URBAN. FOREST. TREE.

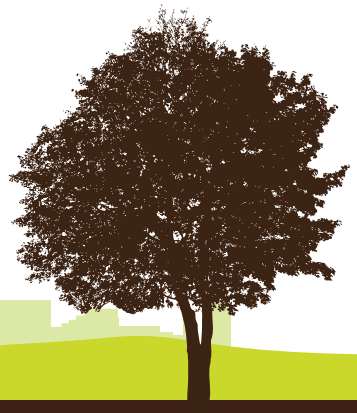
AN URBAN FORESTRY GUIDEBOOK *for the* SAN JOAQUIN VALLEY

ABOUT THIS GUIDE

With the increasing interest in climate change and global warming, urban forestry is becoming more and more important to residents, communities, and cities. **An urban forest is defined as all the trees and vegetation located within a city or community's boundaries**, including publicly and privately owned trees and vegetation.

Choosing the appropriate tree species, plant material, and planting site is as important as choosing energy efficient vehicles and appliances. Planting the right tree in the right place produces myriad benefits for generations to come.

This guidebook is designed to inform and assist residents, communities, and cities to establish or enhance their urban forest program.



Trees improve the quality of the air we breathe.

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PART ONE

THE VALUE *of* TREES *to the* SAN JOAQUIN VALLEY

Urban and community forestry programs make a difference in the quality of our lives in the San Joaquin Valley. Each one of us can make a personal contribution by insisting that a tree program is implemented and enforced in each of our communities.

As we grow and develop technologies for a better way of life, we often times adversely affect our natural environment. For example, our urban area summer temperatures and noise levels are higher than in the surrounding countryside. Air quality problems are more concentrated, and the urban landscape is significantly altered, reducing personal health benefits that are available to us by having access to wooded areas and open green spaces.

Trees help solve these problems.

Currently, 75 percent of us live in cities and towns. We can act individually to improve our natural environment through the planting and care of trees on our own streets, and by supporting community-wide urban forestry programs.

BENEFITS

Through research we are learning more about trees, how they benefit mankind, and how we can do a better job of planting and caring for these trees that make up our urban forests.

Planting 1 million trees would achieve $10 million in energy savings for the San Joaquin Valley. Or planting 4 million trees could save $20 million on annual pollution clean up for the Valley.

Trees are major capital assets in California's cities and towns. Just as streets, sidewalks, sewers, public buildings, and recreational facilities are a part of a community's infrastructure, so are publicly owned trees. Trees – and, collectively, the urban forest – are important assets that require care and maintenance the same as other public property.

TREES:

- Add natural character to our cities and towns.
- Provide us with colors, flowers, beautiful shapes, forms, and textures.
- Reduce energy use by creating shade.
- Improve the quality of the air we breathe by reducing carbon dioxide.
- Reduce stormwater runoff and stabilize soil.
- Increase recreational opportunities and create wildlife habitats.

Trees are on the job 24 hours every day working for all of us to improve our environment and quality of life. Without trees, the city is a sterile landscape of concrete, brick, steel and asphalt. Picture your town without trees. Would it be a place where you would like to live? Trees make communities livable for people. Trees add beauty and create an environment beneficial to our mental health.

Trees impact deeply on our moods and emotions, providing psychological benefits impossible to measure. A healthy forest growing in places where people live and work is an essential element of the health of the people themselves.

A well-managed urban forest contributes to a sense of community pride and ownership which will give to your community for decades to come.

Urban Forest = Air Quality = Human Health!

TREE CITY USA

The Tree City USA (TCUSA) program, sponsored by the National Arbor Day Foundation in cooperation with the USDA Forest Service and National Association of State Foresters, provides direction, technical assistance, public attention, and national recognition for urban and community forestry programs. In California, there are 162 Tree City USA communities.

The many benefits of being a Tree City USA include creating a framework for action, education, a positive public image for your community, and citizen pride. There are also economic benefits of being a Tree City USA, such as reduced costs for energy, storm water management, erosion control, reduced energy consumption by up to 25 percent, and increased property values.

The San Joaquin Valley boasted 17 Tree City USA communities in 2008:

Community	Years
Atwater	6
Bakersfield	12
Ceres	16
Fresno	18
Hanford	14
Lodi	7
Los Banos	19
Manteca	18
Merced	28
Modesto	29
Porterville	16
Sanger	12
Sonora	14
Stockton	28
Tulare	20
Turlock	13
Visalia	26

To qualify for Tree City USA, a town or city must meet four standards established by the Arbor Day Foundation and the National Association of State Foresters.

These standards were established to ensure that every qualifying community would have a viable tree management plan and program. It is important to note that they were also designed so that no community would be excluded because of its size.

The four standards are:

1. A Tree Board or Department
2. A Tree Care Ordinance
3. A Community Forestry Program with an annual budget of at least $2 per capita
4. An Arbor Day observance and proclamation

1 Tree Board or Department

Someone must be legally responsible for the care and management of the community's trees. This may be a professional forester or arborist, an entire forestry department, or a volunteer tree board. Often, both a professional staff and advisory tree board are present, which is a good goal for most communities.

A tree board, or commission, is a group of concerned volunteer citizens charged by ordinance with developing and administering a comprehensive tree management program. Balanced, broad-based community involvement is encouraged. Boards function best if not composed entirely of tree-related professionals such as forestry professors, nursery operators, arborists, etc. Citizens with an interest in trees who are not related

professionally, add fresh ideas and different perspectives. Limited, staggered terms of service on the board will prevent stagnation or burnout, while at the same time assuring continuity.

2 Tree Care Ordinance

A local tree ordinance would establish a tree board or forestry department and give this body the responsibility for writing and implementing an annual community forestry work plan. An ordinance should be flexible enough to fit the needs and circumstances of the particular community.

A tree ordinance provides an opportunity to set good policy and back it with the force of law when necessary. Ideally, the ordinance provides clear guidance for planting, maintaining, and removing trees from streets, parks, and other public places. The ordinance should be reviewed regularly and updated as necessary to reflect a community's growth and needs.

3 A Community Forestry Program with an Annual Budget

Evidence is required that the community has established a community forestry program that is supported by an annual budget of at least $2 per capita. At first, this may seem like an impossible barrier to some communities. However, a little investigation usually reveals that more than this amount is being spent by the municipality on its trees. If not, this may signal serious neglect that costs far more in the end in liability claims against the municipality. Working toward the $2 per capita budget can be beneficial for a community to refocus its budget priorities and redirect funds to care properly for its tree resource.

Ideally, this standard is met by focusing funding on an annual work plan developed after an inventory is completed and a report approved by the city council. Such a plan will address species diversity, planting needs, hazardous trees, insect and disease problems, and a pattern of regular care such as pruning and watering.

4 An Arbor Day Observance and Proclamation

This is the easiest, and by far, the most enjoyable standard to accomplish. An Arbor Day celebration can be as brief or elaborate as a community desires. It can be a simple tree-planting event or an award ceremony that honors leading tree planters. For children, Arbor Day may be their only exposure to the green world or a springboard to discussions about the complex issue of environmental quality.

Arbor Day is the perfect opportunity for publicity and to educate homeowners about proper tree care. Utility companies can join in to promote planting small trees beneath power lines or being careful when digging. Smokey Bear's fire prevention messages can be worked into the event, as can conservation education about soil erosion or the need to protect wildlife habitat.

Assistance is available to meet the four standards. Contact your local CAL FIRE Urban Forester at (559) 243-4109 to get technical assistance and direction in taking these first steps toward better community forestry.

Plant, nurture, and celebrate trees on Arbor Day.

PART TWO

BEGINNING WITH *the* END *in* MIND – *the* ROLE *of* PLANNING

In an effort to raise awareness and help communities, the U.S. Forest Service, American Planning Association (APA), American Forests and the International Society of Arboriculture (ISA) have joined together to outline key principles and strategies from successful urban forestry management plans around the country. They have provided suggestions related to general urban forestry principles, planning principles, and design principles. Each of these three topics have been broken down into specific suggestions.

GENERAL PRINCIPLES:

- Get trees to the forefront of the planning / visioning process
- Know where you came from to know where you are going
- Seek out private and civic partners
- Investing in trees makes economic sense
- Urban forestry must be sustainable financially

PLANNING PRINCIPLES:

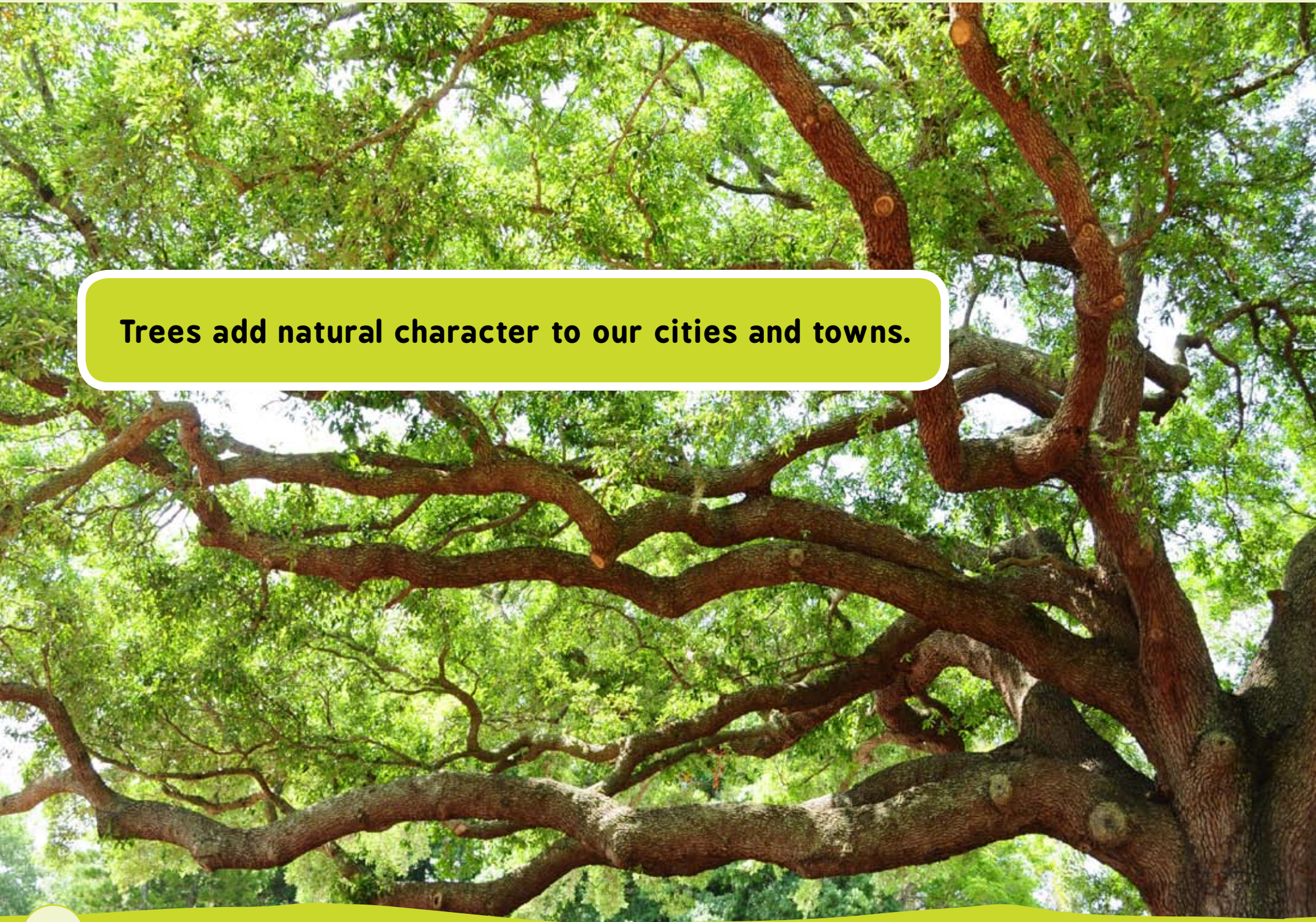
- Incorporate the tree ordinance in the development code and ensure consistency with other codes.
- Collaborate with developers, environmentalists, and other stakeholders to draft ordinances.
- Planned unit development regulations should include an urban forestry evaluation checklist or guidelines.
- Ordinances must include provisions for enforcement personnel.
- Take an adaptive management approach to resources.
- Plan for long-term maintenance of trees.

DESIGN PRINCIPLES:

- Use urban forestry to support other planning goals.
- Include a green infrastructure element in the local comprehensive plan, but link it throughout other elements in the plan.
- The natural environment is part of making neighborhoods livable.
- Make the place right for trees and then pick the right trees.

("Issues in Arboriculture: A Bridge to Planners" column in the Society of Municipal Arborists' City Trees, July-August 2008.)

Ultimately, each community will have unique needs requiring unique and creative management strategies that lead to the same goal of a successful, comprehensive and sustainable management plan.



Trees add natural character to our cities and towns.

STANDARDS *of* CARE

PART THREE

CITY REQUIRED MAINTENANCE PERMITS

At times residents and property owners may want to prune, remove, spray, or provide other maintenance to trees in the city right of way or on private property as a supplement to or in place of city crews. In most instances, a permit will be required by the city to insure that all work is completed in compliance with industry standards and the city's tree ordinance.

The goal is to insure that urban trees are planted and maintained correctly so they are able to develop into maturity and that they are properly placed to avoid conflicts with street lights, underground utilities, and to minimize visibility issues.

Special permits may be required on heritage trees or protected species throughout the community.

Sample permitting requirements include:

REMOVAL

The city values trees as an important part of the environment and shall strive to preserve them whenever possible and feasible. When reviewing requests for a street tree removal permit, the city shall discourage removing desirable trees, and shall consider approving removal of desirable trees only as a last resort alternative for the applicant.

Several Central Valley cities use a similar process of review after the initial application for a removal permit is received:

1. A city arborist shall inspect the property and recommend approving or denying the application in a written report submitted to the city manager, acting through the public works director or his/her designee.

2. The city arborist may authorize a tree's removal after finding either of the following circumstances:

   - The tree is a hazard to life or property, and removing it is the only feasible way to eliminate the hazard;
   - The tree is dead, dying, diseased or damaged beyond reclamation.

3. If the city arborist does not find either of the above circumstances for removing a tree, a priority rating depending on factors can be considered for a tree removal. The highest priority removal shall be given to trees meeting all four factors.

The second priority will be given to trees meeting three factors:

- Service life;
- Damage to utilities and/or sewer lines or hardscape;
- Conformity of the existing tree to recommended species list.

4 All tree removal, whether by city or applicant, shall include the removal of the stump and the removal of all stump grinding chips and the backfilling of the hole created by stump removal with a good quality top soil suitable for the replanting of a replacement tree.

PRUNING

Requirements for pruning and removal permits are basically the same. However, along with the permit for pruning, there are guidelines on how to properly prune street trees and a list of tree companies that are registered with the city. Residents may not be required to use one of the companies on the list, but for their own protection they should be certain that the company they hire is properly licensed and insured.

HERITAGE TREE, NATIVE, OR PROTECTED SPECIES

A local ordinance may include specific definitions and requirements for heritage trees and/or protected species. A good example is from the City of Menlo Park Heritage Tree Ordinance, which includes: 1) definitions of heritage trees, 2) maintenance and protection, 3) permit requirements for removal or pruning, 4) requirements for construction related tree removal, *and* 5) penalties for violation of this ordinance.

Q & A

Q: Who should care for trees?

A: Only qualified individuals.

Tree care services – including planting, pruning and removals – are special services which should be performed by professionals. Safety and other forms of specialty pruning are best performed by a specialized crew. Homeowners should only prune from the ground. Non-professionals should never climb a tree to prune because of the danger of falling or injury from pruning equipment.

Q: What is an ISA Certified Arborist?

A: An arborist by definition is an individual who is trained in the art and science of planting, caring for, and maintaining individual trees. ISA arborist certification is a non-governmental, voluntary process by which individuals can document their base of knowledge. It operates without mandate of law and is an internal, self-regulating device administered by the International Society of Arboriculture. Certification is not a measure of standards of practice. Certification can attest to the tree knowledge of an individual but cannot guarantee or ensure quality performance.

Because Certified Arborists must continue their education to maintain their certification, they are more likely to be up to date on the latest techniques and information in arboriculture. Western Chapter ISA Certified Tree Workers are individuals who have a minimum of 18 months experience professionally climbing trees in a safe and efficient manner to perform tree care. They have knowledge in the major aspects involved in tree care including: tree biology, cabling, planting, pruning and safety. Applicants are required to complete a written knowledge based exam and a practical skills evaluation which includes knot tying. Skills evaluations are conducted in either climbing or aerial lift operations.

Q: How do I select the right Arborist for the job?

A: *(from treesaregood.com)*

1. Check for membership in professional organizations such as the International Society of Arboriculture (ISA), the Tree Care Industry Association (TCIA), or the American Society of Consulting Arborists (ASCA).

   - Check for ISA arborist certification.
   - Ask for proof of insurance.
   - Ask for a list of references, and don't hesitate to check them.

2. Avoid using the services of any tree company that advertises "topping" as a service provided. Knowledgeable arborists know that topping is harmful to trees and is not an accepted practice.

3. Avoid using the services of any tree company that uses tree climbing spikes to climb trees that are being pruned. Climbing spikes can damage trees, and their use should be limited to trees that are being removed.

4. Take a look at this great brochure from Tree Care Industry Association on hiring a tree care company: http://www.treecareindustry.org/PDFs/BBBtipsBrochure8_05.pdf

Q: What are tree care "standards"?

A: Standards are specific principles or criteria, established by authority or convention.

- Tree care standards are being developed by ANSI, the primary US organization fostering the development of technology standards.
- ANSI is working along with representatives of the nursery, landscape, and tree care industries, as well as university researchers.

Here are the standards currently available:

- ANSI A300 Part 1: Tree, Shrub, and Other Woody Plant Maintenance -- Standard Practices (Pruning)
- ANSI A300 Part 2: Tree, Shrub, and Other Woody Plant Maintenance -- Standard Practices (Fertilization)
- ANSI A300 Part 3: Tree, Shrub, and Other Woody Plant Maintenance -- Standard Practices (Support Systems: Cabling, Bracing, and Guying)
- ANSI A300 Part 4: Tree, Shrub, and Other Woody Plant Maintenance -- Standard Practices (Lightning Protection)

Q: What good are these standards?

A: To begin with, they provide a uniform vocabulary for tree care.

- The standards also clarify the job to be done, protecting both parties.
- In addition, using them will promote good arboricultural practices. Tree care terms and techniques are defined carefully, and their appropriate use is explained.

Q: How do you use them?

A: These standards should be used in all relevant tree care contracts.

- Anyone contracting for tree service, whether for private, corporate, institutional, or public trees, should add the following sentence to any agreement:

"Work to be done in compliance with the A300 Tree Care Standards"

- Anyone supplying tree service should write the bid using the standard terms.
- Also, tree care professionals should follow the standards to demonstrate that they follow a specific and carefully considered program of tree management that is considered the norm for the industry.
- "Best Management Practices" booklets have been published by the ISA as aids in the interpretation and implementation of the ANSI A300 guidelines.

ESTABLISHING THE FIELD OPERATIONS FOR MAINTAINING THE URBAN FOREST

The activities involved in maintaining an Urban Forest are many. The activities most commonly considered are planting, pruning, irrigation, and removal. Less apparent, but equally important, are the administrative and support activities that need to occur to manage and coordinate the fundamental efforts. While each municipality will have a unique approach and implementation of these activities, some of the elements are constants that require personnel and equipment to perform and manage the work involved in the successful maintenance of an Urban Forest program.

PERSONNEL

City Arborist /Urban Forester

It is commonly accepted that there be a person who is responsible for the oversight and administration of the Urban Forestry program. This person usually holds the position of City Arborist, Urban Forester, Tree Maintenance Supervisor, or some similar designation. The person occupying this

position should have a combination of education and experience that qualifies them for managing an Urban Forest program. Examples of the qualifications would be Professional Foresters, Certified Arborists, and Certified Urban Foresters.

The duties of this position may vary between agencies, but at a minimum should include the supervision of the tree maintenance activities such as tree planting, pruning, irrigation, pest control, and removal. The City Arborist will also be constantly evaluating and inspecting trees in the Urban Forest for a variety of issues, from public safety to conflicts between residents.

The City Arborist should also be responsible for assuring the sustainability of the Urban Forest by being involved in the agency's development process, which would include working closely with the Planning and Engineering departments. The Arborist's role in this process is to provide expertise regarding issues such as tree selection, landscape design, site preparation and maintenance considerations. The City Arborist may also participate in the plan review process, as well as the development of agency policies and practices as related to the Urban Forest.

It is possible that the position of City Arborist / Urban Forester be combined with another position (for instance Parks Supervisor) if the particular agency does not require a full time Arborist. It is also possible that an agency may contract out the work that a City Arborist would perform, to a qualified professional such as a Consulting Arborist or Professional Forester with experience in Urban Forestry.

Field Personnel

The field work involved with maintaining the Urban Forest includes, but is not limited to, such activities as tree pruning, planting, irrigation, tree support (staking and cabling), and tree removal. It is very important that these activities be performed according to the industry's best management practices (ANSI standards). Tree maintenance personnel with a combination of experience and ongoing training are an essential component of a proficient and productive tree maintenance program. Training will be required for both the technical aspects of tree maintenance, as well as for the safety practices necessary to protect both workers and the public during tree maintenance activities.

The structure of the maintenance crew will vary considerably depending on the amount of work to be performed, and the level of service expected by the agency. At the minimum, the field operation crew should be composed of a crew leader who is both experienced and trained in tree maintenance and safety practices. The crew leader may be an ISA Certified Tree Worker, or even a Certified Arborist. Both programs indicate a high level of professional achievement and ongoing training. Assisting each crew leader will be helpers of various designations who also must be experienced and trained in tree maintenance and safety practices.

Flickr /Creative Commons: Sean Dreilinger

If development codes include requirements for planting trees, building inspectors can be cross-trained to verify plantings at the time of building inspection. In light of Valley municipal budgets, this may alleviate the need for increased field staff.

TREE MAINTENANCE EQUIPMENT

Several items of equipment are common to tree maintenance programs and are considered essential to the safe and productive execution of tree maintenance activities. An aerial lift truck or other similar vehicle allows workers to safely work above ground level. A limb chipper is also a very common component of the tree maintenance equipment. Limb chippers reduce debris to small chips that are more easily disposed of or recycled than large limbs. A comprehensive and continuing safety training program is essential for the safe and productive use of all tree maintenance equipment.

SAFETY

Tree maintenance activities can be hazardous to both those performing the work, and to the public unless safety practices are rigorously implemented. A program of training in the use of all tree maintenance equipment, personal protective equipment, traffic control, and in the practices used in tree maintenance activities are essential to provide a safe and productive tree maintenance program. There should be a trained and experienced tree maintenance professional who is designated to oversee and implement an ongoing safety and training program. Records should be kept regarding the subject and frequency of training. Many safety and training programs are readily available for use by an agency in designing and implementing their particular safety program.

"If you want to go fast, go alone.
If you want to go far, go together."

PART FOUR

WORKING *with* OTHERS

It may take significant community cooperation to implement not only a tree maintenance program, but a tree canopy expansion and maintenance program if that is your city's goal. Here are some examples of how different governmental agencies and other organizations can work together.

UTILITY COMPANIES

LOCAL ELECTRICITY PROVIDERS

A wonderful partnership was formed when the Merced Irrigation District (MID) contacted the Tree Partners Foundation (TPF) to see if they could help with a tree giveaway program for their customers. The TPF took the lead and acted as a project coordinator for ordering and delivery of the tree stock as well as providing

Flickr /Creative Commons: Alex Indigo

volunteers to help load trees into MID customer's cars. The event is scheduled for every other year as funding is available. Deciduous trees were selected to provide shade in the summer and allow sunlight through to warm their customers' houses in the winter. Information was provided by MID to their customers on proper planting procedure and cultural info on their respective tree.

TREE LINE USA PROGRAM

The Arbor Day Foundation, in cooperation with the National Association of State Foresters, recognizes public and private utilities that demonstrate practices that protect and enhance America's urban forests. The goal of the program is to promote the dual goals of safe, reliable electric service and abundant, healthy trees across utility service areas.

The Tree Line USA® program seeks to promote best practices in utility arboriculture and public education through three core standards: 1) quality tree care, 2) annual worker training, and 3) tree planting and public education.

Utility companies who participate in this program gain a number of benefits, including improved access to their lines as a result of the "right tree, right place" plantings, less energy being demanded because the increased canopy has provided shade during peak summer months, and fewer downed lines during storms because properly pruned and maintained trees have healthy root systems. Com-

munities benefit by having increased reliability in their energy service and reduced costs to consumers through energy conservation as a result of a broader urban forest canopy.

*ANSI A300: The American National Standards Institute, A300 Standards for Tree Care Operations: Tree, Shrub, and Other Woody Plant Maintenance—Standard Practices. Visit the Tree Care Industry Association website.

Flickr / Creative Commons: Joel Mann

NON-PROFIT COMMUNITY GROUPS

In the world of Urban Forestry, non-profits are a diverse group of dedicated individuals and organizations that help to promote and protect Urban Forests. Most are set up as 501(c)3 non-profit entities and are comprised of a Board of Directors ranging from 3-20 community volunteers. Most organizations realize the importance of working together to achieve more. Belonging to organizations like California ReLeaf and working with the Urban Forest Council creates a synergy that brings organizations together for the greater good.

Most non-profits play a crucial role in financially supporting urban forestry programs by providing funds for tree plantings as well as organizing volunteers to get work accomplished. Progressive cities have teamed up with local non-profits with the understanding of the acronym TEAM (Together Everyone Achieves More). Cities desperately need man power, expertise, and funding in order to sustain aging urban forests and a local non-profit can fulfill most, if not all, of those needs.

To find local organizations to work with and/or inquire about please visit http://californiareleaf.org/about-releaf/find-a-local-organization.

TREE FOUNDATION OF KERN

The Tree Foundation of Kern has helped the local municipality by being creative with funds. For example, a local non-profit needed 100 trees to use for an annual month long Christmas event. Since a permanent location for the trees had not been decided, the trees were ordered for and loaned to them to "use" for the month of December. In January, the trees were picked up and divided between the city and the county to replace dead or dying Sequoia sempervirens in our area, in medians, and along roads. If the non-profit decides on a permanent location in the future, the Tree Foundation of Kern will replace the trees at that time.

Flickr/Creative Commons: Absentmindedprof/Jennifer

Another way the Tree Foundation of Kern has been able to help the municipality is by offering corporate plantings, as Christmas gifts, for the company's clients. They received $4,000 to plant 80 trees in three city and county parks. In addition, the donor supplied the volunteers, which made for a great partnership between these entities.

The Tree Foundation offers a series of four monthly Citizen Forester classes, which begin each October. Anyone from the community is invited to attend. Attendees have included employees from the county Youth Probation Work Program, the County of Kern, the City of Bakersfield, and the tree crew from Bakersfield College. The Tree Foundation of Kern also encourages Homeowners and interested citizens to attend.

The Citizen Forester class starts in October to highlight the Alliance for Community Trees' (ACT) Neighborwoods month. ACT has mini-grants available to offset costs of advertising and other items with the exception of staff. ACT also supplies free t-shirts, banners, Home Depot aprons, and other things for the participants plus up to $500 for extras. The Tree Foundation of Kern uses the money to run ads in the newspaper to recruit participants and this has been successful over the past few years.

EDUCATIONAL INSTITUTIONS

Education in the San Joaquin Valley can be broken into three main groups that support and promote urban forests.

HIGH SCHOOL

FFA (Future Farmers of America) programs are located in almost every local high school and can serve as a local resource to distribute information, conduct tree plantings and provide community awareness.

For more information: www.californiaffa.org

Flickr /Creative Commons: Jorge Quinteros

COMMUNITY COLLEGES

Community and Junior Colleges serve as an affordable and assessable means of acquiring knowledge in the area of urban forestry and general horticulture. Most community colleges have horticulture programs that teach fundamentals of pruning and proper tree care. These local courses are designed to educate the general public as

well as municipality workers to promote a healthy urban forest. Certificates in horticulture can be attained from most institutions as well as an Associate Degree.

For more information: www.cccco.edu

UNIVERSITIES

The California State University (Bakersfield, Fresno, Stanislaus, Sacramento) and University of California (Merced, Davis) institutions provide students with curriculum to attain their Bachelors, Masters, and Doctorate degrees. These institutions conduct research and develop new ways of combating pest and diseases, methods for managing urban forests, and demonstrate how urban forests add value to communities. Many institutions have close ties with the U.S. Forest Service and Cal Fire to preserve, protect, and enhance trees in the San Joaquin Valley. An additional component that the UC system provides is the Master Gardeners Program. These are the "local experts" that provide seminars, house calls, training, and other services. These wonderful people are UC trained volunteers and in almost every community.

For more information:

CSU www.calstate.edu

UC www.universityofcalifornia.edu

Master Gardeners http://camastergardeners.ucdavis.edu/index.cfm

TREE CAMPUS USA

The Tree Campus USA Program recognizes college and university campuses that:

- effectively manage their campus trees,
- develop connections with the community beyond campus borders to foster healthy, urban forests, and
- strive to engage their student population utilizing service learning opportunities centered on campus, and community-forestry efforts.

You know that trees benefit the environment, but your campus can benefit as well. A commitment to trees on your campus can, in turn, significantly reduce the amount of energy a campus, and community, needs to generate. Planting, and maintaining, trees on your campus and in the community reduces carbon dioxide in the atmosphere. Green spaces give students and faculty the setting to relax with others, or on their own. What better way to study or take a break than by being outside?

Your college campus can receive annual Tree Campus USA recognition by meeting five standards, which include a Campus Tree Advisory Committee, a Campus Tree Care Plan, a Campus Tree Program with dedicated annual expenditures, an Arbor Day observance, and a service learning project. Apply to become a Tree Campus USA college by visiting www.arborday.org.

URBAN FORESTS AND THE TRANSPORTATION CORRIDOR

Urban forests provide a number of benefits to the overall transportation corridor – like highways – as well as areas next to those corridors. These benefits can sometimes be offset by safety concerns if trees are allowed too close to traffic. Trees are immovable objects and can be unforgiving in traffic accidents so proper placement of trees is critical for the success of the facility and the urban forest itself.

SOFTENING OF MODERN FREEWAYS

Freeways in California utilize vast areas of paving and other hardscape materials including bridges, barrier rails, and soundwalls. When properly placed, trees and other landscaping can soften the hard edges of these surfaces, providing a much more pleasant traveling experience. This effect is even more pronounced within neighborhoods adjacent to freeways. Soundwalls frequently obstruct

views and are prime targets for graffiti. Depressed freeways are not as visible, but still can be a community eyesore. Landscaping and trees break up the monotony, discourage graffiti, and provide a positive resource to the adjacent neighborhoods. In some situations where adequate room exists, dirt berms with trees have been used in lieu of traditional concrete soundwalls for noise mitigation.

AIR QUALITY MITIGATION

This benefit is widely accepted as it is a common benefit trees bring to any urban area. The only aspect that may be unique within the freeway environment is that the cut and fill slopes of freeways provide a significant opportunity to enhance the urban forest without the associated safety concerns that can occur with trees adjacent to transportation facilities that are built on grade.

Trees planted on slopes are seldom considered a fixed object as errant vehicles cannot typically reach them. A second factor is that freeways themselves generate a number of air pollutants. Trees located near the freeway facility provide air quality mitigation close to this pollution source as opposed to the general air quality benefit an urban forest has for a community.

COMMUNITY IDENTITY

Many communities are defined or recognized by a predominant tree species. A properly selected freeway landscape palette can help enhance that identity. Oak trees are a common symbol for communities within California, particularly in the Sierra foothills and Central Valley. Incorporation of native oaks with the freeway landscape provides continuity with that community's image and are typically well adapted to the local environment.

PROJECT ACCEPTABILITY

Communities at large are typically supportive of the transportation benefits of freeways. However, individual neighborhoods adjacent to these facilities are not always as supportive, especially when there are projects being contemplated to expand an existing freeway or build a new one. It does not take a large number of opponents to stop a public works project so it is critical that impacted neighborhoods are at least neutral towards the project. Providing a community-supported highway aesthetic plan, including a robust landscape environment, can frequently turn project opponents into supporters. This can be especially critical if the transportation facility is more of a regional benefit rather than a local one.

SLOPE STABILIZATION

Depressed and elevated freeways, or freeways built in hilly terrain, typically require some type of slope stabilization effort. Initial slope stabilization is usually achieved with fast growing grasses and annuals. However trees and shrubs provide the long term stability necessary to avoid slope erosion which not only damages the freeway, but contributes to storm water quality impacts.

WIND, DUST, AND SNOW PROTECTION

Freeways in areas subject to periods of extreme wind and dust have achieved some level of protection by the strategic planting of native trees within the freeway right of way as well as adjacent areas prone to wind blown soil erosion. While this does not typically occur within urban areas, it can occur in urbanizing areas. Trees can provide similar protection against blowing snow in areas subject to severe winter storms.

In addition to all of these direct benefits, there is intrinsic value in a mature urban forest within and adjacent to a transportation corridor. They simply make the transportation experience more enjoyable and less stressful. They provide visual interest, some degree of shading, and help turn the corridor into a community asset.

AIR QUALITY

Maintaining a healthy urban tree canopy not only adds to the physical comfort of urban residents, but works in several ways to reduce ozone precursor emissions. This link to the USDA Forest Service provides excellent information with regards to trees and air quality: www.nrs.fs.fed.us/units/urban/focus/air_quality_climate/

The San Joaquin Valley Air Pollution Control District is developing a Heat Island Mitigation Action Plan. The District is pursuing innovative strategies such as a Healthy Air Living Program and a Regional Energy Efficiency Strategy to provide information to the community regarding the benefits of reducing the effects of urban heat islands through strategies like increasing the tree canopy. The U.S. Department of Agriculture estimates that midday temperature reductions range from 1˚ to 5.5˚ F for every 15 percent increase in the canopy cover.

LOCAL, STATE, AND FEDERAL GOVERNMENT SUPPORT

LOCAL GOVERNMENT

This is the first level of support from a governmental agency and typically consists of the budget of the department responsible for tree care and maintenance. Some municipalities have specific departments and budgets for their tree program, but many are within the Parks or Public Works Utilities departments. The municipality usually owns trees growing on publically owned property, as well as some street trees planted within public rights-of-way and public utility easements.

Support for Urban Forestry programs, whether from the community or within the agency, is not always readily available and that is an appropriate opportunity for a non-profit organization to become involved. A non-profit can assist the municipality with tree planting projects, public education, and city council support.

STATE GOVERNMENT

The California Department of Forestry and Fire Protection's (CAL FIRE) Urban Forestry Program is the state department responsible for urban forestry. The Urban Forestry Act of 1978 gives CAL FIRE its authority. Currently, there is no permanent funding source for urban forestry in California. CAL FIRE delivers an urban forestry program that includes technical assistance and grant funds. The grant funds come from myriad sources, such

as the USDA Forest Service. In turn, CAL FIRE uses these dollars to fund urban forestry projects statewide and must comply with the conditions established by the grant guidelines developed by the funder. One of the federal grant requirements is the establishment of a statewide urban forestry advisory committee. CAL FIRE has established the California Urban Forest Advisory Council (CUFAC) with members representing a variety of urban forestry professions.

Another source of funding comes from voter sponsored proposition funding. In recent years, Propositions 12, 40, and 84 had dollars specifically for urban forestry projects. CAL FIRE managed these funds and granted them to cities, counties, nonprofit organizations, schools, and special districts in support of urban forestry projects. The grant dollars supported tree planting, inventory projects, management plan development, educational projects, and other innovative urban forestry projects. Grant recipients must comply with all State and Federal Regulations established in the grant guidelines. These grants typically require matching funds from the grantee.

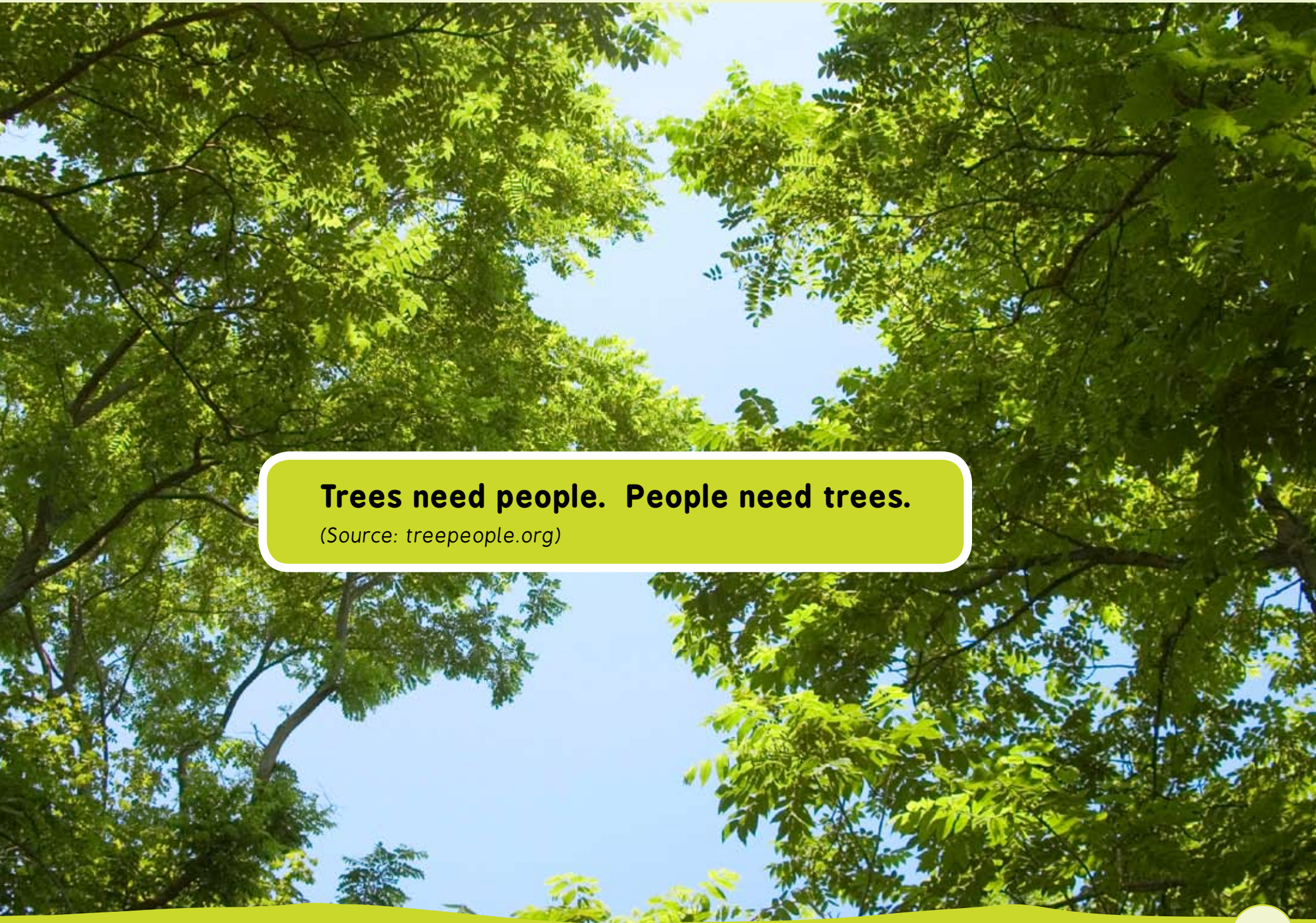
CAL FIRE collaborates with the USDA Forest Service and the National Arbor Day Foundation to support the Tree City USA program in California. In addi-

tion to these two groups, CAL FIRE collaborates with other state departments, national, state, and local non-profit organizations, local governments, and professional associations to deliver the most current research on the benefits of an urban forest. These groups also work together at the local and state level to educate decision-makers and the public to the need and benefit of healthy urban forests.

FEDERAL GOVERNMENT

The USDA Forest Service through their State and Private Forestry division administer the national Urban and Community Forestry Program. The Cooperative Forestry Assistance Act of 1978 gives the USDA Forest Service authority to administer competitive match grants. The Act gives the Secretary of Agriculture the authority to provide technical, financial, and related assistance to State foresters or equivalent State officials to aid States to provide information and technical assistance to local governments and qualified organizations. The Federal funds allocated to CAL FIRE assist them in providing a statewide urban forestry program. Funding has diminished over recent years with more and more of the funding support and responsibility falling to the state and local municipality.

As part of the 1990 Farm Bill, the National Urban and Community Forestry Advisory Council (NUCFAC) was created. This advisory community unites the voices of those concerned with the present health and future preservation of America's urban treescapes. NUCFAC is tasked with synthesizing the full spectrum of views into a cohesive and consistent vision, as a foundation for practical policy on urban forestry.



Trees need people. People need trees.

(Source: treepeople.org)

PART FIVE

FUNDING POSSIBILITIES *for* MUNINCIPAL URBAN FOREST PROGRAMS

Funding will undoubtedly be a community's biggest challenge. Working with your elected public officials to foster support and funding for regional urban forest initiatives will be most crucial.

GENERAL FUND

A municipalities' General Fund is usually the major source of funding for most Urban Forest programs. Program funding from this source has many positive aspects: use of the funds is flexible and usually up to the discretion of managers and directors to determine the appropriation of the funds. However, there is considerable competition for monies from the General Fund, chiefly from Public Safety departments

(police and fire), which often have political and public priority over other programs such as Urban Forestry. However, in the absence of alternative funding sources, the General Fund may be necessary to support Urban Forestry in many agencies. In these situations, it is imperative that Urban Forestry programs provide the necessary information during the budgeting process to justify and substantiate the program's benefits to the public.

GRANT PROGRAMS

Grants are funds dispersed by one party to a recipient. In order to receive a grant, an application or proposal is usually required. Most grants are designed to fund a specific project or program, and require some level of compliance with the grant regulations, as well as reporting of progress and expenditures. Grant writing can be a relatively simple, or a difficult process — it is often best done by persons who have experience with the process.

Grants are very useful for funding one time projects such as tree plantings, urban forest inventories, development of urban forest management plans, development of facilities such as parks and trails, rehabilitate or update existing facilities, educational and training courses, and perhaps the purchase of tree maintenance equipment. Grant funds are not usually used to fund routine, ongoing maintenance activities, or to hire permanent employees.

GAS TAX

Gas Taxes are typically earmarked for transportation projects, but portions of the revenue have been used by municipalities for maintenance of street beautification projects. Based on the acreage of landscaping involved, it may be possible to add additional permanent staff or contract with outside vendors to provide the labor necessary to maintain median islands, streetscapes, greenbelts or trails that may have been constructed with funds provided by gas taxes.

TRANSPORTATION TAX

The funds provided by Transportation Taxes are usually targeted toward specific projects or programs that improve, enhance or create alternatives for local transportation systems.

Within the scope of Urban Forestry, transportation taxes have been used to purchase land for and develop walking and bicycling trails, which are usually planted with trees and sometimes other landscaping.

However, these funds are usually not associated with ongoing maintenance or replacement of the trees that may have been planted as part of an originally funded project.

PARCEL TAX

A Parcel Tax is a qualified special tax that is imposed by a local government. In order to create a parcel tax, a local election must be held, and the tax approved by a 2/3 vote. They can be used for any type of spending, construction projects, salaries, and other expenses that fall within the legal limits of the tax measure's language.

Parcel taxes in California are commonly associated with funding for school districts, which in many cases increases the per pupil spending of districts with them over those without. While it is possible that a parcel tax could be developed that would provide funding for local Urban Forestry programs, it would seem unlikely, given the current political and economic climate, that a tax election requiring a 2/3 majority vote would pass.

LANDSCAPE MAINTENANCE DISTRICTS

A Landscape Maintenance District (LMD) is a special assessment district created to pay for the costs of ongoing maintenance of public landscaping that provides special benefits to parcels in given areas of a City. The district provides services solely for the benefit of those parcels located within each district.

The Landscape Maintenance District is funded through an assessment that each property owner within the district pays with their property tax. The amount of the assessment is based on the actual cost of maintenance

for the specific zone, but is not usually the full cost. Usually a portion of the maintenance costs are relegated to the General Fund, or some other funding source. The establishment and operation of Landscape Maintenance Districts are subject to state laws, and require extensive fiduciary management and accountability.

Two of the possible means of funding Urban Forestry programs with Landscape Maintenance Districts are:

1. to include the costs of an agency's Urban Forestry operation in an existing LMD, or revise the existing LMD to include these costs; or

2. to establish a separate Tree Assessment District that uses the structure of LMD's to specifically pay for the costs associated with an Urban Forestry Program.

At least one California city is currently considering the establishment of a Tree Maintenance District that would fund the cost of maintaining and replacing trees, hardscape repairs, and other costs associated with an Urban Forestry Program.

Trees touch the lives of people daily.

RESOURCES

Alliance for Community Trees (ACT)

www.actrees.org

American Forests

www.americanforests.org

American Forests Foundation

www.affoundation.org/

American National Standards Institute (ANSI)

www.ansi.org

American Planning Association

www.planning.org

American Society of Consulting Arborists (ASCA)

www.asca-consultants.org

California Community Colleges

www.cccco.edu

California Department of Forestry and Fire Protection (CAL FIRE), Urban and Community Forestry

www.fire.ca.gov/resource_mgt/resource_mgt_urbanforestry.php

California ReLeaf

www.californiareleaf.org

The California State University

www.calstate.edu

California Urban Forests Council

www.caufc.org

RESOURCES

City of Menlo Park, Heritage Tree Ordinance

www.ci.menlo-park.ca.us/departments/pln/htree/htree.htm

Future Farmers of America

www.ffa.org and www.californiaffa.org

International Society of Arboriculture (ISA)

www.isa-arbor.com

- **Western Chapter International Society of Arboriculture**

  www.wcisa.net

i-Tree

www.itreetools.org

Land Trust Alliance

www.landtrustalliance.org

Merced Irrigation District (MID)

www.mercedid.org

National Arbor Day Foundation

www.arborday.org

- **Tree City USA Program**

  www.arborday.org/programs/treeCityUSA/index.cfm

- **Tree Line USA Program**

  www.arborday.org/programs/treeLineUSA/index.cfm

RESOURCES

- **Tree Campus USA Program**
  www.arborday.org/programs/treecam-pususa

National Association of State Foresters
www.stateforesters.org

The Nature Conservancy
www.nature.org

San Joaquin Valley Air Pollution Control District
www.valleyair.org

Society of Municipal Arborists
www.urban-forestry.com

Trees Are Good
www.treesaregood.org

Tree Care Industry Association (TCIA)
www.treecareindustry.org

Tree Foundation of Kern
www.urbanforest.org

Tree Fresno
www.treefresno.org

Tree Partners Foundation (TPF)
www.treepartnersfoundation.org

Tree People
www.treepeople.org

RESOURCES

Tree Link

www.treelink.org

The Trust for Public Land

www.tpl.org

University of California

www.universityofcalifornia.edu

- **University of California, Agriculture and Natural Resources, Statewide Master Gardener Program**

  http://camastergardeners.ucdavis.edu

Urban Forest Ecosystem Institute

www.ufei.org

USDA Forest Service, Urban and Community Forestry

www.fs.fed.us/ucf

- **Information on urban tree effects on air quality and climate**

  www.nrs.fs.fed.us/units/urban/focus/air_quality_climate

National Urban and Community Forestry Advisory Council (NUCFAC)

www.treelink.org/nucfac

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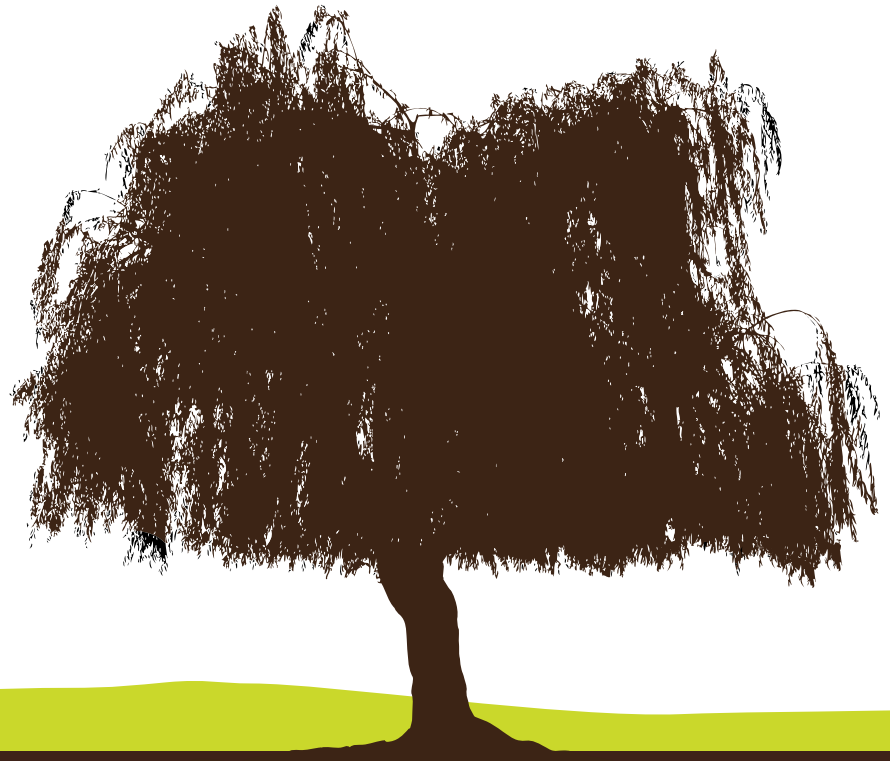
Urban Forest = Air Quality = Human Health!



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