

Trees have life-giving value. They take impurities out of our air and replace them with clean air. A tree-lined street can have up to one hundred

times fewer pollutants in the air than a street without trees. They provide shelter for people and countless other creatures, giving us the opportunity to observe wildlife in a natural habitat in our own back yard. Wildlife is important to people. The bird seed business alone is worth \$2 billion per year!

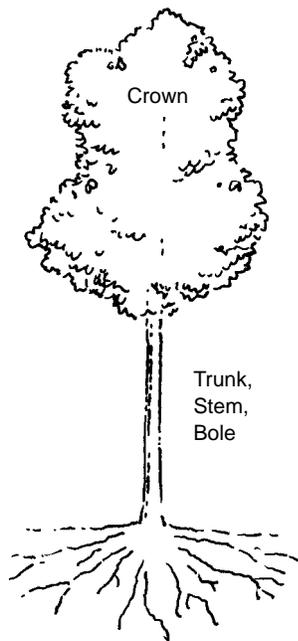
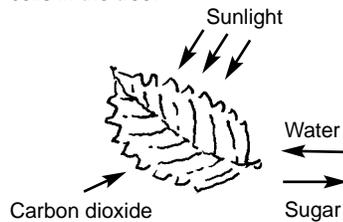
Some Ways Trees Save Energy



The Green Machine

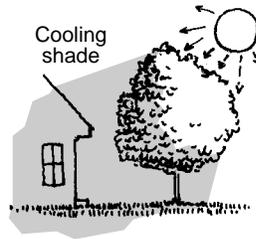
A most marvelous mechanism

Using water from the roots and carbon dioxide from the air, chloroplasts in the leaves create sugar and oxygen. Sugar, the tree's energy-producing food, moves downward to all living cells in the tree.

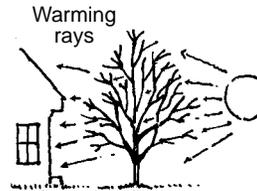


Roots absorb water and dissolve nutrients (nitrogen, phosphorus, etc.) and provide storage for sugar (in the form of starch) during dormancy.

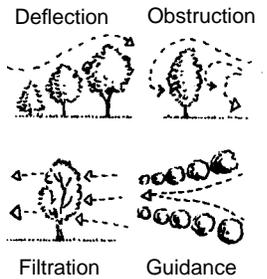
Summer Sun



Winter Sun



Wind Control

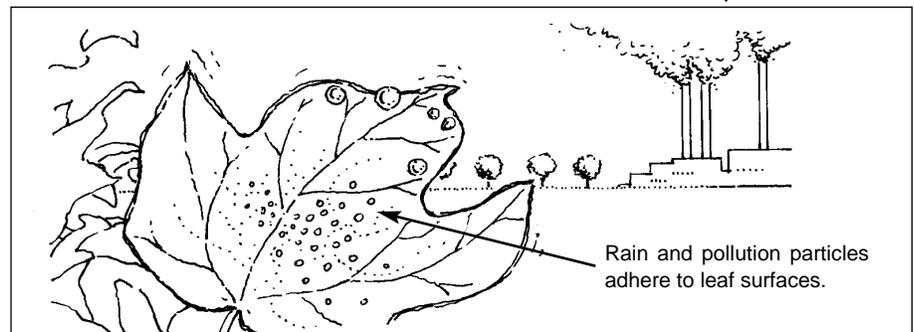


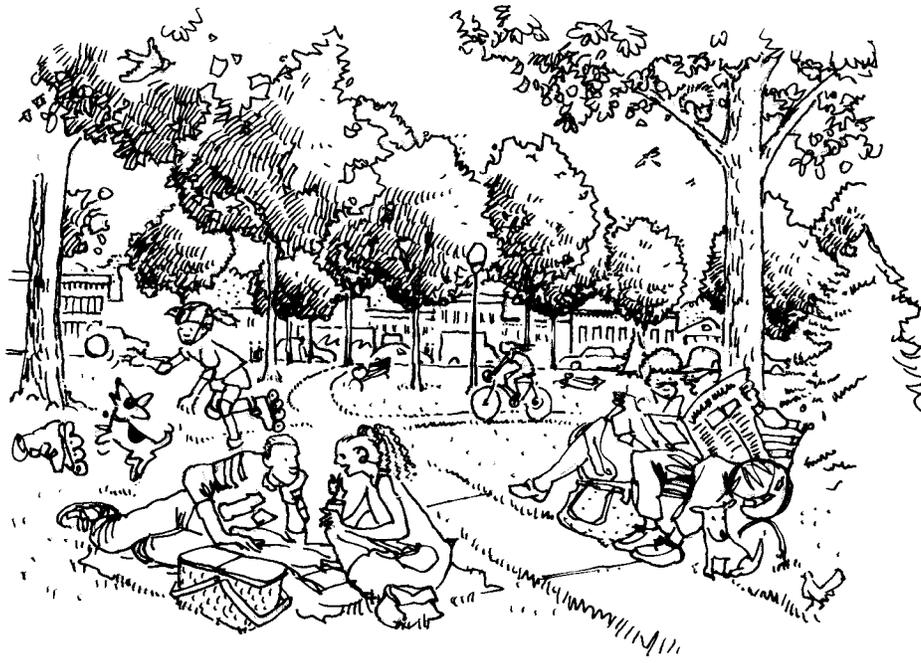
Trees save energy. Strategically placed trees can save as much as 30 percent on the average home air-conditioning bill. They can also cut heating expenses by as much as 50 percent by deflecting strong winds that rob our homes of expensive heating.

Trees protect our environment. They reduce surface runoff of water. This can reduce soil erosion and pollution runoff into water resources. They reduce sedimentation in streams. Trees cool the air and add moisture to it. They lower the ambient air temperature. Trees can also help reduce noise levels.

Some Ways Trees Protect Our Environment

Leaves direct runoff.





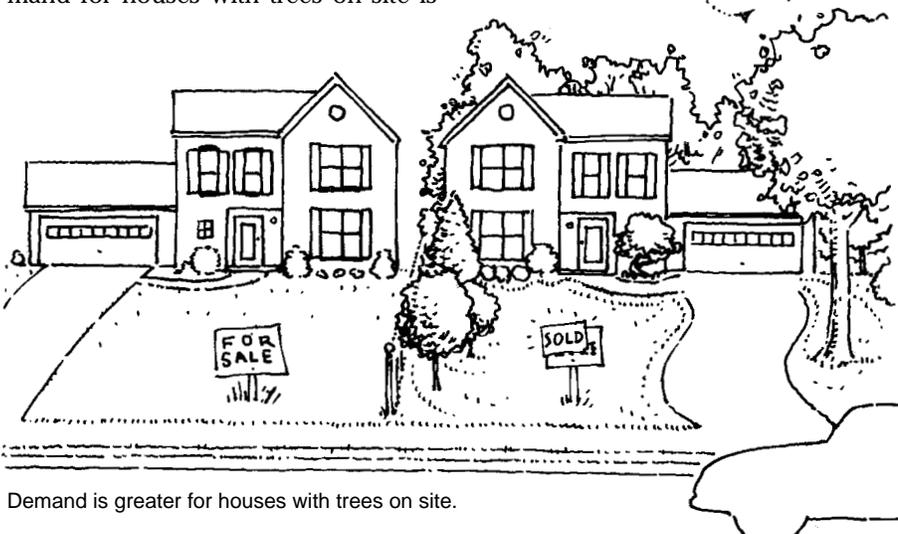
The presence of trees can improve our emotional and psychological well being.

Trees can impact our personal health. Research has shown that patients viewing landscaped areas spend less time in the hospital recuperating than patients without a landscaped view. Trees can impact our emotional and psychological well being too. They convey a sense of peace to the viewer.

Trees also have significant economic value. Studies show that treed property can sell for as much as 18 percent higher than property without trees. Often, 6 to 9 percent of the sales price of a home can be attributed to trees. Developers report that the demand for houses with trees on site is

greater than that of houses without trees. They also report that costs involved in planting or saving trees on a lot are recovered in the sales price. According to some mall managers, landscaping protects a mall's market share. It is reasonable to assume that the same might be true for cities, since malls are small business districts.

It is clear from their many benefits that our urban trees are resources worth saving, investing in, and protecting. A total urban forestry program is an excellent way to create, preserve, fund, and protect these resources.



Demand is greater for houses with trees on site.

Professional Tree Appraisal Is Available In Alabama

The Council of Tree and Landscape Appraisers, which is sponsored jointly by the American Association of Nurserymen, the American Society of Consulting Arborists, the Associated Landscape Contractors of America, the International Society of Arboriculture, and the National Arborists Association, has prepared a formula with which we can place a monetary value on trees. Often, circumstances of damage require that we have dollar values placed on trees before they are injured so the community can recover their loss. Just as motorists who run into utility poles are required to pay for the pole and the labor to install it, so should motorists who damage our trees be required to reimburse the city for the dollar value of the tree. Not only motorists, but vandals and those who use poor judgment when applying chemicals or performing pruning activities should be held accountable for their negligence as well.

Contact your county Extension agent or The Alabama Forestry Commission for more information on tree valuation or for a list of professionals in your area who are qualified to perform tree appraisal.

The practice of urban forestry involves the planting, protection, preservation, maintenance, and management of trees located on community-held property. Such property may include medians, city parks and buildings, rights of way, and riparian zones. Many cities also establish rules that affect

trees on private property. The first step to a successful tree program is to assess the need.

Assess And Foster Support For A Street Tree Program In Your Community

What would you like the environment in your city to be like? Few would question the desire for their city to be as livable as possible. The importance of trees in fulfilling that goal is clear, but where do you start? First, educate your fellow citizens, and assess and encourage their support. A public forum to discuss perceived tree problems or threats should first be called. A public forum provides the opportunity to inform people of the value and importance of trees in your community. You can ask what their individual concerns are, receive input from them, and request their support.

Second, make appointments to visit civic organizations, and make plans based on their input. Listen to their concerns. Ask for names of members or other citizens they think would be good leaders for your cause, and ask if they would support these people.

The Alabama Cooperative Extension System and The Alabama Forestry Commission have educational videotapes and publications to help you develop your program.

The Tree Commission, Committee, Or Board

From your list of potential leaders, select the number of tree board members you think will be needed to do the work. Looking at similar citizen groups in your community should give you some idea of the number needed. Do not make the committee too large or too small for the need. Six to twelve individuals should be satisfactory. Consider making elected officials ex-officio members. A larger committee may be needed at first until you get organized. Since you selected the committee from a list of suggested candidates, citizens from across your community should be represented by someone on the committee.

The committee should work within established guidelines. Remember, this committee is working to get a municipal tree program established. Authority must come from elected officials. If your city is large enough, you may want to request temporary funding from your local government at this time. If your request is not funded, look to the private sector for the support you need to get started.

Assess Resources And Prioritize Needs

Once support for a tree program is secured, it is of prime importance to conduct a street tree inventory for your community. An inventory creates a record of existing trees, identifies hazardous trees, and gives you an overall view of where you are beginning and the direction in which you should be going. You must have this data as a baseline for developing your program and to measure your progress in the future. If funding for an initial survey is limited, perform a basic tree inventory with volunteers. A more comprehensive inventory can be performed in the future as funding permits. You may obtain information on tree identification from your county Extension agent or local Alabama Forestry Commission representative.

You should inventory each tree and each reasonable place for a tree. Assess each situation independently. Note the location of utilities, sidewalks, lines of sight for traffic, soil conditions, and any other factor pertinent to the successful existence of a tree. Identify the species, condition, and any possibilities for management of the tree. Perhaps the development of a standard checklist would help make this process easier.

Determine if there are any tree health or establishment promotions available (Tree City U.S.A., Tree Trust, Urban and Community Forestry Grants, etc.) that are not being fully utilized. Identify any gaps between what services are needed and what services are available. If funding is available

from any source or if a resource is not being effectively or efficiently used, note it.

Contact your county Extension agent or Alabama Forestry Commission representative for possible funding sources. Your elected officials will be much more likely to legitimize your committee and its intentions if you have made every effort to identify these resources.

Now you are ready to validate the need for a tree program to your community officials. Organize all of your information, detailing the value of your urban forest, the condition of existing trees, and resources available. Invest in your presentation to further express your sincerity, concern, and competence. Be prepared to respond to questions.

Prioritize what needs to be done and list necessary resources. Be ready to give a brief, but complete, explanation of each item or resource you need. Make it clear that you have identified the most efficient ways to provide needed services. Ask elected officials to legitimize your committee, address the disparities between what is needed and what is available, and adopt a tree ordinance.

Develop A Tree Ordinance

State your purpose and mission in a tree ordinance. This will be the document to guide your urban forestry program. A tree ordinance may range in size from a few pages to volumes, depending on the needs and desires of your community. Your purpose should be a broad mission statement about what will be accomplished by your tree program. It should answer the question, "Why does the tree commission exist?" Consider all aspects of your urban forest that you plan to address, such as environmental quality, aesthetic appeal, increased business, or a combination of these or other aspects of your urban forest. This information needs to be explained in a manner that all citizens can understand.

Establish goals for the tree program. Goals are a little more specific than your mission statement. For ex-



When establishing a tree ordinance, seek input from a variety of citizens, including architects, business people, homeowners, construction engineers, and others.

ample, one goal may be to increase your stocking percentage. Stocking percentage is the number of occupied tree spaces divided by the total number of spaces available. Other goals may be listed, also. A goal is a step toward fulfilling an objective.

Determine the objectives of the tree program. Objectives are somewhat more specific than goals. Where a goal is just to increase stocking, an objective would be to reach and maintain full stocking by a certain time, in a certain way. Your objectives should clearly spell out your intentions.

Each of these parts of your program is progressively more specific. Avoid being either too general or too specific. Consider different situations, putting different rules in place for special situations such as natural disasters. Remember—your purpose, goals, and objectives will be the points by which you measure the success of your program in the future. Make your purpose, goals, and objectives reasonable, concise, and progressive in nature.

Establish a functional, comprehensive, understandable tree ordinance for your community. Review sample ordinances to get ideas about what considerations need to be addressed. Urban forestry personnel in many cities will send you a copy of their ordinance. The tree ordinance may address such considerations as the authority of your tree committee, sources of tax and fine revenue, what you can and cannot do with trees on city prop-

erty and private property, suggested species or excluded species, authority of the urban forester or horticulturist, and qualifications of the urban forestry personnel, among other things. Address all issues that are important to your community but keep the document concise, organized, flexible, and as simple as possible. Have someone who is not familiar with trees or government jargon read the document to make sure it is easy to understand. Make your ordinance the most usable tool it can be.

Consider Hiring A Professional Urban Forester

The need to hire professional staff depends on the size of your community, the availability of funds, and other factors. The benefits of hiring a professional urban forester should not be overlooked by even the smallest community. The cost of the expertise they can provide may be recovered exponentially in the future. Many urban improvement investments are often wasted because of unknowledgeable selection, installation, and maintenance of urban trees and landscapes. Obtain a copy of "Trends in Urban Forestry Management" from the International City Management Association to see where your community ranks compared to other cities of your size. This will be a valuable tool in assessing the need for professionals and budgeting.

The urban forester should be able to select the proper species for partic-

ular sites and select superior tree cultivars for establishment and maximum ornamental appeal. An investment in someone who can provide this resource will allow you to plant and maintain healthy trees instead of beginning a cycle of planting and removing trees as they outgrow their sites, become hazards, or die. In *Silva Notes*, Brett States relates a visit to a large wholesale nursery where trees destined for urban environments were marked by city employees with varying degrees of knowledge: "The citizens of the city with the urban forester are clearly the winners since they will start out with healthy trees that have well trained branches.... The losers are the people who live in neighborhoods that have been planted with "lollipops" ...trees [that] will haunt those citizens until the tree is removed, probably prematurely. The lollipop trees of today are the hazard trees of tomorrow.... Ultimately...we pay for them in higher taxes and insurance premiums. We must take steps toward becoming the winners."

The decision to hire, retain, or consult with an urban forester can make the difference in the success of your urban forestry program. Auburn University has a graduate program in urban forestry that is producing professionals qualified to fill these positions. There is a growing list of certified arborists who have studied the information necessary to pass a test given by the International Society of Arboriculture. Your county Extension office may have a list of individuals who have successfully reached this

**URBAN LANDSCAPING
PROBLEM**

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**PROFESSIONAL URBAN
FORESTER**

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\$ LONG-TERM SAVINGS \$

level of professionalism. Extension personnel in your county or at Alabama's land grant universities can also be a valuable resource.

"Get On" With The Program

Establish a system for how, where, when, and by whom the work of maintaining the urban forest will be done. Determine which department will house the urban forestry staff, how often reviews of progress will be presented to the tree commission, how often the commission will meet, and what subcommittees will address issues such as funding, design, or hiring. Provide a written procedure for resolving problems.

Urban forestry may be placed under the direction of an existing department within your city. If this is the case, be sure the administrator of the system is aware of the goals and objectives of your program.

Hire a professional and make a commitment to educate and invest in your staff. If a professional is hired, he or she should be granted the authority to make the decisions on most tree-related concerns within the community. The commission should be a support group for the urban forester. He or she should not be required to be a politician. Politics and urban forestry are often a poor mix. For example, as much as 85 percent of the street tree canopy in some of Alabama's cities are one species. This is often referred to as monoculture. Monoculture is a bad situation because a tree disease

could potentially devastate the tree canopy of a city with this problem. When asked why this situation existed, many urban foresters attribute it to politics. American elms that once lined city streets have been wiped out by disease. The American chestnut that made up more than 50 percent of the forest canopy in the eastern United States has been decimated by blight. It should be the responsibility of the tree commission to defend the decisions of their forester and educate their citizenry and public officials to avoid potential problems. Ultimately, we are all consumers of the urban forest resource, and a professional forester makes us wiser consumers. Trees are a long-term investment, and communities with knowledgeable personnel are winners in the long-term.

Deal with any problems identified in your initial survey and extemporaneous problems in a coordinated manner. Keep records of work that is completed or needs to be done. Plan strategies to attain the goals you have stated and work toward your objectives.

Keep The Community Involved

Good public relations are an integral part of a successful tree program. Keep the public involved and informed. Help citizens develop pride in their urban forest resource. It takes planning and cooperation to create and maintain a livable environment as our cities expand. You will need the knowledge, talents, influence, and support of many people to have a successful program.

Resources For The Tree Program

- Urban foresters or horticulturists know how to write the ordinances, oversee development, secure grants, and provide guidance throughout the process. The city can contact the county Extension office or the Alabama Forestry Commission for assistance, if this individual is not available.

- Urban foresters and horticulturists are knowledgeable of adaptable plant cultivars and plant requirements. They may also have insight into multiple uses of the urban forest.

- City engineers offer special knowledge in structural requirements and construction problems and solutions.

- Landscape architects offer creative designs considering traffic flow, safety, and the ability to capture the vision and put it on paper.

- Utility company representatives have a major concern of providing required services to the people and are very helpful when included in the planning process.

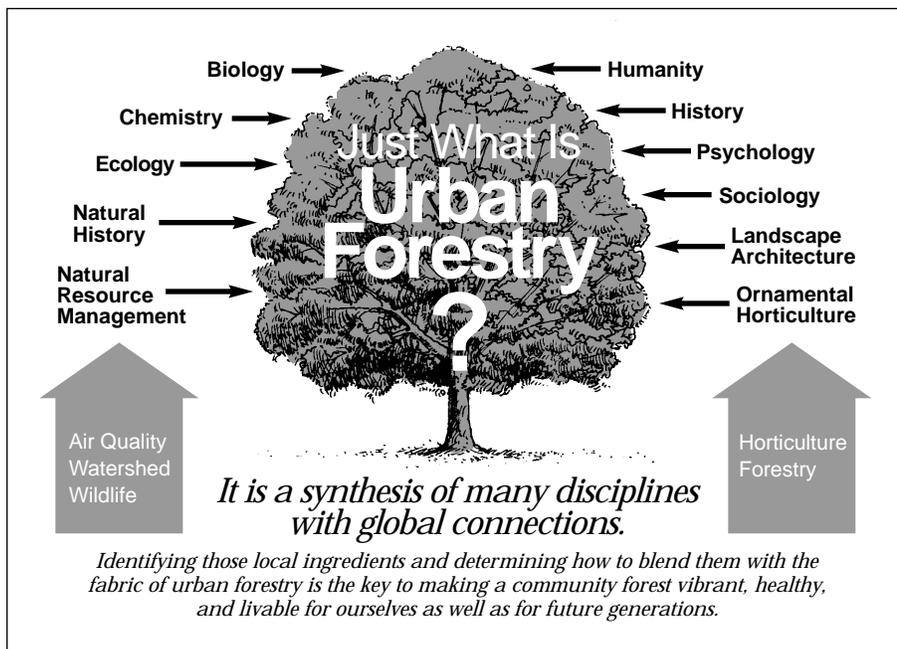
- Chamber of Commerce members represent business interests and can serve as a link to muster support and funding for the projects.

- City planners can link with city managers and the city council to promote and facilitate plans. They can also help avoid conflicts in the planning process.

- County Extension agents provide a communication link to the citizens and a link to land-grant university research-based information. They also



A diverse urban forest canopy is attractive.



Prioritize projects and prepare budgets so they can be presented to the city council for funding. The plan is not presented as a beautification project but as an investment to enhance the economic and aesthetic value of the city. It is a plan to create an image that will hold the tax base you have and attract people to an area where pride in the city is clearly displayed. Write responsible city tree and landscape ordinances, so architects and contractors are all bidding on projects that require responsible consideration for conservation of existing trees and soil structure on the site.

Take advantage of educational opportunities. Attend urban forestry meetings and workshops. Make contacts with people who can help you do your best.

Advertise to show your progress, create images, and ask for support. Regular advertisements can more than pay for themselves by encouraging citizens to volunteer time or money for your worthwhile project. Visitors to your city see that citizens there take active roles in improving their city's environment and image.

Continue in your efforts to educate the public and city officials. Do not discontinue educational efforts after you gain their initial support. Strengthen that support with seminars, visits to civic organizations, and pamphlets. An educated public and government make for good decisions, management, and support.

Continually evaluate the program. Do this as often as possible to identify progress and resolve problems in a timely manner. A "State of Our Urban Forest" message presented in a public forum or in the local newspaper is one good idea. Follow up on those goals and objectives and assure that you are fulfilling your purpose. You must continue moving forward to properly manage your living resource.

have the connections to mobilize volunteer leaders to support and implement programs.

- Board of Education members or school representatives can get students and parents involved and can create educational opportunities for future leaders.

- Media representatives know how to get information to the public to promote the desired image and the plan.

These people and others should be involved in the planning process.

Keep The Program Going

The problem solving process and steps for proceeding include reassessing the urban forest, prioritizing projects, and preparing budgets.

Reassess the status of the city's urban forest. The street tree inventory is a working tool and must be continually updated. From this tool, goals are set to plan for:

- **The city's image.** What impression are you trying to communicate to potential businesses and those looking for a place to live?

- **Removal of dangerous trees.** You must clean up what you have and remove possible hazards before starting new plantings.

- **Protection of existing trees.**

The street tree survey will identify valuable trees that need to be protected, in order to create or preserve your desired image and meet your goals.

- **Scheduled maintenance.**

Scheduled maintenance is cheaper in the long run and reduces liability to the city. It also enhances the community's sense of pride in its city and encourages citizens to help in the process.

- **Creating designs for future plantings.** Once maintenance has been assured, it is time to see how things can be improved.

- **Replacements or removals if design warrants.** Should you replace the trees or are new designs needed to assure a better environment for the trees? Is this an area that needs to be totally renovated?

- **Publicity to raise public awareness of the goals and plans and for recruiting participants to help fulfill the mission.** The work is being done for the citizens at their expense. They should be kept informed at all stages. Ownership creates a strong sense of community and a sense of empowerment to change their environment. Involvement also fosters the pride needed to encourage preservation of their work.

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Other Sources Of Information Concerning Urban Forestry

Alabama Cooperative Extension System, Extension Horticulture, 20 Extension Hall, Auburn University, Alabama 36849-5630.

Alabama Urban Forestry Association.

American Forestry Association, 1319 18th Street N.W., Room 101, Washington, DC 20036-1802.

American Society of Consulting Arborists, 700 Canterbury Road, Clearwater, Florida 33546.

Auburn University, Horticulture Department, 101 Funchess Hall, Auburn University, Alabama 36849-5408.

Auburn University, School of Forestry, M. White Smith Hall, Auburn University, Alabama 36849-5418.

Council of Tree and Landscape Appraisers, 1250 "I" Street NW, Suite 504, Washington, DC 20005.

International Society of Arboriculture, P.O. Box 71, Urbana, Illinois 61801.

National Arbor Day Foundation, 100 Arbor Avenue, Nebraska City, Nebraska 68410.

National Arborist Association, 174 Route 101, Bedford Station, Box 238, Bedford, New Hampshire 03102.

Society of Municipal Arborists, RR #3, Box 614, Williston, North Dakota 58801.

World Forestry Center, 4033 SW Canyon Rd., Portland, Oregon 97221.



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For more information, call your county Extension office. Look in your telephone directory under your county's name to find the number.

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