Agenda Item B.2
DISCUSSION/ACTION ITEM
Meeting Date: May 6, 2013

TO: Commissioners

FROM: Steve Wagner, Public Works Director

SUBJECT: Overview of the Goleta Urban Forest Management Plan

RECOMMENDATION:

Receive an overview of the Goleta Urban Forest Management Plan.

BACKGROUND:

On June 7, 2011 the City Council adopted the Goleta Urban Forest Management Plan (UFMP). A copy of the UFMP (Attachment 1 to this report).

DISCUSSION:

The UFMP describes a long range plan for managing the City's urban forest (trees located on City's owned parcels and right of way). The UFMP provides a basic policy framework from which specific actions related to the ongoing management of the City's urban forest will be developed. It includes recommended guidelines, standards, policies and ordinances that the Commission and/or Council may consider in the coming years.

The UFMP includes recommendations that are derived from the Goleta General Plan. These recommendations help ensure the health of the urban forest by setting guidelines for canopy coverage, diversity, size, infrastructure conflicts, maintenance, and other areas of importance. These recommendations form the basis of the UFMP. Each recommendation is accompanied by specific objectives. Possible performance measurements are included, along with current conditions that will serve as the baseline for comparison during the 20-year review period.

The UFMP includes an initial five-year implementation program. The intent of an Urban Forest Management Plan is to create a living document that can be revised and updated as conditions change. City staff is responsible for preparing an annual report to the Council that will serve as both a summary of accomplishments for the prior year and a brief action plan for the following year.

At today's meeting staff will provide a brief overview of the Goleta Urban Forest Management Plan.

Review By:

Approved By:

_____ _____

Deborah S. Lopez
City Clerk

Steve Wagner
Public Works Director

ATTACHMENTS

1. Goleta Urban Forest Management Plan

ATTACHMENT 1

Goleta Urban Forest Management Plan

GOLETA URBAN FOREST

MANAGEMENT PLAN

June 7, 2011

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CITY OF GOLETA URBAN FOREST MANAGEMENT PLAN

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Executive Summary

The Goleta Urban Forest Management Plan (GUFMP) provides a five year policy framework for how trees within public areas will be managed. This plan recognizes the environmental, economic and social benefits of Goleta's public trees, and identifies the many ways that City policies can gradually reshape a public urban forest to reflect Goleta's urban forest goals. The plan addresses how trees are publically managed, and those portions of new land-use development that deal with public trees. The plan does not deal with the private urban forest, but provides an example of how private trees could be managed.

While this plan is comprehensive in recommending a number of tree management strategies, it is fiscally conservative by relying on existing staffing levels and City resources to implement the plan. The policies and procedures outlined in this plan may take up to 5 years to be put into practice. Additional City urban forestry programs will be implemented as funding allows. For example, it could take 24 years at current planting rates to fill all current vacant tree sites.

The recommendations summarized in the Plan could restructure the City's approach to its public trees that is less costly to maintain than the current urban forest plan. This plan includes elements that may provide a cleaner, cooler, and more environmentally beneficial urban forest. The Goleta urban forest of the future may look much different from today. Older neighborhoods with smaller parkways could see large canopy trees retained for as long as feasible but eventually replaced with smaller, more diverse trees over time. Parks and open spaces could see an increase in larger more diverse tree species while environmentally sensitive locations will have more indigenous trees. The effective implementation of this plan will depend upon the level to which the recommendations are implemented and the resources are available as approved by the City Council.

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Summary of Recommendations

1.0 Introduction to the Goleta Urban Forest Management Plan

1.0.1 Adopt the Urban Forest Management Plan covering all City areas, and all new land use development applications within the City of Goleta.

2.0 Vision Statement

2.0.1 Adopt the following vision statement for the GUFMP:

Goleta's urban forest is a thriving and sustainable mix of tree species and ages that creates a contiguous and healthy ecosystem that is valued and cared for by the City and all of its citizens as an essential environmental, economic and community asset.

3.0 City Tree Inventory

3.0.1 Maintain a computerized non-proprietary database inventory of City trees. The database will be continuously updated whenever a tree is planted, removed, or maintained by either City staff, contractors or volunteers.

3.0.2 Conduct a visual inspection to confirm City tree inventory every ten years beginning in 2014.

4.0 Goleta Urban Forestry Program Overall Goals

4.1 Canopy Coverage

4.1.1 Consider a policy of no net loss of City public tree canopy.

4.1.2 Consider a policy of increasing the total percentage of canopy within the City from the current 19% to 20% over a ten year period.

4.2 Age Diversity

4.2.1 The Goleta Urban Forest should emphasize a variety of ages of trees within its inventory, with an emphasis on species which have a long life expectancy.

4.3 Species Diversity

4.3.1 Consider citywide street/park species diversity goals of 10% Cultivar, 20% Genus, and 30% Family to help protect the Goleta urban forest against diseases and other pests.

4.4 Recommended Tree Species

4.4.1 The City's tree species list should relate to the City's adopted urban forest policies, including choosing species for maximum environmental benefit, canopy coverage, native tree emphasis, longevity, sustainability and increasing the diversity of species.

4.4.2 Consider revising the recommended street tree list to include all City tree sites and develop an inclusive tree species list to identify trees eligible for planting in City areas.

4.5 Right Tree, Right Place

4.5.1 The basic criterion for tree location should follow a flexible "right tree, right place" policy that selects species that are appropriate for the specific conditions in which they are to be planted, so as to minimize ongoing maintenance by City staff.

4.5.2 The largest mature size tree species possible given site constraints should be planted at a site.

4.5.3 The ultimate mature size of a tree species that can be planted at a tree site can be identified by comparing the volume of available soil compared to the projected soil needs of the tree at maturity, with the caveat that lack of sufficient soil volume can result in slower growth, smaller trees, and shorter life expectancy.

4.5.4 To allow sight distance for vehicles, trees should be planted the minimum distance away from intersections according to the latest edition of the Traffic Engineering handbook.

4.5.5 Street trees should be gradually pruned to have clear trunk clearance of 14’ along streets and 8’ above a sidewalk. A minimum canopy thickness of 10’ is recommended. Tree species which have a canopy height of less than 20’ at maturity are generally not recommended as street trees.

4.5.6 Street tree sites should be located a sufficient distance from driveways, gas, utility, sewer and water lines (generally a minimum of 7’), and also positioned so that the canopy at maturity will not substantially interfere with street lighting.

4.5.7 New and replacement street trees planted under electrical power lines should not exceed 25’ in height at maturity so that the edge of the tree canopy will not come within 4’ of household electrical transmission wires. This recommendation does not apply to telephone, cable or street light power lines.

4.6 Early Tree Care

4.6.1 Recognize the critical importance of the first three years of a tree's life and adopt an early tree care program that implements proper tree planting and training techniques so that young trees will become established within two years of planting with a mortality rate of less than 4%.

4.7 Very Mature Tree Care

4.7.1 Identify very mature trees in the City’s tree inventory and sustain their number through preventive maintenance.

4.7.2 Healthy trees, especially very mature trees, should be retained to the greatest extent possible.

4.8 Professional Tree Care Standards

4.8.1 Consider adoption of the latest revisions of the following professional standards for tree care for the City of Goleta Urban Forestry program:

a. American National Standards Institute (ANSI) A300 tree care standards
b. ANSI Z133.1 safety standards
c. International Society of Arboriculture (ISA) Best Management Practices

4.8.2 All tree care contractors doing business within the City of Goleta should verify that they operate according to the above standards.

4.9 Urban Wood Reuse

4.9.1 Establish environmentally sound tree removal practices by considering an Urban Wood Reuse policy so that the remains of removed trees can be utilized to provide economic and recreational benefits for the community.

4.10 Infrastructure Coordination

4.10.1 Evaluate City policies and standards for construction and engineering of roads, sidewalks, parking lots, bus stops, and utility right-of-ways to identify conflicts with urban forests and recommend administrative and policy changes.

4.11 Urban Heat Island Mitigation

4.11.1 Evaluate measures to increase shade coverage of new parking lots.

4.11.2 Consider measures for retrofitting existing public parking lots and large paved areas with shade trees.

4.12 Tree Risk Management

4.12.1 Consider a proactive public tree risk management program to minimize dangerous conditions on public property.

4.12.2 Coordinate the public urban tree risk management plan with the Wildland Fire Study currently under development by the City.

4.12.3 Implement defensible space procedures in high fire hazard areas identified by the County Fire Department.

4.13 Pest and Disease Management

4.13.1 Take regular preventive measures against pest and disease problems by following the Integrated Risk Management Process for pest management in City trees.

4.14 View Corridors

4.14.1 Recognize the capability of trees in affecting the aesthetic quality of views along public right-of-ways.

4.14.2 Consider planting a diverse number of species, densities, sizes,

deciduous, and evergreen trees along scenic corridors that will enhance views.

4.15 Heritage Trees / Historical Landmarks

4.15.1 Consider adopting procedures for defining, designating and incentivizing the protection of Heritage/landmark trees.

4.15.2 Consider future policies or ordinances that protect Heritage trees.

4.16 Trees and Economic Development

4.16.1 Consider planting large shade trees in commercial and business areas as an economic development measure, particularly within Old Town Goleta.

4.16.2 Accommodate trees during early infrastructure design of City projects.

4.17 Tree Advisory Board

4.17.1 Develop a volunteer Tree Advisory Board to advise the City staff and City Arborist in developing plans and goals for the Goleta Urban Forest, represent the interests of the community, work to resolve conflicts between community members and urban forestry policy, and inform the community of the Urban Forestry program.

5.0 Urban Forestry and Regional Planning

5.1 Air Quality

5.1.1 Determine the ability of the urban forest to sequester carbon emissions and particulates and provide a better quality and cleaner air for all.

5.1.2 Recognize that the actions taken now to promote the planting of trees could have impacts on the air quality maintenance plan.

5.2 Storm Water Management

5.2.1 Recognize the short and long term value of the urban forest in storm water management through urban forestry projects that reduce storm water run-off, recharge groundwater, reduce stream channel erosion and improve soil and water quality.

5.3 Energy Conservation

5.3.1 Consider amending the City of Goleta's energy plan in conjunction with the South Coast Energy Efficiency Partnership to recognize the importance of long term urban forest benefits, i.e. more than 5 years.

5.3.2 Combine landscape planning with urban forest planning to maximize the potential energy conservation benefits of trees.

5.4 Greenhouse Gas Reduction

5.4.1 Recognize the relationship between urban forestry and the Greenhouse Gas emission reduction goals, through the use of models such as those available through the California Climate Registry.

5.5 Utilities

5.5.1 Develop ongoing coordination between utility representatives and City officials to insure continued utility service while maintaining and supporting appropriate urban forestry.

6.0 Goleta Urban Forest Resources

6.1 Community Services Urban Forestry Personnel and Budget

6.1.1 Encourage certified arborists to assist in the implementation of Goleta's Urban Forestry program.

6.1.2 Insure that Urban Forestry program funding will be sufficient to meet minimum standards for annual Tree City USA Awards.

6.2 Goleta Urban Forestry Program Professional Standards

6.2.1 Continue to maintain accreditation in the annual Tree City USA program.

6.2.2 Achieve and maintain accreditation in the Tree City USA Growth Award.

6.2.3 Identify new or updated professional standards and make recommendations for their inclusion within the City of Goleta Urban Forestry program.

6.3 City of Goleta Interdepartmental Coordination

6.3.1 Recognize the impact of all City departments on the urban forest and the importance of developing collaborative solutions that preserve the interests of both the urban forest and entire City.

6.4 Planting of New and Replacement Trees Annual Targets

6.4.1 Recognize the importance of annual targets to a successful tree planting program.

6.4.2 Consider an annual target of planting 100 new public trees a year.

6.4.3 Consider a target of planting all 2,300 vacant public tree sites within 24 years.

6.4.4 Establish a goal of replanting any failed tree within one year subject to site availability.

7.0 Urban Forestry Education, Outreach and Partnerships

7.1 Public Outreach/Education

7.1.1 Encourage wide public participation in the implementation of the Goleta Urban Forest Management Plan.

7.1.2 Recognize the benefits of adopting an open and accessible

computerized tree inventory system.

7.1.3 The City should seek to identify and support diverse public leaders to serve as spokespeople for urban forestry.

7.2 Nonprofit Urban Forestry Partnerships

7.2.1 Acknowledge and encourage the efforts of nonprofit groups to provide urban forestry services and community outreach.

7.3 Professional Urban Forestry Partnerships

7.3.1 Acknowledge and encourage the efforts of professional urban forestry groups to provide urban forestry services and community outreach.

7.4 Government and Agency Partnerships

7.4.1 Acknowledge and encourage the efforts of government and public agency partnerships to provide urban forestry services and community outreach.

8.0 Goleta Urban Forest Ordinances and Enforcement Program

8.0.1 Consider ordinances and policies in order to successfully implement the Goleta Urban Forest Management Plan.

9.0 Financing Recommendations

9.0.1 Recognize the monetary value of trees and incorporate this understanding into City's decision-making.

9.0.2 The Goleta Urban Forestry program funding should be sufficient to achieve the services outlined in this report.

10.0 Summary of Recommendations

10.0.1 The City should prepare an annual urban forestry report that recognizes progress made in implementing the Urban Forest Management Plan and identifies those portions of the plan requiring modification to meet the changing needs of the City's urban forest.

1.0 Introduction to the Goleta Urban Forest Management Plan

The City of Goleta initiated the development of this Urban Forest Management Plan to provide a guide for the long term preservation and enhancement of the urban forest within the City's jurisdiction. The Conservation Element of the Goleta General Plan calls for the development and maintenance of a Public Urban Forest Management Plan that: 1) describes and maps the resources; 2) includes a vision statement; 3) establishes measurable urban forest management goals and performance standards; and 4) presents a timeline for managing the Goleta Urban Forest.

Goleta's urban forest consists of all public and private trees, which include the street tree system, trees in parks and other public lands, and trees on private properties throughout the City. This plan deals with the City trees, focusing on those trees which line streets, walkways, parks and other City owned areas.

The City of Goleta shares the responsibility for the management of naturally occurring and planted trees and associated plants in public urban areas with a number of other public agencies. The majority of the urban forest is located in private areas and their management is primarily a private responsibility.

Background

With the aid of a grant from the California Department of Forestry and Fire Protection, the City embarked on a three stage process for developing a Goleta Urban Forest Management Plan (GUFMP). One of the first efforts in creating this plan was to develop a set of baseline conditions of Goleta's trees and the administrative practices for managing them. *The State of the Goleta Urban Forest Report* was developed in order to provide a snapshot of the current conditions of the Goleta urban forest, including an aerial analysis of the entire Goleta public and private urban forest, and an inventory of current goals, policies, and urban forest conditions. A copy of this report is available through the City's Community Services Department.

The *Goleta Urban Forest Guidelines Report* was the second stage of the Urban Forest Management planning process and built upon the *State of the Goleta Urban Forest Report*. The guidelines for the GUFMP are based on the directives adopted in the Goleta General Plan. The guidelines report examined in greater depth, the purpose of the urban forest management planning effort, reviewed the state of the practice for urban forest management plans, and provided an overview of items to consider in preparing a final urban forest management plan.

Several public meetings were held to gather public input during the development of the *State of the Goleta Urban Forest Report* and the *Goleta Urban Forest Guidelines Report*. Public comments from these meetings were incorporated into the documents.

The purpose of the third phase of this process is to provide a document that achieves a sustainable urban forest in which the ecological, social, and economic functions and benefits can be maintained over time. The GUFMP describes a long range, 20 year

strategic plan, for achieving urban forest goal. The goals are set-out in five year increments, and will be updated through annual reports. The plan includes tasks, priorities, best management practices, standards, specifications, and funding recommendations. Best management practices, or the best available, industry-recognized courses of action, are used to maximize environmental benefits, and improvements to the natural world provided by the urban forest.

The GUFMP includes recommendations that are derived from the Goleta General Plan. These recommendations help ensure the health of the urban forest by setting guidelines for canopy coverage, diversity, size, infrastructure conflicts, maintenance, and other areas of importance. These recommendations form the basis of the GUFMP. Implementation of these recommendations and associated objectives are necessary to achieve the goals of the GUFMP.

Each recommendation is accompanied by specific objectives. Possible performance metrics are included, along with current conditions that will serve as the baseline for comparison during the 20 year review period. When available, timelines and projected resource needs are identified in the Plan. Projected resources (City staff time) are expressed in terms of Full Time Equivalence (FTE) for an- employee working 2,000 hours or 250 days per year.

The GUFMP includes an initial five year implementation program. The intent of adopting an Urban Forest Management Plan is to create a living document that can be revised and updated as conditions change. The City Arborist will prepare an annual report that will serve as both a summary of accomplishments for the prior year and establish a strategic plan for the year to come.

Recommendations

1.0.1 Adopt the Urban Forest Management Plan covering all City areas, and all new land use development applications within the City of Goleta.

Objectives

1. While only 29% of public trees are under the jurisdiction of the City, implementation of this plan may establish comprehensive policies to protect and preserve the City's urban forest that should be followed by all groups, organizations and departments responsible for the management of public trees.
2. The Urban Forest Management Plan will assist in increasing interdepartmental coordination and the ability to identify issues that would benefit from the attention of multiple departments. Air quality, storm-water management, water quality, energy conservation and greenhouse gas emissions are among those areas that may be simultaneously affected by their respective management plans, the Urban Forest Management Plan, and others.

Performance Standards
To monitor the progress and assess the success of these recommendations, it is recommended that an annual report be compiled and presented to the City Council (see recommendation 10.1).

2.0 Vision Statement
The City of Goleta's General Plan calls for a vision statement in the GUFMP. A vision statement is a short, succinct, and inspiring statement summarizing what the City Council intends for the Goleta urban forest to become and to achieve in the future. A vision refers to the broad intentions that are both all-inclusive and forward-thinking. It describes aspirations for the future, without specifying the means that will be used to achieve those desired ends.

Recommendations
2.0.1 Adopt the following vision statement for the GUFMP:

> *Goleta's urban forest is a thriving and sustainable mix of tree species and ages that creates a contiguous and healthy ecosystem that is valued and cared for by the City and all of its citizens as an essential environmental, economic and community asset.*

Objectives
The current vision statement will serve as a general guide pending review and revision as deemed appropriate by the City Council and the proposed tree advisory board.

Performance Standards
Ability of the statement to reflect the future direction of the Goleta Urban Forest.

3.0 City Tree Inventory
This section clarifies the City of Goleta's responsibility of the public urban forest. This section also compares the City of Goleta with other public and private urban forests.

City of Goleta Tree Inventory: The most recent comprehensive street tree inventory (i.e. surveying every tree) for the City of Goleta was completed in 2004. The street tree inventory is updated on a continuous basis as trees are maintained by the City's contract arborists. A working copy of the street tree inventory is available for viewing in the City's Community Services Office, but due to its large size and continuous updating, it is not included as an Appendix to this Plan.

The City's partial park tree inventory was conducted in 2006 by Goleta Valley Beautiful volunteers in an effort to highlight the location, species and condition of major trees close to publicly used areas. This inventory also identified potential sites for new trees to be located on the periphery of City of Goleta's parks and open spaces. The inventory has not been updated since 2006. This inventory is also available with the City Arborist with the City's Community Service Department.

Number of Trees: The total estimated number of trees within the City of Goleta's public and private urban forest is approximately 51,823. These figures are estimates and are based on available data taken from the tree inventory studies.

An estimated 58% of the trees in the Goleta urban forest are within private ownership. This includes most of the trees in creeks and riparian drainage ways. The Santa Barbara County Flood Control Agency is responsible for flood control purposes and does not maintain trees.

Of the remaining 42% of trees maintained by public agencies in the Goleta urban forest, the City of Goleta is responsible for about 29% of the total or approximately 14,855 trees. As indicated in the following table, the other 13%, or approximately 7,210 trees, are the shared responsibility of 9 other public, semi-public and nonprofit agencies within the City of Goleta.

Table 1 – Number of Trees in Goleta

Trees	Tree Subtotals	%	Agency	Location
30,000		57.9	Private Sector	Citywide including riparian areas
	30,000			
6,727		13.0	City of Goleta	Street parkways and medians
5,000		9.7	City of Goleta	Natural and public areas
3,128		6.0	City of Goleta	Parks & Open Spaces-Managed
	14,855			
3,600		7.0	Southern CA Edison	Utility Easements
1,500		2.9	CalTrans	Highway 101, Route 217
1,000		1.9	Goleta Union School District	10 elementary campuses
600		1.2	SB Secondary School District	1 High, 1 Jr. High School
200		0.4	Foundation for Girsh Park	Girsh park
68		0.1	County Fire	Fire Stations 11, 14
0		0	Special Districts	Service Easements
0		0	County of Santa Barbara	Flood Control Corridors
	6,968			
51,823		**100%**	**Total Trees in Goleta Urban Forest**	

Recommendations

3.0.1 Maintain a computerized non-proprietary database inventory of City trees. The database will be continuously updated whenever a tree is planted, removed, or maintained by either City staff, contractors or volunteers.

3.0.2 Conduct a visual inspection to confirm City tree inventory every ten years beginning in 2014.

Objectives

For staff to have an accurate tool for managing the Goleta Urban Forest.

Performance Standards
Ensuring that the information is current enough to assess the condition of Goleta's Urban Forest Plan.

4.0 Goleta Urban Forestry Program Overall Goals

The topics explored in this section provide the framework of the GUFMP. These topics establish the framework for polices that will be later incorporated into ordinances and regulations, and will also help provide staff direction administering the Plan.

4.1 Canopy Coverage

Urban tree canopy is the layer of leaves, branches, and stems of trees that cover the ground when viewed from above. The 2008 study showed that Goleta's overall canopy coverage is approximately 19%. This figure includes public and private areas, including tree and large shrub canopy as the analytical tools used for the study do not differentiate between trees and shrubs. The 19% figure is an estimate of tree canopy coverage, since shrubs are usually not large enough to provide shade.

By planting all 2,952 currently vacant street and park tree sites, the City could increase the total net tree canopy of the City by approximately 2%. This increase assumes that the private tree canopy remains the same during this time period. However, anticipated constraints on current vacancies indicate that only 2,362 sites may be suitable for planting. If all suitable planting sites were planted, a conservative increase in overall canopy would be closer to 1% than 2%.

Recommendations

4.1.1 Consider a policy of no net loss of City public tree canopy.

4.1.2 Consider a policy of increasing the total percentage of canopy within the City from the current 19% to 20% over a ten year period.

Objectives

1. Identify what annual tree planting and care efforts need to be considered within specific land uses to support the preservation and any increases to the tree canopy.
2. Encourage other public agencies and private parties to increase the canopy coverage of land which is under their control.

Performance Standards

1. The canopy coverage of City-managed trees and the total land for available trees should be recalculated every five-years.
2. Include a section in the annual report detailing with general changes in canopy such as number of trees added and removed, and including any new recommendations or alterations to the recommended coverage percentages.

4.2 Age Diversity:

Goleta's Urban Forest can be categorized as generally mature to very mature. Most long lived native trees in the Goleta Valley were cut down by settlers in the late ninetieth

and early twentieth centuries. The majority of average age Goleta street trees were planted in conjunction with post World War II building booms during the 1950s and 60s. Recent attempts to re-vegetate Goleta's parkways and open spaces with moderately to very long lived trees have helped reduce the overall average age.

Longevity is an important consideration for long-term shading, screening, beauty and value of a property. Short-lived trees may also be wonderful shade trees, and can be useful where permanence is not the ultimate goal. Longevity may vary depending on the proper selection of adapted species, the care the tree receives, risk of damage, and the presence or lack of diseases and pests. Longevity is defined as follows:

- Short – less than 50 years
- Average – 50 to 100 years
- Long – greater than 100 years

In addition, the environmental benefits of trees increase as they grow and age. As trees live longer than their anticipated lifespan, they are classified as very mature. While the environmental benefits are great, there are associated preventative maintenance costs and increased safety risks related to mature trees.

A healthy urban forest should have a large percentage of tree species that have average to very long lives. In addition, a healthy urban forest should have a majority of trees in the mature to very mature status, as older trees are the most environmentally beneficial.

Recommendations

4.2.1 The Goleta Urban Forest should emphasize a variety of ages of trees within its inventory, with an emphasis on species which have long life expectancy.

Objectives

1. Assess the current age distribution of all public trees managed by the City.
2. Enact the necessary administrative policies requiring age estimates to be included in all new tree inventory data.

Table 2 – Tree Longevity

Longevity of species	Current % Estimate	Recommended %
Short <50 years	30	10
Average >50 years	50	60
Long >100 years	20	30

Performance Standards

1. Re-assess the age distribution of City-managed trees every five years.
2. Include a section in the annual report detailing the change in distribution, and include any new recommendations or alterations to the recommended age distribution.

4.3 Species Diversity

Specie diversity is important for disease and pest resistance, calculating the environmental benefits of canopy coverage, identifying sustainable native trees, assessing tree longevity, and resolving tree conflicts with hardscape.

The data collected from the City's street tree inventory shows there are 178 different species of trees along Goleta streets. Over 100 of those species represent less than 10 trees presented in the inventory. The top 30 species account for 89% of street trees. 21 of the top 30 species are no longer on the list of species approved to be planted in public right of way. This includes the most popular tree in the City inventory, the Lemon bottlebrush (Callistemon citrinus), and large street trees such as Ash, Sweet gum, Elms and Pines. The complete list of species and the frequency of their occurrence within the City of Goleta is included in Appendix A to this report.

Recommendations

4.3.1 Consider citywide street/park species diversity goals of 10% Cultivar, 20% Genus, and 30% Family to help protect the Goleta urban forest against diseases and other pests.

Objectives

1. Assess the current species, genus, and family distribution of all public trees managed by the City.
2. Pursue a planting and management program that will gradually produce the following citywide species distribution:

Table 3 – Species Distribution

Tree Group	Current Estimated Distribution	Recommended
Cultivar	10%	10%
Genus	20%	20%
Family	50%	30%

3. Consider developing an individual street/park diversity goal of no more than 15-25% of a cultivar.

Performance Standards

1. After the adoption of the species diversity objectives, reassess the species distribution of City-managed trees every five years.
2. Include a section in the annual report detailing the change in distribution, and reviewing progress made in each objective.

4.4 Tree Species Eligibility List

The current approved street tree species list was adopted on February 11, 2009. This list is intended for street right of way areas only.

This Plan recommends that an eligibility list be adopted to list approved tree species which have been authorized by the City Arborist for all City owned areas. The adopted eligibility list would review characteristics of tree species that are potentially workable in Goleta. This would depend upon a number of conditions including: climate, mature tree height and width, deciduous vs. evergreen, water needs, longevity, soil volume needs, site location, and invasiveness.

All trees will have some characteristics that may make it more or less suitable for a site. An eligibility list expands the number of potential choices, from which a final species decision will be made.

The proposed tree species eligibility list, included as Appendix E expands the potential number of tree species to be considered for Goleta public trees. It is based on a database maintained by the CalPoly Urban Forest Ecosystems Institute called *SelecTree* which is used as a primary source of allowable tree species by the California Department of Forestry and Fire Protection. Only those trees suitable for planting in Goleta's climate are included, defined as Sunset Zone 24. Additional tree species proposed to be added to the eligibility list include some of those listed in the Muller and Bornstein study of tree diversity among California's Tree City USA cities, and trees listed in the Muller and Haller text, *Trees of Santa Barbara*.

All palm species were removed from the SelecTree list. Palms are not woody trees and are more related to grasses. Palms do not provide the environmental benefit that woody trees provide nor are their fronds easily compostable. Healthy palms within City right of ways and which do not present a hazard do not need to be removed; however, trees and not palms are recommended for future public tree plantings and replacements.

Any plant listed on the California Invasive Plant List should not be considered for listing on the eligibility list. This list includes many widely established tree species in Goleta including Pittosporum, Myoporum, Mexican Fan Palms (Washingtonia robusta) and Canary Island Date Palms (Phoenix canariensis) among others.

Recommendations

4.4.1 The City's tree species list should relate to the City's adopted urban forest policies, including choosing species for maximum environmental benefit, canopy coverage, native tree emphasis, longevity, sustainability and increasing the diversity of species.

4.4.2 Consider revising the recommended street tree list to include all City tree sites and develop an inclusive tree species list to identify trees eligible for planting in City areas.

Objectives

1. Consider using *SelecTree* or similar database tool as a standard for identifying allowable species, with recommended additions as identified in Appendix E.
2. If a tree is on the tree species eligibility list and does not meet performance standards for the conditions in which it is to be planted, or if a tree is *not* on the tree species eligibility list and is shown to meet those performance standards, then consideration to allow the tree may be made.
3. If there is no local data for the performance of a particular species in the proposed location conditions, performance in a similar climate should be referenced.
4. Criteria to consider when selecting trees species for public areas:
    a. Drought-tolerant species.
    b. Native and non-invasive species, where conditions warrant, to prevent damage to the surrounding habitat.
    c. Trees with resistance to pests and disease.
    d. Trees with a low probability of root conflicts near streets.

Performance Standards

1. Include a section in the annual report assessing whether or not the policy is followed.
2. Identify new plantings that do not appear on the official species list and determine whether or not they were appropriate for the location.
3. Determine whether any species on the official list were planted inappropriately.

4.5 Right Tree, Right Place

Major issues concerning the placement of trees in urban spaces include:

Soil Volume – The volume of soil available for rooting must be sufficient to support the intended tree size. The most usable soil volume is found in the first three feet below the surface. Limitations on soil volume will result in trees that do not reach mature size levels and may affect adjacent infrastructure. The soil volume for a tree can be increased by removing non permeable coverings (e.g. concrete, brick, decomposed granite) within planting sites, enlarging planting sites by reconfiguring adjacent sidewalks to minimum ADA standards, reinforcing construction of non-permeable walkways adjacent to planting site and installation of appropriate root diverters.

Diversity versus Monoculture – Goleta has opted to diversify its plantings to avoid catastrophic failures in the event of changes in insect and disease vectors, and provide diverse habitat for the insect and animal world.

Natives versus Exotics – Outside of environmentally sensitive habitat areas, the soil and drainage characteristics of urban environments are different than those of trees growing in their native environment, so essentially most trees are exotic in urban conditions. The best tree suited to a site is recommended.

Tree Spacing – The general rule is to space trees 25 to 35 feet apart, although is

difficult to apply this rule to trees of varying sizes. Tree spacing should take into consideration the potential mature crown of the tree and plant so that tree crowns adjoin but do not interconnect.

Time and Trees – Rather than requiring an 'instant landscape' by planting a large tree at the time of planting, smaller size trees (5 to 25 gallon trees) should be allowed that provide for greater diversity and less planting cost.

Recommendations

4.5.1 The basic criterion for tree location should follow a flexible "right tree, right place" policy that selects species that are appropriate for the specific conditions in which they are to be planted, so as to minimize ongoing maintenance by City staff. Many elements of this policy are currently in practice, and should also include the following provisions:

4.5.2 The largest mature size tree species possible given site constraints should be planted at a site.

4.5.3 The ultimate mature size of a tree species that can be planted at a tree site can be identified by comparing the volume of available soil compared to the projected soil needs of the tree at maturity, with the caveat that lack of sufficient soil volume can result in slower growth, smaller trees, and shorter life expectancy.

4.5.4 To allow sight distance for vehicles, trees should be planted the minimum distance away from intersections according to the latest edition of the Traffic Engineering handbook.

4.5.5 Street trees should be gradually pruned to a have clear trunk clearance of 14' along streets and 8' above a sidewalk. A minimum canopy thickness of 10' is recommended. Tree species which have a canopy height of less than 20' at maturity are generally not recommended as street trees.

4.5.6 Street tree sites should be located a sufficient distance from driveways, gas, utility, sewer and water lines (generally a minimum of 7'), and also positioned so that the canopy at maturity will not substantially interfere with street lighting.

4.5.7 New and replacement street trees planted under electrical power lines should not exceed 25' in height at maturity so that the edge of the tree canopy will not come within 4' of household electrical transmission wires. This recommendation does not apply to telephone, cable or street light power lines.

Objectives

1. Improve current procedures from a 'one size fits all' policy regarding the location of trees to a policy of taking into consideration a wider range of factors that impact the long term health and viability of a tree.

2. A planting policy for higher pollen producing trees is not addressed in this policy. A large number of native trees are high pollen producers; including oak, sycamore, alder, willow, and elderberry, among others. A policy of restricting planting of high pollen producing trees along streets would curtail most native tree planting efforts. Generally, the male trees within a species are the pollen

producers, while the flower producing females trees are relatively pollen free. Possible policy considerations for the future should consider planting a higher proportion of lower pollinating trees on streets in order to reduce litter.

Performance Standards
Include a section in the annual report regarding the implementation of each policy. Assess new plantings for their compliance with their respective policies, and include any proposed changes to said policies.

4.6 Early Tree Care

Young trees should be viewed as an investment. With time, young trees will eventually reach their full value as mature and structurally sound shade trees. They will be able to provide benefits to the surrounding area at minimal risk to the community. However, proper techniques are essential within the first stages of the tree's life for this to happen.

Local public tree planting experience indicates that a 3% to 5% mortality rate can be expected for new trees within the first year of planting, and a 1% annual mortality rate after that. Mortality rates include all causes, including too much or too little water, pests, disease, accidents, vandalism, etc.

Recommendations

4.6.1 Recognize the critical importance of the first three years of a tree's life and adopt an early tree care program that implements proper tree planting and training techniques so that young trees will become established within two years of planting with a mortality rate of less than 4%.

Objectives

1. Implement the general elements of tree planting to ensure a well-established young tree keeping in mind that practices may be more specified at the arborist's discretion:
    a. Proper Planting Holes - A firm, flat bottomed hole will prevent trees from sinking and loosened soil that is three times the area of the size of the root ball.
    b. Installment Root Management - Remove soil and roots from the top of the root ball to expose the root collar; cut away any roots that grow over the collar, and cut roots to form new roots that grow away from the truck.
    c. Staking (if necessary) - Holds trees erect and straightens the upper trunk.
    d. Mulching - A layer of organic mulch helps protect roots and prevents competing grasses from growing.
    e. Irrigating - Consistent irrigation is critical for proper establishment. It is recommended to irrigate 20 gallons per tree, weekly.
2. Implement regular training practices to ensure the future quality of young trees. Also, proper training practices promote structurally sound growth so that the tree will pose absolute minimal risks to the community.
3. Structural Pruning - Cut or remove stems that are competing with the central leader. This will encourage growth in the central leader. Also, identify the lowest

branch in what will become the permanent crown and prevent branches from growing below the identified crown.
4. Consider ordinances to prevent damaging or removing young City owned trees.
5. Monitor and record the mortality rate of City trees within the first 5 years after planting.
6. Encourage volunteer training to involve the general public in young tree care.

Performance Standards
Include a section in the annual report assessing the mortality rate of trees younger than 5 years old. If the rate is higher than 7%, make recommendations for further action to maintain the health of young trees.

4.7 Very Mature Tree Care
Very mature trees are trees which have lived longer than their species average lifetime. While these may require more preventative maintenance to maintain their health, these trees continue to provide significant environmental benefits. Trees offer more benefits as they age. A mature tree can increase property values, beautify its surroundings, purify the air, and save energy by providing shade during summer and protection against cold winds in the winter. Therefore, a preventive care program should not only be viewed as a cautionary measure against tree deterioration but ultimately, as an investment for the City. In order to allow these investments to prosper, regular maintenance of mature trees is critical. Keeping in mind the longevity of most trees, regular maintenance of mature trees are more beneficial in the long run rather than addressing problems after they occur.

Recommendations
4.7.1 Identify very mature trees in the City's tree inventory and sustain their number through preventive maintenance.
4.7.2 Healthy trees, especially very mature trees, should be retained to the greatest extent possible.

Objectives
1. Inspect very mature trees at least once every three years to prevent or solve problems to ensure a lesser cost of maintenance. The following characteristics outline the criteria used for inspecting a tree's mature tree health:
   a. Reduction in buds or new leaves compared to previous years that indicate atypical growth pattern.
   b. Trunk decay and/or crown die back which demonstrates poor tree health. Common signs of stem decay also include loose bark or deformed growths.
   c. Any other abnormalities such as insect activity and spotted, deformed, discolored, or dead leaves and twigs should also be taken into consideration.
2. Establish a regular maintenance program to ensure very mature tree health. Three major practices used to tend to mature trees include mulching, fertilization, and pruning. Recommended practices include:
   a. Mulching reduces environmental stress on trees. It also helps prevent mechanical damage that could be done to the tree's trunk and surface

absorbing roots. Lastly, mulch reduces the competition of invading vegetation.

b. Fertilization is to be used based on the arborist's observation of the mature tree's soil conditions. Fertilizer promotes mature tree health by providing essential elements for growth especially in nutrient-poor soils.
c. Pruning is to be practiced regularly in order to remove dead, diseased, or infested branches so that the structure, vigor, and safety of the tree can be enhanced.

3. Recognize that tree removal is deemed necessary at the City Arborist's discretion considering the following conditions of the tree:
    a. Dead, dying or hazardous
    b. Causing an obstruction to neighboring trees that pruning cannot correct
    c. It is to be replaced by a more suitable specimen
    d. Required to be removed for construction
    e. High maintenance or invasive species that is unsuitable
    f. Expected sidewalk and other hardscape damages from roots
    g. Expected hazards such as being situated under a power line
    h. Poses a risk to the community (4.13 Risk Management)
4. If tree removal is deemed absolutely necessary at the City Arborist's discretion for reasons such as, but not limited to the ones above, refer to 4.9 Urban Wood Reuse.

Performance Standards

1. After regular inspections, determine the number of very mature trees that continue to thrive after implementing regular maintenance practices (Objective 2). Compare this number to previous years.
2. After regular inspections, determine whether or not the need for tree removals has been reduced.

4.8 Professional Tree Care Standards

The importance of scientifically based pruning and tree care practices is essential for the health of trees, as is contracting with tree care companies that follow safe and environmentally sound practices.

Recommendations

4.8.1 Consider adoption of the latest revisions of the following professional standards for tree care for the City of Goleta Urban Forestry program:
    a. American National Standards Institute (ANSI) A300 tree care standards
    b. ANSI Z133.1 safety standards
    c. International Society of Arboriculture (ISA) Best Management Practices

4.8.2 All tree care contractors doing business within the City of Goleta should verify that they operate according to the above standards.

Objectives

1. When awarding tree work contracts, consider only those companies that are duly licensed, bonded and insured and follow professional standards for tree care.
2. Consider enacting policies to require all City Departments and contractors

working with existing or new public trees to report changes in the status of each tree within 24 hours to the City Arborist. The report shall be in a format developed by the City Arborist and include information on the location, species, status changes, and additional information as required by the City Arborist.
3. Monitor and record instances of topping and other destructive pruning practices.
4. Encourage tree preservation and planting plans for all new developments.
5. Ensure that tree maintenance workers are trained in:
    a. Work practices and safety procedures
    b. Medical services and first aid
    c. Job briefing
    d. Personal protective equipment
    e. Recommended safe use of all specialized mechanical equipment
    f. Line clearance tree pruning operations and required safe working standards.

Performance Standards

1. Include a section in the annual report assessing whether tree status change information given to the City Arborist is accurate. If not, utilize the appropriate enforcement mechanisms.
2. Include a section in the annual report assessing the effectiveness of the ordinances in deterring destructive pruning practices.

4.9 Urban Wood Reuse

Creating an environmentally sound policy for the removal of trees is needed in order to avoid the unnecessary and costly removal of trees that would have otherwise provided substantial and long-term benefits to the community. However, the occasional and necessary removal of trees can be expected. When this becomes the case, urban wood reuse policies should be considered to utilize these tree remains. Not only will urban wood reuse policies greatly decrease the amount of useful materials left to decompose in landfills, but it will ultimately provide revenue for the community and reduced damage to the environment.

One method of urban wood reuse is encouraging the creation of sawlogs. Sawlogs are intact sections of removed trees that can be processed and substituted for traditional lumber. Maintaining larger pieces of removed tree material, rather than breaking it up into smaller pieces such as for firewood and wood chips, can lessen the CO^2 released.

Recommendations

4.9.1 Establish environmentally sound tree removal practices by considering an Urban Wood Reuse policy so that the remains of removed trees can be utilized to provide economic and recreational benefits for the community.

Objectives

1. Consider policies and practices to ensure that trees are removed in a safe and effective way. Consider the following elements:
    a. The agency, organization or company responsible for the removal of a tree should use the methods and machinery with the lowest carbon emission impact.

b. The agency, organization or company responsible for the disposal of a tree should use those methods that will limit release of carbon from the dead material.
c. Public and private parties removing and disposing of trees should be attentive to these objectives as well.

2. Consider encouraging local milling site(s) to process urban tree sections of removed trees which may be suitable for sawlogs.
   a. This could provide greater community program support by providing more jobs.
   b. Local milling of urban sawlogs also contributes to greater economic base by reducing disposal costs.
3. Consider a City policy giving the woodworking community access to urban sawlogs.
   a. Reusing material that would have otherwise been disposed, allows the woodworking community to promote “green” or “environmentally friendly” wood product usage by converting these sawlogs with their hobby or work.
   b. The use of urban sawlogs is profitable for the woodworking community and provides them with opportunities to work with species, quality, or grain of wood that might not be available otherwise.
4. Recognize the environmental benefits of utilizing urban woody green waste on both local and regional levels.
   a. Keeping trees out of the dump saves critical landfill space and reduces pollution that associates with the breakdown of materials.
   b. Greater utilization of urban woody green waste reduces the amount of material used for firewood or burned at dumps and will create less pollution and CO^2 production.

Performance Standards

Include a section in the annual report discussing the status of Objective 2. Report on the adoption of the policies and determine if it is being followed. Include any recommended changes.

4.10 Infrastructure Coordination

This section recognizes the importance of integrating new and existing infrastructure within the urban forest.

Recommendations

4.10.1 Evaluate City policies and standards for construction and engineering of roads, sidewalks, parking lots, bus stops, and utility right-of-ways to identify conflicts with urban forests and recommend administrative and policy changes.

Objectives

1. Consider a coordinated design policy and any additional actions which support this objective. Consider the following elements:

General Elements

a. Integrate planned construction with existing and projected trees during the design stage. Approved projects should minimize impact to existing trees and should ensure that future plantings will have adequate room and healthy soil to grow.
b. Install new utilities around the identified optimal locations of trees, so as not to negatively impact their growth.

Street Tree Elements

a. Review the research on the effectiveness of root shields with an effort to identify better methods of calculating root space needs and potential impacts on adjacent hardscape.
b. Design parking lots with aesthetic curves, traffic islands, setback areas, pavement cutouts, turnarounds and other traffic-calming devices that allow for additional trees to be included.

Building Tree Elements

a. Plant trees between 5 and 50 feet away from houses (depending on the size of the tree) to avoid conflicts with the building, while still allowing them to effectively provide shade.

Surface Conditions

a. When planting new trees adjacent to existing or proposed hardscape areas, permeable paving options such as open planting areas, porous pavers, and porous pavements should be considered.
b. Permanent, non-permeable coverings are not recommended for use on parkways near trees.
c. Identify infrastructure conflicts and costs.
d. Produce an annual report outlining the results of this objective.

Performance Standards

1. Include a section in the annual report assessing whether infrastructure conflicts have been reduced through the adoption of infrastructure coordination policies. It is difficult to gauge the success or failure of a tree by infrastructure because roots and other conflicts do not generally appear for at least 5 years after a tree is planted.
2. Include a section in the annual report assessing the fiscal impact of the policy. The costs resulting from the policy may be compared with the lifetime cost of conflict mitigation for a similar tree in a similar situation elsewhere.

4.11 Urban Heat Island Mitigation

When pavement is shaded by the crowns of mature trees it‘s useful life may be extended, ultimately reducing the costs of replacement. Shaded vehicles have cooler interiors and fuel tanks, improving their safety, energy efficiency, comfort and lifespan. External air temperatures are dramatically cooler which makes commercial and retail environments more comfortable for shoppers and can also stimulate visitation. Cooler

exterior temperatures also reduce the energy needs of buildings for air conditioning, especially in summer when energy demands for cooling are generally high.

Municipalities may adopt a standard for a percentage of shade cover for commercial and public areas to be planted with shade trees. A standard for Urban Heat Island Mitigation recommended by the Center for Urban Forest Research is 50% shade coverage. In Goleta's Architectural Standards for Commercial Projects, part 4, it is stipulated that vegetation shall be used to "reduce the effects of heat and glare on pavement" and in order to achieve that goal that there shall be one tree planted for every 8 parking spaces planned. Nothing is indicated as to the species, size, or minimum effective shade cover required of planted trees in those guidelines.

Recommendations

4.11.1 Evaluate measures to increase shade coverage of new parking lots.

4.11.2 Consider measures for retrofitting existing public parking lots and large paved areas with shade trees.

Objectives

1. Consider using established guidelines from other communities.
2. Prepare shade coverage policy/recommendation for consideration by City Council.

Performance Standards

Annually report a summary of the progress of tree shade coverage in public areas including an estimation of the success of the program's procedures in achieving its objectives.

4.12 Tree Risk Management

All trees have a potential element of risk. For example, roots can push up on sidewalks creating trip hazards, fruits and debris can drop on walkways, or tree branches might grow into overhead lines. However, an effective risk management program created by specialists and arborists ensures proper management of trees to allow for healthy and attractive communities while reducing the risks associated with tree-infrastructure conflicts.

Certain areas within Goleta have been designated as high wildland fire hazard areas, including areas north of Cathedral Oaks Road, portions of the Winchester Commons subdivision, and the Bacara Resort property. Figure 5-2 of the General Plan includes a map showing the wildland fire hazard areas within the City of Goleta.

The City is currently working to develop a Wildland Fire Study. The City Arborist should be consulted during the development of the plan and informed where the plan involves tree management procedures to reduce fire risk. The City Arborist should work with local fire authorities and within the plan to reduce danger to urban areas and adopt best management procedures in areas of high risk.

Recommendations

4.12.1 Consider a proactive public tree risk management program to minimize dangerous conditions on public property.

4.12.2 Coordinate the public urban tree risk management plan with the Wildland Fire Study currently under development by the City.

4.12.3 Implement defensible space procedures in high fire hazard areas identified by the County Fire Department.

Objectives

1. Continue a tree risk assessment program which will systematically evaluate the potential for a City tree or one of its parts to pose a threat to the people or property. A risk assessment program should contain the following:
   a. Timely inspections prescribed by the arborist keeping in mind budget and staff;
   b. Evaluation of tree defects which usually consists of the standard visual inspection from a ground survey;
   c. Evaluate site conditions to understand the significance influence certain factors can pose to tree failure; and
   d. Evaluating specific targets will take into consideration the activities associated with the area as well as how frequently and intensely the location is used.
2. Consider a tree failure rating system that allows the arborist to rank the relative risks posed by each tree within a public area so evaluations can be systematically implemented. Trees that are determined to pose an immediate risk should be removed or otherwise altered, as deemed appropriate by the City Arborist.
3. Consider a tree emergency plan that details preparations to be taken before and actions to be taken after storms, floods, or other emergencies that can result in hazardous situations involving trees.
4. Implement recommendations of City Wildland Fire Plan.
5. Continue implementing tree risk reduction practices:
   a. Pre-planning that takes into account both site and tree factors
   b. Proper and regular maintenance practices.

Performance Standards

1. Include a section in the annual report assessing the status of the tree risk management program.
2. Include a section in the annual report assessing the progress made in implementing an emergency plan, along with any additional recommendations.

4.13 Pest and Disease Management

Although trees are adapted to coping with environmental stresses such as shading and competition for water and nutrients, many of these stresses can make them more susceptible to insects and diseases. To avoid using harmful and costly treatments such as pesticides or removal, the adoption of a proper Plant Health Care program is critical. The purpose of Plant Health Care is to maintain and improve the vitality of trees through effective environmentally sensitive practices and treatments. Plant Health Care

programs are regularly executed by an arborist who performs appropriate diagnostics and maintenance.

Recommendations

4.13.1 Take regular preventive measures against pest and disease problems by following the Integrated Risk Management Process for pest management in City trees.

Objectives

1. Consider developing a Plant Health Care program specific to the City of Goleta
2. Continue regular tree monitoring and maintenance to detect early stages of pest issues so that cost-effective and environmentally sound practices can be used as treatment.
3. Recognize that the least toxic treatment used for a particular insect or disease will depend on the species involved, extent of the problem, budgeted resources, and a variety of other factors which will be addressed by the City Arborist.

Performance Standards

1. Inventory the number of trees having instances of pest and disease related problems. This data will be collected during regular monitoring sessions.
2. Annually assess the number of trees that have been successfully treated.

4.14 View Corridors

Section 6 of the Goleta General Plan, Visual and Historical Resources, stipulates that trees shall be planted and preserved in order to develop and maintain the aesthetic properties along roadways. Trees are integral to beautiful natural views of natural landscapes and agricultural land. Trees also enhance views because they screen buildings, roads and other man-made structures. Any developed roadway can become a scenic corridor and has the potential to increase Goleta's beauty and property values.

In order to preserve views of the foothills, coastal bluffs, and scenic agricultural land trees along scenic corridors should be planted so as to avoid view blockage. Tree canopies along roadways are normally pruned to 14' above the ground to avoid interference with large vehicles, and to provide a clear view for motorists.

Diversity of species is important to views, i.e. deciduous trees lose their leaves, and evergreens can provide screening from undesirable views. A larger variety of sizes, canopy densities and color provides screening or see-through. These elements preserve a more natural view, and provide durability to the urban forest as it ages.

Recommendations

4.14.1 Recognize the capability of trees in affecting the aesthetic quality of views along public right-of-ways.

4.14.2 Consider planting a diverse number of species, densities, sizes, deciduous, and evergreen trees along scenic corridors that will enhance views.

Objectives

1. Establish a formal process for review of view corridor conflicts involving trees.
2. Produce an annual report outlining the results of Objectives 1.

Performance Standards

Number of view conflicts brought to the attention of the City Arborist for resolution.

4.15 Heritage Trees

Irreplaceable and significant urban trees in good health and of stable form are substantial components to the history of each urban forest. These trees, known as heritage trees, are considered outstanding because of their size, form, age, color, rarity, genetic constitution and/or shape. They can also be a distinctive landmark to a community; a specimen associated with a historic person, place, event or period; a representative of a crop grown by ancestors and their successors that is at risk of disappearing from cultivation; a specimen recognized by members of a community as deserving heritage recognition. Heritage trees also increase the prestige of the community and they play a vital role in maximizing environmental benefits.

The Witness Tree, a 250 year old Sycamore located in the patio of the Sizzler Restaurant on Hollister Avenue has been recognized as a historically significant tree by several historical organizations, but it is not a publically protected tree. No trees have been designated as heritage, historical, or significant since the City has formed, and there is no process for protecting any Heritage tree or tree of significance on public or private property. A list of potential Goleta Heritage tree sites is identified in Appendix B.

Recommendations

4.15.1 Consider adopting procedures for defining, designating and incentivising the protection of Heritage/landmark trees.

4.15.2 Consider future policies or ordinances that protect Heritage trees.

Objectives

1. Protection and Enhancement of Heritage trees in Goleta.
2. Develop a list of candidate Heritage/landmark trees.

Performance Standards

1. Implement standards to protect Heritage trees.
    a. Consider Heritage trees as an irreplaceable community resource.
    b. Trees designated by City as Heritage trees should be protected without regard to their location. A listing of horticultural information, photographs, and a location map of all designated landmark trees shall be maintained and updated by the City.
    c. Consider establishing Heritage Tree Criteria. Said criteria may include but not be limited to the following:
        1) A tree one hundred (100) years of age or more
        2) A tree or stand or trees which are of historical significance

3) A tree or stand of trees which is of a rare species and is unusual because of size, color, or blossoms
4) A tree or stand or trees which have unique characteristics of form or shape that contribute to the community skyline
5) A tree or stand or trees which are intended to become of future visual, cultural and/or historical significance
6) Trees having a 30" diameter at breast height (DBH) measured at 4.5 feet above the ground, or having 75% or more of the DBH of the current State champion tree of that species.

d. Designation as a Heritage Tree may be considered in any one of the following ways subject to approval by resolution of the City Council:
   1) An applicant may request such designation as part of any land use application. To do so, the applicant shall submit an expert evaluation by a landscape architect, certified arborist, certified urban forester, registered consulting arborist, historian or other expert as part of the application.
   2) A property owner may request such designation at any time.
   3) The City Arborist may make such designation as part of an overall tree protection planning program for the City or portion thereof as staff may request.

4.16 Trees and Economic Development

Merchants may focus on the direct costs of revitalization projects and overlook the long-term benefits of maintaining the trees lining their place of business. Healthy and well-maintained trees within business districts send positive messages to consumers and ultimately increase the quality of their shopping experience through a number of ways: providing amenity and comfort, encouraging interaction with merchants, increasing the quality of products, and a project a positive view on the maintenance and upkeep of a business from the consumer's standpoint. Recent case studies highlight the importance of shaded versus non-shaded sidewalks in attracting customers and also illustrated that districts with trees had increased positive reviews about the quality of products being sold.

Also, trees in business districts positively influence patronage behavior by increasing consumers' willingness to travel further to shop, increasing their duration and frequency of visits, and increasing their willingness to pay for parking.

Effective pre-planning processes should be enforced so that the value of large trees can be maintained within business district despite ongoing or future City projects that would otherwise force the removal of these trees. By accommodating the needs of trees during the pre-planning process, opportunity for providing large shade trees at lower costs can be increased, especially in redeveloping business districts.

Recommendations

4.16.1 Consider planting large shade trees in commercial and business areas as an economic development measure, particularly within Old Town Goleta.

4.16.2 Accommodate trees during early infrastructure design of City projects.

Objectives

1. Improve the pre-planning process of City projects in business districts by involving trees in the early design stages.
2. Implement tools to accommodate the future needs of large trees located in business districts.

4.17 Tree Advisory Board

A Tree Advisory Board could provide advice to the Community Services Director and the City Council on how to plan and implement a City urban forestry management program. The mission of the board could include advising, administration and management of City UFMP. A formal tree advisory board is an essential part of qualifying for an annual Tree City USA Award and associated grant funding.

Recommendations

4.17.1 Develop a volunteer Tree Advisory Board to advise the City staff and City Arborist in developing plans and goals for the Goleta Urban Forest, represent the interests of the community, work to resolve conflicts between community members and Urban Forestry policy, and inform the community of the Urban Forestry program.

Objectives

1. A Resolution creating a Tree Advisory Board should identify:
   a. Number and qualifications of members, including at minimum one certified arborist/certified urban forester/ registered consulting arborist professional.
   b. Terms of office including provisions for staggered terms, succession and vacancies, and procedures for perpetuation of the Board.
   c. Duties and responsibilities to citizens, City staff and City Council.
   d. Operational provisions detailing the choosing of officers, making of rules, keeping of records, meeting requirements, and the constitution of a quorum, conflict of interest, etc.
   e. Scope of responsibilities.

Performance Standards

1. After the creation of a Tree Advisory Board, a section will be included in the annual report assessing its performance including:
   a. Determine whether the Board is discharging its duties as per its enacting Resolution or bylaws.
   b. Identify any overlapping duties with other committees, boards or agencies and determine whether or not there is a conflict.

5.0 Urban Forestry and Regional Planning

This section recognizes that urban forestry issues extend beyond the borders of the City of Goleta. There are numerous legally mandated and cooperative regional organizations of which the City is a member or participant in that deal with issues that are affected by urban forestry.

This section addresses the process by which urban forestry issues within and outside of the City of Goleta can be more effectively addressed by officials representing the City in the agencies dealing with air quality, storm water management, energy conservation, green house gas reduction and utilities.

5.1 Air Quality

Trees have the unique ability to sequester carbon dioxide and remove particulate pollutants from our atmosphere and clean our air. Thus, trees represent a significant part of any air quality program and there are many ways to implement their benefits. The City of Goleta is part of a regional agency which monitors and regulates air quality through the air quality plan put forth every three years.

Recommendations

5.1.1 Determine the ability of the urban forest to sequester carbon emissions and particulates and provide a better quality and cleaner air for all.

5.1.2 Recognize that the actions taken now to promote the planting of trees could have impacts on the air quality maintenance plan.

Objectives

1. Consider supporting revisions to the 2010 or future versions of the Clean Air Plan put forth by the Santa Barbara County Air Pollution Control District to include the following:
    a. Add the general reporting protocol used by the California Climate action registry to calculate and report the sequestration and the emissions of the new trees planted. Used as a mechanism for the impact of carbon emissions.
    b. Also record other particulate ratings and data from the reporting protocol.

5.2 Storm Water Management

Trees act as vertical rainwater filtration systems during storms as they collect the water around their radius through their roots, and then transpire that water through their leaves back into the atmosphere. Trees also capture the energy from rainfall and dissipate it, thus reducing run off and erosion. The filtration process slows down the speed of storm water allowing trees more time to capture dirt, chemicals and pollutants. This integration of urban forestry techniques into urban watershed planning acknowledges the importance of trees and forests in protecting water resources. With limited space in urban areas, trees provide the most cost effective way to manage storm water. The City of Goleta has recognized this already in their latest version of the Storm Water Management Plan approved by the Central Coast Regional Water Quality Control Board. The plan references the urban forest and its importance in helping reduce storm water runoff. The plan focuses on implementing the best management practices

intended to reduce the discharge of pollutants from the City and protect downstream water quality to the maximum extent practicable.

Recommendations

5.2.1 Recognize the short and long term value of the urban forest in storm water management through urban forestry projects that reduce storm water run-off, recharge groundwater, reduce stream channel erosion and improve soil and water quality.

Objectives

1. Reduce impacts associated with BMPs including but not limited to the following:
   a. Increase the canopy coverage of trees to intercept the amount of rainfall that hits the ground.
   b. Allow for full root development by allowing the most space possible for tree expansion.
   c. In areas not inhibited by people and not in a high fire hazard, allow for trees to naturally shed leaves. This creates duff, and leaves on the ground allow further absorption of rainwater.
   d. Design pavement areas to allow the flow of storm water to travel toward the closest trees and use water-permeable surface materials to give the roots the possibility of maximal absorption.
2. Reduce stream channel erosion by implementing the following considerations:
   a. Plant trees along hills and stream bank sides to prevent the erosion of soil and sediment by stabilizing the soil and by dispersing raindrop energy.

Performance Standards

1. Include a section in the annual report assessing the progress made in the adoption of the new system, along with any additional recommendations.
2. Determine if the objectives mentioned above are implemented and meet the standards of the new tree board.
3. Conduct feedback reports with coalitions in debris collection.

5.3 Energy Conservation

Money saved is one of the most overlooked benefits associated with strategically planting trees. With the right type of tree planting design, the shade from trees can reduce air conditioning costs during the summer, block the cold wind during the winter and extend the life of buildings, windows, driveways, patios, porches, and swimming pools.

The City of Goleta recognizes that trees play an important role in energy conservation. There are tips concerning the benefits of shade trees on the City's website. Utilizing a tree benefits estimator can persuade homeowners to plant trees around their home, thus reducing their costs by saving money on heating and air conditioning.

Recommendations

5.3.1 Consider amending the City of Goleta's energy plan in conjunction with the South

Coast Energy Efficiency Partnership to recognize the importance of long term urban forest benefits, i.e. more than 5 years.

5.3.2 Combine landscape planning with urban forest planning to maximize the potential energy conservation benefits of trees.

Objectives

1. Increase the canopy coverage of the urban forest to increase the shade it provides.
2. Place new and mature trees to provide shade to streets, buildings, parking lots and pedestrians.
3. Consider the use of a computer model to estimate the amount of energy savings and the amount of CO2 removed by one tree planted.
4. Encourage planting of deciduous trees where they are most effective in reducing energy use.
5. Avoid planting trees on the southern sides of buildings that would interfere with solar access.

Performance Standards

1. Include a section in the annual report assessing the progress made in achieving these objectives.
2. Include annual changes and growth trends of the urban forest in the annual report.
3. Determine if local policies are approved by local, environmental and energy efficiency boards.
4. Include in the annual report an estimation of the carbon sequestration due to newly planted trees.

5.4 Greenhouse Gas Reduction

Trees are composed of carbon. Large woody trees have been recognized to sequester a great deal of carbon for long periods of time. Several state and national agencies have developed protocols for identifying how to measure the carbon sequestration of trees and how to secure carbon credits for reducing greenhouse gases**.**

Recommendations

5.4.1 Recognize the relationship between urban forestry and the Greenhouse Gas emission reduction goals through the use of models such as those available through the California Climate Registry.

Objectives

Maximize the benefits and limit the costs of maintaining a healthy urban forest. Determine baseline data that will allow the City to more accurately gauge its progress in carbon sequestration.

Performance Standards

Consider using national and state programs such as the California Climate Registry to estimate greenhouse gas emission reductions associated with the planting of new trees.

5.5 Utilities

Southern California Edison is responsible for maintaining a safe electrical grid by managing the trees closest to their power lines. There are overlapping responsibilities between some public trees that are the responsibility of the City to maintain, but may also be within an electrical easement and thus are also the maintenance responsibility of Southern California Edison. Close coordination between Southern California Edison and the City is necessary to maintain effective working relationships.

Recommendations

5.5.1 Develop ongoing coordination between utility representatives and City officials to insure continued utility service while maintaining and supporting appropriate urban forestry.

Objectives

1. Avoid topping trees when possible and implement the correct pruning techniques to avoid interference with nearby overhead utilities.
2. Consider tunneling the lines, thus avoiding, to the maximum extent, severing pre-existing roots. Minimize trenching adjacent to existing trees through use of alternative measures.
3. Consider underground utility alignments that minimize impact to public trees.
4. Forming a utility partnership and improving maintenance by public utility companies will help earn Goleta the Tree City USA Growth Award, and the utility company the Tree Line Award.

Performance Standards

Include a section in the annual report assessing the progress made in the adoption of the new system, along with any additional recommendations.

6.0 Goleta Urban Forest Resources

6.1 Community Services Urban Forestry Personnel and Budget

An effective management program will follow good risk management practices that use appropriate contract requirements for all tree care work, and initiate an open and easy-to-use computerized tree inventory process.

<u>Professional Staff</u>

Currently the Goleta Community Services Parks and Open Space Manager, a Certified Arborist, is designated as the City's Arborist. Young and mature tree maintenance within the City of Goleta is done under contract with private sector firms specializing in tree care. The hazardous nature of the work requires special equipment and training. By contracting for services, the City can meet its tree care needs effectively while retaining budgetary control.

<u>Budget</u>

While a separate urban forest budget is not specifically identified, the line items of various components of the City budget can be combined to compile an estimated

annual urban forest budget of approximately $300,000. This amount more than qualifies the City for meeting a Tree City USA requirement to maintain a minimum $2 per capita annual tree care budget.

Budget Assumptions

The current budget for the City's UFMP covers annual street tree maintenance, medians, parks and open space trees, pest, disease, risk management and exceeds $300,000 per year.

Recommendations

6.1.1 Encourage certified arborists to assist in the implementation of Goleta's Urban Forestry program.

6.1.2 Insure that Urban Forestry program funding will be sufficient to meet minimum standards for annual Tree City USA Awards.

Objectives

1. Professional staff members should have the education, training and experience in the fields of urban forestry, arboriculture, and/or horticulture. These requirements are intended to ensure that the person with the primary responsibility has the ability to professionally manage the urban forest's resources and advance Goleta's Urban Forestry program.
2. Applicants desiring to plant, remove or modify trees in public areas within the City are required to submit their planting plan to the City before obtaining a City encroachment permit. If the City determines the plan to be acceptable, the City approves the planting plan and forwards recommendations to the City Engineer for issuance of an encroachment permit.

Performance Standards

1. City employees, contractors advising in the management of the Urban Forestry program, and consultants providing arboricultural consultation within the community shall meet one or more of the following criteria:
   a. A degree in urban forestry or a closely related field (e.g., forestry, horticulture, arboriculture, etc.).
   b. International Society of Arboriculture (ISA) Certified Arborist, Municipal Specialist, American Society of Consulting Arborists Registered Arborist, California Urban Forest Council Urban Forester, or equivalent certification.
   c. Other experience or training in municipal forestry.

6.2 Goleta Urban Forestry Program Professional Standards

There are practical and symbolic benefits gained by accreditation and through following accepted industry standards in urban forestry.

The Tree City USA award is sponsored by the National Arbor Day Foundation and coordinated with the CalFire State Urban Forester. To receive the Tree City USA award the following criteria must be met: The City must have a tree board or department, the City must have a tree ordinance or by-law, the City must have a comprehensive urban

forestry program supported by a minimum of two dollars per capita, and the City must make an Arbor Day proclamation and hold a commemorative tree planting at a public ceremony.

The Tree City USA Growth Award recognizes the additional achievement and encourages higher level of tree care in addition to the minimum Tree City USA qualifications.

Recommendations

6.2.1 Continue to maintain accreditation in the annual Tree City USA program.
6.2.2 Achieve and maintain accreditation in the Tree City USA Growth Award.
6.2.3 Identify new or updated professional standards and make recommendations for their inclusion within the City of Goleta Urban Forestry program.

Objectives

1. Recognize city agencies and private companies that follow American National Standards Institute (ANSI) tree care standards, and identify areas of improvement to make adoption of ANSI standards more widespread.

Performance Standards

1. Ensure that standards adoption is recognized and progress is made year-to-year.
2. Include a section in the annual report assessing the progress made in meeting/retaining each of the professional standards, and develop further recommendations to ensure further progress.

6.3 City of Goleta Interdepartmental Coordination

Effective interdepartmental coordination requires various City departments to consider the impact of their projects on the urban forest. Ongoing identification of potential conflicts is recommended.

Recommendations

6.3.1 Recognize the impact of all City departments on the urban forest and the importance of developing collaborative solutions that preserve the interests of both the urban forest and entire City.

Objectives

1. The City should provide a copy of the Goleta Urban Forest Management Plan to all City departments.
2. Routine communications should take place between City departments regarding the planting, protection and maintenance of the Goleta urban forest.

Performance Standards

1. Include a section in the annual report discussing the impact of the explanatory document and regulations.

6.4 Planting of New and Replacement Trees Annual Targets

An effective tree planting program sets annual targets, pursues good record-keeping practices to measure success, plants the right tree in the right place, and is supervised by a certified arborist. The Goleta Urban Forest Management Plan provides guidance on locating, planting and caring for public trees within the City of Goleta. Successful implementation of the plan requires providing for the trees' long-term viability and maximizing as many environmental benefits as practicable.

Computer models comparing current City of Goleta public tree inventories to vacant locations identified approximately 2,900 potential park (600) and street trees (2,300) within the City. The number of trees to be generated by new development within the City of Goleta is not included in total potential new trees. Not every vacant site can be planted. Some sites will not be suitable due to conflicts with utilities, setbacks, view corridors and lack of owner acceptance. If an adjacent homeowner is unwilling or unable to care for a new tree during its establishment period, the City will not plant a tree at that location. To recognize these constraints, the total number of sites is reduced by 20% (580) for a total of approximately 2,300 vacant sites suitable for planting. Non-City public jurisdictions such as CalTrans, Southern California Edison and School Districts are also not included in these totals.

The City of Goleta added 209 additional trees to the street tree inventory in 2010 primarily through the efforts of non profits funded by grants and donations. A voluntary public tree planting program in the City of Goleta will require more extensive outreach and education among Goleta residents, as well as coordinated cooperation among City staff and urban forestry volunteers and professionals.

Recommendations

6.4.1 Recognize the importance of annual targets to a successful tree planting program.
6.4.2 Consider an annual target of planting 100 new public trees a year.
6.4.3 Consider a target of planting all 2,300 vacant public tree sites within 24 years.
6.4.4 Establish a goal of replanting any failed tree within one year subject to site availability.

Objectives

1. Annually identify tree planting targets including:
   a. Location and number of planting sites available
   b. Projected number of species of trees to be planted during the year.
2. Every five years produce a list of projected number of trees to be planted during the next 10 years.
3. Publicize the targets document to all agencies and organizations which plant public trees.
4. Enact the necessary policies and or ordinances to ensure that public trees are planted within budgetary constraints.
5. Work with non profits to assist in leveraging fiscal and volunteer resources for young tree planting and care.

Performance Standards
Use records of trees planting during the year to assess if the projected number of trees were planted.

7.0 Urban Forestry Education, Outreach and Partnerships

7.1 Public Outreach/Education

While many Goleta homeowners enjoy the aesthetic and environmental benefits of large shade trees, those residential areas directly affected by deteriorated hardscape that occurred before the City was formed, have seen many large street trees removed, parkways paved over, or new trees being planted mostly without formal government approval. These actions are evident by the large number of species present that are not identified on adopted street tree lists, and the number of parkways without trees covered with impervious surfaces.

Public support comes in the form of the public's perception regarding the Urban Forestry program. Public support is necessary in order to obtain the funding necessary to pay for street tree management. Public support can be enhanced through a wide variety of public relations programs including personal outreach by staff during the course of their daily activities, and public information distributed through the City's website, the Monarch Press and during community events.

Recommendations
7.1.1 Encourage wide public participation in the implementation of the GUFMP.
7.1.2 Recognize the benefits of adopting an open and accessible computerized tree inventory system.
7.1.3 The City should seek to identify and support diverse public leaders to serve as spokespeople for urban forestry.

Objectives
1. Ensure that new inventory is publicly available for viewing and incorporate the public in keeping the inventory up to date.
2. Promote participatory approaches in all urban forestry projects.
3. Keep all interested citizens informed of opportunities through City newsletters and other appropriate publication.
4. Consider the economic values of community trees and forests.
5. Widely distribute "best management practices" for preserving trees during construction.
6. Educate public about State, regional and local laws to encourage compliance.
7. Develop and distribute a general press kit and timely news releases concerning urban and community forestry issues to local groups.
8. Distribute existing educational resources and curriculum on teaching about urban forestry in our schools.
9. Partner with local schools to implement urban forestry projects.
10. Demonstrate cost effectiveness of regular maintenance.

Performance Standards
Include a section in the annual report assessing the progress made in the adoption of the public tree inventory system, along with any additional recommendations.

7.2 Nonprofit Urban Forestry Partnerships

Many city urban forestry programs began through the efforts of local citizens groups, and these groups often serve as a catalyst to encourage active local urban forest resource management for the long term. Presence of advocacy and/or advisory groups actively operating within a community is used by the Forest Service Urban and Community Forestry program as a benchmark to measure community urban forest management performance.

Non-profit groups are active in Goleta to advocate and participate in the planting, protection and maintenance of urban and community trees and forests. These organizations ensure that community residents and program stakeholders are informed, educated, and engaged in the development and implementation of a sound urban forestry program.

The City of Goleta partners with numerous public and nonprofit organizations to support public trees. Volunteers may be used to assist City Departments in managing the Urban Forestry program on an as needed basis.

Recommendations

7.2.1 Acknowledge and encourage the efforts of nonprofit groups to provide urban forestry services and community outreach.

Objectives

1. Increase community awareness and support for urban forestry
2. Consider use of volunteer labor for urban forestry programs.
3. Bring together professionals in training and networking events.
4. In cooperation with all stakeholders, develop and promote a consistent set of standards and policies.
5. Promote cooperation and understanding among stakeholders.

Performance Standards
Identify annual value of support from nonprofit organizations.

7.3 Professional Urban Forestry Partnerships

Professional urban forestry groups provide support for establishing and upgrading professional standards among tree care professionals working within the City of Goleta. Active professional organizations with an interest in urban forestry include the following;

Western Chapter International Society of Arboriculture - The Western Chapter ISA is a member driven organization dedicated to fostering a greater appreciation for trees by promoting research and education to advance the professional practice of arboriculture.

Central Coast Urban Forest Council
The California Urban Forest Council is a nonprofit organization dedicated to supporting urban forestry to improve communities. The mission of the Central Coast Urban Forest Council (CCUFC) is to promote the health, vitality and stewardship of urban and community forests throughout Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz and Ventura Counties. CCRUFC is one of seven Regional Urban Forest Councils that make up the California Urban Forest Council, the oldest statewide urban forest advocate group.

American Society of Consulting Arborists
The American Society of Consulting Arborists (ASCA) is the industry's premier professional association focusing solely on arboricultural consulting. The role of the Consulting Arborist is to bring a comprehensive, objective viewpoint to the diagnosis, appraisal and evaluation of arboricultural issues.

Recommendations

7.3.1 Acknowledge and encourage the efforts of professional urban forestry groups to provide urban forestry services and community outreach.

Objectives

1. Increase community awareness and support for urban forestry.
2. Consider use of volunteer labor for urban forestry programs.

Performance Standards

Identify annual value of support from professional organizations.

7.4 Government and Public Agency Partnerships

United States Department of Agriculture, Forest Service, Urban and Community Forestry This department works to protect more livable communities by caring for trees where people live, work and play. Urban and Community Forestry (UCF) is a cooperative program of the US Forest Service that focuses on the stewardship of urban natural resources. With 80 percent of the nation's population in urban areas, there are strong environmental, social, and economic cases to be made for the conservation of green spaces to guide growth and revitalize city centers and older suburbs.

CalFire Urban Forestry - Urban and Community Forestry Under the authority of the Urban Forestry Act (PRC 4799.06 - 4799.12) the Urban Forestry Program offers grants to plant trees and for related projects in urban communities throughout California. Seven Urban Forestry Field Specialists provide expert urban forestry support to communities, nonprofit groups and other municipal governments to create and maintain sustainable urban forest.

The mission of the California Department of Forestry and Fire Protection's Urban Forestry Program is to develop a regional and statewide cooperative effort to advance the development of sustainable urban and community forests. This mission is

accomplished in cooperation with many groups including California ReLeaf, a nonprofit organization that coordinates grants to local groups, urban forestry researchers and educators including the USFS Center for Urban Forest Research located in Davis and the Urban Forestry Ecosystem Institute at California Polytechnic in San Luis Obispo, the California Urban Forest Council, power and utility companies, municipal arborists and professional organizations. Together they discuss trends, address concerns, develop suggestions for consideration by CAL FIRE management, and provide support and information to their local communities on urban forestry issues.

California's State Urban Forestry Program also works with our Fire Prevention Program in advocating fire-safe landscaping for homeowners and communities.

Recommendations

7.4.1 Acknowledge and encourage the efforts of government and public agency partnerships to provide urban forestry services and community outreach.

Objectives

1. Increase community awareness and support for urban forestry.
2. Consider use of technical expertise for urban forestry programs.

Performance Standards

Identify annual value of support from governmental and public agency organizations.

8.0 Goleta Urban Forest Ordinances and Enforcement Program

In general, the City adopts ordinances to provide for effective enforcement of various public policies. The City also has specific ordinances dealing with the protection of native trees in environmentally sensitive habitat areas (ESHA). Upon incorporation, the City inherited the County's tree ordinance. This ordinance needs additional refinement in order to provide specific enforcement for policies identified in the General Plan. The City's ordinances provide legal support to City staff in dealing with public trees.

Permitting is an important part of protecting the public while work is being done in the public right of way. It assures that work is performed safely and meets the minimum City standards. A permit also helps avoid conflicting work within the public right of way. The Community Services Department manages and administers encroachment permits for a variety of uses of the public right of way. Generally, the public right of way begins at the sidewalk and includes the parkway planting strip (which may be on either side of the sidewalk, the curb, and roadway surface.

Some homeowners have planted trees and other landscape in public parkways. As a result, the City's tree inventory reflects a wide diversity of trees that were not part of a County or City authorized permitting process. The City's Community Services staff is responsible for monitoring and enforcing City ordinances related to right of ways through regular surveys and response to public requests.

An effective enforcement program will allow for the development of the necessary

ordinances to implement the Urban Forest Management Plan, and invest authority with City staff to enforce the ordinances that follow from this Plan.

Recommendations

8.0.1 Consider ordinances and policies in order to successfully implement the GUFMP.

Objectives

1. Approve a timeline for the completion of each ordinance as identified in this Plan that is necessary and appropriate for the Plan's implementation.
2. Consider ordinances to prevent destructive pruning practices. Consider the following actions:
   a. Ban the topping of trees on public land.
   b. Prohibit damage to the branch collar of a tree when pruning.
   c. Prune public trees effectively while young so as to minimize maintenance when the trees are mature.

Performance Standards

1. Include a section in the annual report discussing the progress made in preparing ordinances, securing their approval by City Council, and the effectiveness of implementation.
2. Include a section in the annual report discussing the success of these Objectives.

9.0 Financing Recommendations

This document recognizes that, despite the many benefits and services that an urban forest offers, the amount of funding for urban forestry is subject to available funding from the City's limited financial resources. While this document clarifies existing urban forestry programs and proposes new programs and standards, the implementation of these programs can occur under current funding. A well-managed urban forestry program supported by a long term management plan may result in fewer maintenance costs over time while increasing the number of trees in the City's inventory.

While the City concentrates on a more effective and efficient management of its existing urban forest inventory, the City can take advantage of partnerships with nonprofits, developers and restoration specialists to create and expand the urban forest of tomorrow. These partnerships will be necessary to assist the City in developing the resources to implement this Urban Forest Management Plan.

In order to support the financing required to implement a successful urban forest management plan, it is important to understand the value that trees in general provide the community.

Recommendations

9.0.1 Recognize the monetary value of trees and incorporate this understanding into City's decision-making.

9.0.2 The Goleta Urban Forestry program funding should be sufficient to achieve the services outlined in this report.

Objectives

1. Dedicated public financing for urban forestry be increased and sustained subject to budgetary constraints.
2. Encourage collaboration to increase buying power for urban forestry products and services.
3. Encourage collaboration to market urban forest products including municipal wood waste.
4. Identify and promote successful partnerships and new revenue sources.
5. Encourage more partnerships with utilities companies.
6. Create a City tree fund to accept in-lieu mitigation payments.
7. Advocate for sufficient compensation (i.e. full value remuneration) to the City when City owned trees are destroyed for construction, accidents, and other acts of tree destruction.

Performance Standards

Include a section in the annual report that identifies how these objectives were met.

10.0 Summary of Recommendations

This section is a summary of each of the recommendations in the report. The resources that are estimated to implement the plan, as well as a recommended timeline are included as part of Appendix E. In order to provide ongoing information about the status of the Urban Forest Management Plan, an annual report prepared by the Community Services Director is recommended to assess timeliness of implementation efforts, decide if modifications are needed to the Plan, and make changes in resources, if they are needed.

Recommendations

10.0.1 The City should prepare an annual urban forestry report that recognizes progress made in implementing the Urban Forest Management Plan and identifies those portions of the plan requiring modification to meet the changing needs of the City's urban forest.

Objectives

1. Include a section in the report for each item of the Urban Forest Management Plan that requires it (specified in the Performance Standard of each item).
2. Recommend the addition or removal of items from the annual report as necessary.
3. Identify necessary changes to items in the Urban Forest Management Plan, and recommend them to be made in the next version of the Urban Forest Management Plan.
4. Identify any items in the Urban Forest Management Plan that are no longer necessary, and recommend their removal in the next version of the GUFMP.
5. Identify new items that may be necessary, and recommend their inclusion in the next version of the Urban Forest Management Plan.

Performance Standards

1. Ensure that all significant changes in the growth and maintenance of the urban forest are recorded and assessed.
2. Ensure that the Urban Forest Management Plan remains a consistent and effective document, but allows for necessary changes to be made.

Appendix A
Goleta Street Tree Species Frequency

This is a list of the 178 species and the number of each in the Goleta street tree inventory.

Botanical Name	Common Name	Total	Photo
Callistemon citrinus	LEMON BOTTLEBRUSH	606	Yes
Cupaniopsis anacardioides	CARROTWOOD	552	Yes
Liquidambar styraciflua	AMERICAN SWEETGUM	524	Yes
Schinus terebinthifolius	BRAZILIAN PEPPER	361	Yes
Pyrus kawakamii	EVERGREEN PEAR	348	Yes
Jacaranda mimosifolia	JACARANDA	332	Yes
Melaleuca quinquenervia	CAJEPUT TREE	313	Yes
Syagrus romanzoffianum	QUEEN PALM	260	Yes
Lophostemon confertus	BRISBANE BOX	251	Yes
Fraxinus uhdei	SHAMEL ASH	240	Yes
Geijera parviflora	AUSTRALIAN WILLOW	159	Yes
Fraxinus velutina 'Modesto'	MODESTO ASH	153	Yes
Callistemon viminalis	WEEPING BOTTLEBRUSH	138	Yes
Washingtonia robusta	MEXICAN FAN PALM	132	Yes
Prunus cerasifera	PURPLE-LEAF PLUM	127	Yes
Quercus suber	CORK OAK	125	Yes
Pittosporum undulatum	VICTORIAN BOX	119	Yes
Ulmus parvifolia	CHINESE ELM	107	Yes
Prunus caroliniana	CAROLINA LAUREL CHERRY	87	Yes
Trachycarpus fortunei	WINDMILL PALM	78	Yes
Podocarpus gracilior	FERN PINE	73	Yes
Ligustrum lucidum	GLOSSY PRIVET	65	Yes
Harpephyllum caffrum	KAFFIR PLUM	63	Yes
Magnolia grandiflora	SOUTHERN MAGNOLIA	62	Yes
Quercus ilex	HOLLY OAK	47	Yes
Archontophoenix cunninghamiana	KING PALM	43	Yes
Pinus radiata	MONTEREY PINE	38	Yes
Malus floribunda	CRABAPPLE	35	Yes
Zelkova serrata	SAWTOOTH ZELKOVA	31	Yes
Pistacia chinensis	CHINESE PISTACHE	28	Yes
Olea europaea	OLIVE	26	Yes
Ficus benjamina	WEEPING FIG	25	Yes
Yucca gloriosa	SPANISH DAGGER	25	Yes
Tristania laurina	WATER GUM	22	Yes
Erythrina caffra	KAFFIRBOOM CORAL TREE	21	Yes
Phoenix roebelenii	PYGMY DATE PALM	21	Yes
Cinnamomum camphora	CAMPHOR TREE	20	Yes

Eucalyptus torquata	CORAL GUM	20	Yes
Pinus canariensis	CANARY ISLAND PINE	20	Yes
Agonis flexuosa	PEPPERMINT TREE	18	Yes
Ginkgo biloba	MAIDENHAIR TREE	16	Yes
Other tree	OTHER TREE	16	Yes
Quercus agrifolia	COAST LIVE OAK	16	Yes
Juniperus chinensis 'Torulosa'	HOLLYWOOD JUNIPER	15	Yes
Pyrus calleryana	ORNAMENTAL PEAR	13	Yes
Unknown	UNKNOWN	13	
Acacia spp.	ACACIA	12	Yes
Arbutus 'Marina'	MARINA ARBUTUS	11	Yes
Fraxinus spp.	ASH	11	
Phoenix canariensis	CANARY ISLAND DATE PALM	11	Yes
Pinus pinea	ITALIAN STONE PINE	11	Yes
Albizia julibrissin	SILK TREE	10	Yes
Betula pendula	EUROPEAN WHITE BIRCH	10	Yes
Cassia leptophylla	GOLD MEDALLION TREE	10	Yes
Lagerstroemia indica	CRAPE MYRTLE	10	Yes
Brahea edulis	GUADALUPE PALM	9	Yes
Cupressus sempervirens	ITALIAN CYPRESS	9	Yes
Tipuana tipu	TIPU	9	Yes
Acacia decurrens	GREEN WATTLE	8	Yes
Eucalyptus polyanthemos	SILVER DOLLAR GUM	8	Yes
Prunus domestica	PLUM	8	Yes
Rhapiolepis 'Majestic Beauty'	INDIAN HAWTHORNE	8	Yes
Cedrus deodara	DEODAR CEDAR	7	Yes
Chamaerops humilis	MEDITERRANEAN FAN PALM	7	Yes
Dead Tree	DEAD TREE	7	Yes
Magnolia soulangiana	SAUCER MAGNOLIA	7	Yes
Myoporum laetum	MYOPORUM	7	Yes
Ravenea rivularis	MAJESTY PALM	7	Yes
Bauhinia variegata	PURPLE ORCHID TREE	6	Yes
Ceratonia siliqua	CAROB	6	Yes
Eucalyptus cinerea	ASH GUM	6	Yes
Eucalyptus citriodora	LEMON-SCENTED GUM	6	Yes
Eucalyptus spp.	EUCALYPTUS	6	Yes
Koelreuteria bipinnata	CHINESE FLAME TREE	6	Yes
Nerium oleander	OLEANDER	6	Yes
Pinus spp.	PINE	6	Yes
Schinus molle	CALIFORNIA PEPPER	6	Yes
Acer saccharinum	SILVER MAPLE	5	Yes
Ficus microcarpa 'Nitida'	INDIAN LAUREL FIG	5	Yes
Laurus nobilis	SWEET BAY	5	Yes
Prunus persica	PEACH	5	Yes

Robinia pseudoacacia	BLACK LOCUST	5	Yes
Washingtonia filifera	CALIFORNIA FAN PALM	5	Yes
Casuarina stricta	DROOPING SHE-OAK	4	Yes
Chorisia speciosa	SILK-FLOSS TREE	4	Yes
Fraxinus uhdei 'Tomlinson'	TOMLINSON ASH	4	Yes
Hymenosporum flavum	SWEETSHADE	4	Yes
Salix spp.	WILLOW	4	Yes
Sequoia sempervirens	COAST REDWOOD	4	Yes
Ulmus pumila	SIBERIAN ELM	4	Yes
Brugmansia spp.	ANGELS TRUMPET	3	
Calocedrus decurrens	INCENSE CEDAR	3	Yes
Caryota urens	FISHTAIL WINE PALM	3	
Cordyline australis	DRACAENA	3	Yes
Eriobotrya japonica	EDIBLE LOQUAT	3	Yes
Eucalyptus sideroxylon	RED IRONBARK	3	Yes
Juniperus chinensis	CHINESE JUNIPER	3	Yes
Metrosideros excelsus	NEW ZEALAND CHRISTMAS TREE	3	Yes
Neodypsis decaryi	TRIANGLE PALM	3	Yes
Parkinsonia aculeata	JERUSALEM THORN	3	Yes
Pinus thunbergiana	JAPANESE BLACK PINE	3	Yes
Pittosporum rhombifolium	QUEENSLAND PITTOSPORUM	3	Yes
Populus fremontii	FREMONT COTTONWOOD	3	Yes
Prunus blireiana	FLOWERING PLUM	3	Yes
Quercus spp.	OAK	3	Yes
Stenocarpus sinuatus	FIREWHEEL TREE	3	Yes
Acacia longifolia	SYDNEY GOLDEN WATTLE	2	Yes
Acacia melanoxylon	BLACK ACACIA	2	Yes
Acer palmatum	JAPANESE MAPLE	2	Yes
Alnus rhombifolia	WHITE ALDER	2	Yes
Brachychiton acerifolius	AUSTRALIAN FLAME TREE	2	Yes
Broussonetia papyrifera	PAPER MULBERRY	2	Yes
Carya illinoensis	PECAN	2	Yes
Chitalpa tashkentensis	CHITALPA	2	Yes
Eucalyptus ficifolia	RED FLOWERING GUM	2	Yes
Eucalyptus rudis	DESERT GUM	2	Yes
Koelreuteria paniculata	GOLDENRAIN TREE	2	Yes
Malus sylvestris	EDIBLE APPLE	2	Yes
Markhamia hildebrandtii	MARKHAMIA	2	Yes
Melaleuca spp.	MELALEUCA	2	Yes
Morus alba	WHITE MULBERRY	2	Yes
Palm spp.	PALM	2	Yes
Paulownia tomentosa	EMPRESS TREE	2	Yes
Persea americana	AVOCADO	2	Yes
Photinia fraseri	FRASERS PHOTINIA	2	Yes

Pinus edulis	PINON PINE	2	Yes
Pinus halepensis	ALEPPO PINE	2	Yes
Platanus racemosa	CALIFORNIA SYCAMORE	2	Yes
Podocarpus nagi	PODOCARPUS NAGI	2	Yes
Prunus armeniaca	APRICOT	2	Yes
Prunus ilicifolia	HOLLYLEAF CHERRY	2	Yes
Punica granatum	POMEGRANATE	2	Yes
Salix babylonica	WEEPING WILLOW	2	Yes
Zelkova serrata 'Village Green'	ZELKOVA VILLAGE GREEN	2	
Ailanthus altissima	TREE OF HEAVEN	1	Yes
Albizia distachya	PLUME ALBIZIA	1	Yes
Araucaria heterophylla	NORFOLK ISLAND PINE	1	Yes
Arbutus unedo	STRAWBERRY TREE	1	Yes
Bauhinia blakeana	HONG KONG ORCHID TREE	1	Yes
Broussonetia spp.	PAPERBARK	1	
Caesalpinia spinosa	BIRD OF PARADISE	1	Yes
Cassia excelsa	CROWN OF GOLD TREE	1	Yes
Chionanthus retusus	CHINESE FRINGE TREE	1	Yes
Citrus reticulata	TANGERINE	1	Yes
Citrus sinensis	ORANGE	1	Yes
Crinodendron patagua	LILY OF THE VALLEY TREE	1	
Cupressus macrocarpa	MONTEREY CYPRESS	1	Yes
Eucalyptus cladocalyx	SUGAR GUM	1	Yes
Eucalyptus viminalis	MANNA GUM	1	Yes
Ficus carica	EDIBLE FIG	1	Yes
Ficus elastica	RUBBER TREE	1	Yes
Ficus spp.	FIG	1	Yes
Fraxinus velutina 'Dr Pironne'	ASH ARIZONA	1	
Grevillea robusta	SILK OAK	1	Yes
Heteromeles arbutifolia	TOYON	1	Yes
Howea forsterana	PARADISE PALM	1	Yes
Juglans regia	ENGLISH WALNUT	1	Yes
Lagunaria patersonii	PRIMROSE TREE	1	Yes
Ligustrum japonicum	JAPANESE PRIVET	1	Yes
Magnolia stellata	MAGNOLIA	1	Yes
Maytenus boaria	MAYTEN TREE	1	Yes
Melaleuca styphelioides	PRICKLY MELALEUCA	1	Yes
Musa spp.	BANANA	1	Yes
Phoenix dactylifera	DATE PALM	1	Yes
Platanus acerifolia	LONDON PLANE	1	Yes
Prosopis glandulosa	MESQUITE	1	Yes
Prunus amygdalus	ALMOND	1	Yes
Pyrus communis	FRUITING PEAR	1	Yes
Quercus lobata	VALLEY OAK	1	Yes

Salix laevigata	RED WILLOW	1	Yes
Sophora japonica	JAPANESE PAGODA TREE	1	Yes
Syzygium paniculatum	BRUSH CHERRY	1	Yes
Tabebuia avellanedae	LAVENDER TRUMPET TREE	1	Yes
Tabebuia impetiginosa	PINK TRUMPET TREE	1	Yes
Tecomaria capensis	CAPE HONEYSUCKLE	1	Yes
Ulmus americana	AMERICAN ELM	1	Yes
Umbellularia californica	CALIFORNIA BAY	1	Yes
Yucca elephantipes	GIANT YUCCA	1	Yes
		Total: 6,261	

Non Species:

Vacant site		
Stump	VACANT SITE	2565
Not City Planted/Maintained	STUMP	34
Total: 2,629	NOT CITY PLANTED/MAINTAINED	30
	Grand Total: 8,890	

Height Frequency

Height	Total
---	2,566
01-15	1,420
15-30	2,531
30-45	1,958
45-60	392
60+	23
	Total: 8,890

DBH Frequency

DBH	Total
---	2,565
0-6	815
07-12	1,250
13-18	2,869
19-24	856
25-30	397
31+	138
	Total: 8,890

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Appendix B
Potential Heritage Tree Sites within the City of Goleta

The listed trees that are not within or visible from public right of ways are in private areas that require the permission of the owners to enter. Please respect trees in private areas by not trespassing.

Map #	Name	Location	Description
1	Witness Tree and Sister Witness Tree	5555 Hollister Avenue	Goleta's 250 year old Sycamore and 'twin' across the street
2	Sexton Historic Grove	5490 Hollister Avenue	Remnants of Sexton plantings from 1860's
3	Kellogg Ranch	100 S. Kellogg	Large Avocado and Oak examples
4	Orange Avenue Street Trees	Orange Avenue	Camphors from the 1930's
5	Goleta Community Center	5679 Hollister Avenue	Community Holiday Tree
10	Coronado Preserve/Ellwood Mesa	400 Coronado Drive	Eucalyptus serve as home for Monarch Butterflies
11	Santa Barbara Shores Park	7801 Hollister Ave	Remnants of Ellwood Cooper plantings from 1880's
12	Sandpiper Golf Course/Bacara	7925 Hollister Avenue via Access Road	Variety of Eucalyptus in parking area/Cypress at Beach
14	Evergreen Open Space	Evergreen and Brandon	Eucalyptus serve as backdrop for disc golf course
15	Bella Vista Open Space	Placer Dr and Mirano Dr	Excellent examples of massed Australian Willows

17	Bishop Ranch Grove	96 Glen Annie Road	1907 garden with 100 year old imported Specimens
18	Stow House Gardens and Al Turnbull Grove	304 N. Los Carneros Rd	Specimen plantings from the 1870's/ Oak Honor Grove
19	Lake Los Carneros	304 N. Los Carneros Rd	S of the dam is the largest local oak
20	Stow Grove	La Patera Lane	Picnic area for Stow family containing 300 Redwoods

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Appendix D
Five Year Projected Allocation of City Urban Forestry Staffing

The following table represents the estimated personnel resources necessary to complete the projects in this plan. These figures should be considered approximations of staff time needed and subject to change. The recommendations for staffing assumed existing staffing levels that total approximately full time equivalency of 0.7 of one position annually allocated to urban forestry issues. Additional City support and related staff are not included.

Section	Title	Year 1 FTE	Year 2 FTE	Year 3 FTE	Year 4 FTE	Year 5 FTE
1.0.	Introduction Section of Annual Report	.002	.002	.002	.002	.002
2.0.	Vision statement accomplishments in the Annual Report	.002	.002	.002	.002	.002
3.1.1	Inventory of the public trees for which the City of Goleta is responsible	.022	.022	.022	.022	.022
3.1.2	Annual inventory summary in the Annual Report	.002	.002	.002	.002	.002
4.1.1.	Canopy coverage-Tree canopy assessment:	.013	.000	.000	.000	.000
4.1.2.	Canopy coverage-Tree canopy policy refinements	.002	.000	.000	.000	.000
4.1.3.	Canopy coverage-Reassessing canopy/writing canopy section of report every 5 years	.000	.000	.000	.000	.000
4.2.1.	Age diversity-5 year tree age assessment	.000	.000	.000	.000	.013
4.2.2.	Age diversity-Writing administrative policies enacting estimated tree age data collection	.008	.000	.000	.000	.000
4.2.3.	Age diversity-Reassessing age distribution/writing age diversity section of annual report	.002	.002	.002	.002	.002
4.3.1.	Species diversity-Annual tree species distribution assessment	.013	.013	.013	.013	.013
4.3.2.	Species diversity-Implementing the species diversity program	.008	.000	.000	.000	.000
4.3.3.	Species diversity-Reassessing species distribution/write species diversity annual report	.002	.002	.002	.002	.002
4.4.1.	Recommended tree species-Developing the program	.022	.000	.000	.000	.000
4.4.2.	Recommended tree species-Collecting data	.022	.022	.022	.022	.022
4.4.3.	Recommended tree species-Writing the tree species section of the annual report	.002	.002	.002	.002	.002
4.5.1.	Implementing ‘right tree right place’ recommended policies	.066	.000	.000	.000	.000
4.5.2.	Select the right tree for the right place-collecting data	.013	.013	.013	.013	.013
4.5.3.	Writing right tree/right place annual report	.002	.002	.002	.002	.002
4.6.1.	Early tree care-Developing the early tree care program	.013	.000	.000	.000	.000
4.6.2.	Early tree care- Implementing early tree care policies:	.013	.013	.013	.013	.013
4.6.3.	Early tree care-Collecting data and writing early tree care section of the annual report	.002	.002	.002	.002	.002
4.7.1.	Very mature tree care-Annual very mature tree inspection	.022	.022	.022	.022	.022
4.7.2.	Very mature tree care-Annual report writing	.002	.002	.002	.002	.002
4.8.1.	Professional tree care standards-monitoring standards	.022	.022	.022	.022	.022
4.8.2.	Writing professional tree care standards section of annual report	.002	.002	.002	.002	.002
4.9.1.	Urban wood reuse-Developing an Urban Wood Reuse Program	.000	.000	.022	.022	.022
4.9.2.	Urban wood reuse-writing the ordinances	.000	.000	.040	.000	.000
4.9.3.	Urban wood reuse-writing the annual report	.000	.000	.002	.002	.002
4.10.1.	Infrastructure Coordination-writing policy	.000	.026	.000	.000	.000

4.10.3.	Infrastructure Coordination-Collecting data	.000	.013	.013	.013	.013
4.10.4.	Writing the infrastructure annual report	.000	.002	.002	.002	.002
4.11.1.	Urban heat island mitigation-Annual review of urban heat/shade coverage	.000	.004	.004	.004	.004
4.11.2.	Urban heat island mitigation-prepare annual report section	.000	.002	.002	.002	.002
4.12.1.	Tree risk management-Preparing TRM programs and coordination	.022	.022	.022	.022	.022
4.12.2.	Tree risk management-Preparing risk management section of Annual Report	.002	.002	.002	.002	.002
4.13.1.	Pest and disease management-Develop a Plant Health Care Program	.000	.013	.000	.000	.000
4.13.2.	Pest and disease management-Monitoring and data collection	.013	.013	.013	.013	.013
4.13.3.	Pest and disease management-regular maintenance and treatment-Annual Report	.002	.002	.002	.002	.002
4.14.1.	Public trees in and near env. sensitive habitat areas-Identifying buffer zones	.000	.022	.022	.022	.022
4.14.2.	Public trees in/near env. sensitive habitat areas-biennial monitoring/data collection	.000	.022	.000	.022	.000
4.15.1.	View corridors-Collecting data	.000	.008	.008	.008	.008
4.15.2.	View corridors-Preparing Annual report on view corridors	.000	.002	.002	.002	.002
4.16.1.	Heritage trees-Collecting data and writing ordinance	.000	.022	.022	.022	.022
4.16.2.	Heritage trees-Preparing annual report on heritage trees	.000	.002	.002	.002	.002
4.17.1.	Trees and economic development-Promote trees and economic development policy	.000	.004	.004	.004	.004
4.17.2.	Prepare trees & Economic Development section of annual report	.000	.001	.001	.001	.001
4.18.1.	Tree board-Creating the Tree Board	.066	.000	.000	.000	.000
4.18.2	One day of staff support for each tree advisory board meeting	.044	.044	.044	.044	.044
4.18.3	Tree board-Writing the Tree Board section of the annual report	.002	.002	.002	.002	.002
5.1.1.	Air quality and urban forestry-Air Quality Record Keeping	.000	.022	.022	.022	.022
5.1.2.	Air quality and urban forestry-Writing the Air Quality section of Annual Report	.000	.002	.002	.002	.002
5.1.3.	Air quality and urban forestry-Writing air quality ordinances	.000	.022	.000	.000	.000
5.2.1.	Storm water management-Developing stream stabilization projects	.000	.022	.022	.022	.022
5.2.2.	Storm water management-Writing the storm water management Annual report	.000	.002	.002	.002	.002
5.3.1.	Energy conservation-Develop Energy Conservation Program with trees	.000	.000	.022	.022	.022
5.3.2.	Energy conservation-Writing the Energy Conservation section of annual report	.000	.000	.002	.002	.002
5.4.1.	Greenhouse gas reduction-Implement GHG reduction procedures	.000	.022	.022	.022	.022
5.4.2.	Greenhouse gas reduction-Prepare GHG reduction section of annual report	.000	.002	.002	.002	.002
5.5.1.	Utilities-Writing and implementing utility/urban forest ordinances	.013	.013	.013	.013	.013
5.5.2.	Utilities-Writing the utility section of the annual report	.002	.002	.002	.002	.002
6.1.1.	Community Services Urban Forestry personnel and budget-Administration	.044	.044	.044	.044	.044
6.2.1.	Professional standards-Writing section of annual report	.002	.002	.002	.002	.002
6.3.1.	Communicating policies to other departments	.004	.004	.004	.004	.004
6.3.2.	City of Goleta interdepartmental coordination-Writing the policies	.022	.000	.000	.000	.000
6.3.3.	Writing interdepartmental section of annual report	.002	.002	.002	.002	.002
6.4.1.	Planting of new and replacement trees-Writing annual targets document	.002	.002	.002	.002	.002
6.4.2.	Planting of new and replacement trees-Writing the five-year targets document	.022	.000	.000	.000	.000

6.4.3.	Collecting data & writing section of annual report	.002	.002	.002	.002	.002
7.1.1.	Public outreach/education-Implementing a public outreach program	.000	.044	.044	.044	.044
7.1.4.	Public outreach/education-Writing the public outreach section of the annual report	.002	.002	.002	.002	.002
7.2.1.	Nonprofit urban forestry partnerships-Engage nonprofit urban forestry partners	.004	.004	.004	.004	.004
7.2.2.	Nonprofit urban forestry partnerships-Writing the relevant section of annual report	.002	.002	.002	.002	.002
7.3.1.	Professional urban forestry partnerships-Engage prof. urban forestry partners	.004	.004	.004	.004	.004
7.3.2.	Professional urban forestry partnerships-Writing annual report	.002	.002	.002	.002	.002
7.4.1.	Government and public agency-Engage Govt. and Public Agency partners	.004	.004	.004	.004	.004
7.5.1.	Government and public agency-Writing the Govt/Public Agency section of report	.002	.002	.002	.002	.002
8.0.1.	Goleta Urban forest ordinances and enforcement-Writing ordinances	.066	.022	.022	.022	.022
8.0.2.	Goleta Urban forest ordinances and enforcement-Enforcement	.022	.022	.022	.022	.022
8.0.3.	Writing the Ordinances and enforcement section of annual report	.004	.004	.004	.004	.004
9.0.1.	Financing recommendations-Developing financial support for urban forestry	.022	.022	.022	.022	.022
9.0.2.	Financing recommendations-Writing the financial section of the annual report	.004	.004	.004	.004	.004
10.0.1.	Summary of recommendations/Annual report-Preparing projected timelines	.004	.004	.004	.004	.004
10.0.2.	Summary of recommendations/Annual report-Writing the summary section	.002	.002	.002	.002	.002
	Total	.700	.698	.700	.685	.663

Full Time Equivalent (FTE) is based on a position with 1840 work hours annually

.0005	One hour
.002	Four Hours
.004	Eight hours (one day)
.008	Sixteen hours (two days)
.013	Twenty four hours (three days)
.017	Thirty two hours (four days)
.022	Forty hours (five days/one week)
.044	Eighty hours (ten days/two weeks)
.066	One Hundred twenty hours (15 days/3 weeks)

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Appendix E
Tree Species Eligibility List

The purpose of the eligibility list to identify the number of potential tree species available for planting within our area while also recognizing the many constraints on planting sites and types of species. This is an evolving list that the City will use for identifying opportunities for diversity. The City Arborist retains final responsibility for determining the appropriate species for a site.

The basis for the eligible species list is the list of trees in CalPoly's website data base SELECTREE (www.selectree.calpoly.edu). The list was narrowed to all species that are recommended for Goleta's climate zone number 24 classified by Sunset Magazine. The six factors used in the Sunset Garden Climate Zone include latitude, elevation, influence of the Pacific Ocean, influence of the continental air mass, mountains and hills, and local terrain. Non woody palms were excluded from the list to emphasize the environmental benefits of woody plants. Also excluded from the list are trees listed on the California Invasive Plant List.

Note: Trees with no data are in the process of being added to the SelecTree list.

Explanation of column headings for attached Tree Species Eligibility List

Botanical and Common Names: The species are listed by their botanical names. This was done so that closely related species are grouped together as their common names may provide confusing information about the tree's family or genus.

Maximum Height: The maximum height of each species was obtained by SelecTree. Although exact values are not given for each species, they all fall within the maximum range of 20ft, 25ft, 35ft, 50ft, 65ft, or greater than 65ft. However, many variables influence the actual height of the final tree. The values given are the maximum height a tree can potentially grow in their natural setting.

Maximum Spread: The values for maximum spread were obtained from Sunset Western Garden. The spread or width was given as a range from minimum to maximum. This species table is the maximum value.

Deciduous or Evergreen: SelecTree lists the natural growth habit for each species as deciduous (D), evergreen (E), or partially deciduous (P).

Water Needs: The descriptions used for the water needs come from SelecTree.

Wet soil = naturally wet areas or areas with high rainfall (and riparian areas)
Moist soil = damp most of the year in areas with moderate rainfall (poor drainage areas)
Dry soil = crumbly or compacted where there is little or no rainfall (Goleta general area)

Longevity: Longevity is an important aspect when considering the long term or short term goals. SelecTree provides ranges of the expected life spans of tree species since longevity varies due to numerous factors such as care the tree actually receives, risk of mechanical damage, presence or lack of disease and pests, etc.

Short - Less than 50 years
Average – Greater than 50 years and less than 100 years
Long - Greater than 100 years

California Native/ California Indigenous: California native species was determined by SelecTree. These species are characteristic of the geographic region. California indigenous species were determined by *Trees of Santa Barbara*. Indigenous species are original to the sites where they grow.Native species may be genetically challenged by a nonnative tree having the potential for hybridizing with the native. An example is the London plane tree's potential to hybridize with the indigenous California sycamore. Hybridization threatens local genetic integrity.

Diversity Trees: A diversity tree is labeled D under various categories. Diversity trees are extracted from those species identified in a Journal of the International Society of Arboriculture research paper on the Diversity of California's Urban Forests compiled by Muller and Bornstein. Muller's research article focused on recommended street tree lists for the 44 California Tree City cities. A tree can be a diversity tree either as a 25ft and under, over 25ft street tree or as a park tree.

Street Trees Under Transmission Lines: Trees that are recommended for planting under transmission lines were determined by SelecTree. For nearly all of these recommendations, the criteria for a under transmission line tree was defined as any species that reaches a maximum height of 25ft. However, trees less than 25' are not recommended as street trees as they cannot sustain sufficient canopy when pruned to the standard height of 14' above street level. A tree that is under 25" in height could be better suited to be a park tree, but this would be contrary to other urban forest recommended policies that state the largest possible tree should be planted at any site,

Street Unrestricted Height: The species listed as street unrestricted height was any tree species that was not recommended for under transmission lines planting. Street unrestricted height species consists of trees that exceed 25ft. As long as a street tree can be trimmed to 14ft above the ground with a single trunk, its location is more dependent on soil volume availability and not of its location on the street, such as a median or a parkway on either side of a sidewalk.

Park Trees: Park trees are species eligible for park planting. These species include trees that may not be suitable street trees under transmission lines and street unrestricted height. A tree that is under 25" in height could be eligible as a park tree, but

this maybe contrary to other urban forest recommended policies that state the largest possible tree should be planted at any site,

Soil Volume: These values were derived from a 1992 study by James Clark that developed a ratio between the crown spread and diameter breast height as a means of identifying the amount of cubic feet of permeable surface soil needed to support a tree.

	Minimum Parkway Width
Small (S) = 120 cu. ft	3.5’
Medium (M) = 120 ft to 360cu. ft	4’
Large (L) 360cu. ft	5’ +

Recommended Street Trees: All underlined tree species on the attached eligibility list are recommended street trees. Additional street trees on the eligibility list can be added on a case by case basis by the City Arborist.

Botanical Name	Common Name	Maximum Height	Maximum Spread	Deciduous/Evergreen/ Partially deciduous	W-W, M-M, D-Dry DT-Drought Tolerant	Longevity S-Short,	Indigenous/-Ca Native	Street trees under transmission lines	Street trees-no height	Park	Soil Volume- Small, Medium Large
Acacia baileyana	Bailey acacia	**25**	40	E	DT	S		D			S
Acacia 'purpurea'	Purple-leaf acacia	**25**	30	E	M-D	S		X			S
Acacia pendula	Weeping acacia	**25**	15	E	M-D	A		X			S
Acacia podalyrifolia	Pearl acacia	**25**	15	E	M-D	S		X			S
Acacia subporosa	Bower wattle	**35**	--	E	M-D	S			X		M
Acer paxii	Evergreen maple	**35**	--	E	M	A			D		M
Acmena smithii	Lilly-pilly tree	**25**	15	E	M	A					S
Acrocarpus fraxinifolius	Pink cedar	**50**	--	P	M	A			D		M
Aesculus californica	California buckeye	**25**	30	D	M-D/ DT	A	N				S
Agonis flexuosa	Peppermint tree	**35**	30	E	W-D	A			D		M
Agonis juniperina	Juniper myrtle	**35**	30	E	M	A			X		M
Alnus cordata	Italian alder	**50**	25	D	W/M	A			D		M
Anogophora costata	Gum myrtle	**50**	--	E	M-D	A			D		M
Araucaria heterophylla	Norfolk island pine	**>65**	60	E	M	L			D		L
Arbutus 'marina'	Marina madrone	**35**	30	E	M-D	A			D		M
Betula nigra	River birch	**>65**	60	D	W/M	A			D		L
Betula nigra 'heritage'	Heritage river birch	**50**	60	D	W	--			D		M
Bischofia javanica	Bischofia	**>65**	--	E	W	--			D		L
Brachychiton populneus	Bottle tree	**50**	30	E	M-D/DT	A			D		L
Broussonetia papyrifera	Paper mulberry	**50**	40	D	M-D/DT	A			X		M
Callistemon citrinus	Lemon bottlebrush	**25**	15	E	M-D/DT	A		D			S
Callistemon viminalis	Weeping bottlebrush	**25**	15	E	W-D/DT	A		D			S
Calocedrus decurrens	Incense cedar	**>65**	15	E	M-D/DT	L	N		D		L
Calodendrum capense	Cape chestnut	**35**	40	D	M	A			D		M
Casimiroa edulis	White sapote	**50**	--	E	M	A			X		M
Cassia excelsis	Crown of gold tree	**35**	--	P	M-D	A			D		M

Botanical Name	Common Name	Maximum Height	Maximum Spread	Deciduous/Evergreen/ Partially deciduous	W-W, M-M, D-Dry DT-Drought Tolerant	Longevity S-Short,	Indigenous/-Ca Native	Street trees under transmission lines	Street trees-no height	Park	Soil Volume- Small, Medium Large
Cassia fistula	Golden-shower	**50**	35	D	M-D	--			X		L
Cassia leptophylla	Gold medallion tree	**25**	30	P	M-D	S		D			S
Casuarina cunninghamiana	River she-oak	**>65**	30	E	W-D/DT	A			D		L
Casuarina equisetfolia	Horsetail tree	**65**	20	E	W-D/DT	A			X		L
Casuarina stricta	Mountain she-oak	**35**	--	E	W-D/DT	A			D		M
Catalpa bignonioides	Common catalpa	**50**	--	D	M	A			D		M
Catalpa speciosa	Western catalpa	**65**	--	D	M	A			D		L
Catalpa x chitalpa tashkentensis	Chitalpa	**35**	--	D	M-D	A			X		M
Cedrela fissilis	Cedrela	**65**	--	D	M	A			D		M
Cedrela sinensis	Chinese cedrela	**50**	--	D	M	A			D		M
Cedrus deodara	Deodar cedar	**>65**	40	E	M-D	L			D		L
Celtis occidentalis	Common hackberry	**65**	S	D	M-D/DT	A			D		L
Ceratonia siliqua	Carob	**35**	40	E	M-D	L			D		M
Cercis occidentalis	Western redbud	**25**	18	D	M-D/DT	A	I	X			S
Chionanthus retusus	Chinese fringe tree	**20**	20	D	M	A				D	S
Chiranthodendron pentadactylon	Monkey hand tree	**50**	--	E	M	A			X		L
Chorisia insignis	White floss silk tree	**50**	50	E	M-D	A			X		L
Chorisia speciosa	Floss silk tree	**65**	60	E	M-D	A			D		L
Chorisia speciosa 'l.a beautiful'	L.A Beautiful floss silk tree	**50**	60	D	W	A	N		D		L
Cinnamomum camphora	Camphor tree	**65**	60	E	M	A			D		L
Cryptocarya rubra	Cryptocarya	**35**	--	E	M	A			D		M
Cupaniopsis anacardioides	Carrot wood	**35**	30	E	W/M	A			D		M
Eriobotrya deflexa 'coppertone'	Bronze loquat	**25**	--	E	M	A		D			S
Eriobotrya japonica	Loquat	**35**	35	E	M-D/DT	A			X		M
Erythrina Americana	Coral tree	**25**	--	D	M-D	A		X			M
Erythrina corralloides	Naked coral tree	**25**	30	D	M-D	A		X			M

Botanical Name	Common Name	Maximum Height	Maximum Spread	Deciduous/Evergreen/ Partially deciduous	W-W, M-M, D-Dry DT-Drought Tolerant	Longevity S-Short,	Indigenous/-Ca Native	Street trees under transmission lines	Street trees-no height	Park	Soil Volume- Small, Medium Large
Eucalyptus calophylla	Beautiful leaf eucalyptus	**65**	--	E	M-D/DT	A			X		L
Eucalyptus citriodora	Lemon-scented gum	**>65**	45	E	W-D/DT	A			D		L
Eucalyptus cladocalyx	Sugar gum	**>65**	75	E	M-D/DT	A			D		L
Eucalyptus deglupta	Mindanao gum	**>65**	75	E	M-D/DT	A			D		L
Eucalyptus ficifolia	Red flowering gum	**45**	60	E	M-D/DT	A			D		M
Eucalyptus lehmannii	Bushy yate	**25**	--	E	M-D/DT	A		X			S
Eucalyptus nicholii	Nichol's willowleafed peppermint	**50**	36	E	M-D/DT	A			D		M
Eucalyptus polyanthemos	Silver dollar gum	**65**	45	E	W-D/DT	A			D		L
Eucalyptus robusta	Swamp mahogany	**>65**	75	E	M-D/DT	A			X		L
Eucalyptus sideroxylon	Red ironbark	**65**	60	E	M-D/DT	A			D		L
Eucalyptus stellulata	Black sally	**50**	--	E	M-D/DT	A			X		M
Eucalyptus torquata	Coral gum	**35**	30	E	M-D/DT	A		X	D		M
Eugenia myrtifolia	Brush cherry	**50**	--	E	M	A			X		M
Fagus sylvatica	European beech	**65**	60	D	M	A			D		L
Fagus sylvatica 'atropunicea'	Purple beech	**35**	45	D	M	A			D		M
Ficus benjamina	Weeping Chinese banyan	**60**	>60	E	M	A			D		L
Firmiana simplex	Chinese parasol tree	**35**	12	D	M-D/DT	S			D		M
Fraxinus oxycarpa 'raywood'	Raywood ash	**35**	--	D	M-D	A			D		M
Fraxinus velutina 'modesto'	Modesto ash	**50**	40	D	M-D	A			D		L
Fraxinus velutina 'rio grande'	Fan-tex ash	**50**	40	D	M-D	A			D		L
Fraxinus velutina coriacea	Montebello ash	**50**	40	D	M-D	A	N		X		L
Geijera parviflora	Australian willow	**35**	20	E	M-D/DT	A			D		M
Ginkgo biloba	Maidenhair tree	**65**	35	D	M-D	L			D		M
Ginkgo biloba 'autumn gold'	Autumn gold maidenhair	**65**	30	D	M-D	L			D		M
Ginkgo biloba 'fairmont'	Fairmont maidenhair tree	**65**	20	D	M-D	L			D		M
Grevillea robusta	Silk oak	**65**	35	E	M-D/DT	A			D		L

Botanical Name	Common Name	Maximum Height	Maximum Spread	Deciduous/Evergreen/ Partially deciduous	W-W, M-M, D-Dry DT-Drought Tolerant	Longevity S-Short,	Indigenous/-Ca Native	Street trees under transmission lines	Street trees-no height	Park	Soil Volume- Small, Medium Large
Heteromeles arbutifolia	Toyon	**25**	25	E	M-D/DT	A	N	D			S
Ilex 'san jose hybrid'	San Jose holly	**25**	--	E	M	A		X			S
Ilex altaclarensis 'wilsonii'	Wilson holly	**25**	12	E	M/DT	A		D			S
Ilex aquifolium 'big bull'	Big bull English holly	**35**	--	E	M	A			X		M
Jacaranda mimosifolia	Jacaranda	**50**	30	P	M	A			D		M
Juniperus monosperma	One-seeded juniper	**35**	--	E	M-D/DT	A			X		M
Juniperus occidentalis	Western juniper	**65**	50	E	M-D/DT	L	N		X		L
Juniperus osteosperma	Utah juniper	**35**	30	E	M-D/DT	A	N		X		M
Koelreuteria bipinnata	Chinese flame tree	**35**	40	D	M	A			D		M
Koelreuteria elegans	Flamegold	**50**	30	D	W	--			D		M
Koelreuteria henryi	Henry flame tree	**35**	--	D	M	A			X		M
Lagerstroemia 'natchez'	Natchez hybrid crape myrtle	**25**	--	D	M-D/DT	A		X			S
Lagerstroemia 'tuscarora'	Tuscarora hybrid crape myrtle	**25**	25	D	M-D/DT	A		X			S
Lagunaria patersonii	Primrose tree	**50**	40	E	M-D	A			D		M
Laurus 'saratoga'	Saratoga laurel	**25**	25	E	M-D	A		X			S
Laurus nobilis	Sweet bay	**35**	35	E	M-D	A			D		M
Liquidambar styraciflua 'rotundiloba'	Rotundiloba sweetgum	**>65**	25	D	W	--			D		M
Lophostemon confertus	Brisbane box	**50**	25	E	M-D/DT	A			D		M
Lyonothamnus floribundus aspen.	Catalina ironwood	**50**	15	E	M-D/DT	A	N		D		M
Magnolia grandiflora	Southern magnolia	**65**	60	E	M	L			D		L
Magnolia grandiflora 'majestic b.'	Majestic beauty southern magnolia	**50**	20	E	W	--			D		M
Magnolia grandiflora 'samuel s.'	Samuel Sommer southern magnolia	**50**	30	E	M	A			D		M
Magnolia soulangiana	Saucer magnolia	**25**	25	D	M	A		D			S
Markhamia hildebrandtii	Muho	**25**	--	E	M	A		X			S
Melaleuca quinquenervia	Cajeput tree	**35**	25	E	W-D/DT	A			D		M
Melaleuca styphelioides	Prickly melaleuca	**35**	20	E	W-D/DT	A			D		M

Botanical Name	Common Name	Maximum Height	Maximum Spread	Deciduous/Evergreen/ Partially deciduous	W-W, M-M, D-Dry DT-Drought Tolerant	Longevity S-Short,	Indigenous/-Ca Native	Street trees under transmission lines	Street trees-no height	Park	Soil Volume- Small, Medium Large
Melia azedarach	Chinaberry	**50**	50	D	M/DT	A			D		M
Melia azedarach 'umbraculifera'	Texas umbrella tree	**35**	25	D	M-D	A			D		M
Metasequoia glyptostroboides	Dawn redwood	**65**	20	D	M	L			D		L
Metrosideros excelsus	New Zealand Christmas tree	**35**	35	E	M-D	A			D		M
Michelia doltsopa	Michelia	**35**	--	E	M	A			D		M
Morus alba	White mulberry	**50**	50	D	M-D	A			D		M
Myrica californica	Pacific wax myrtle	**25**	30	E	M-D/DT	A	N	X			S
Olea europaea 'swan hill'	Swan hill olive	**35**	25	E	M-D/DT	L		X	X		M
Paulownia tomentosa	Empress tree	**65**	50	D	M	A			D		L
Persea Americana x drymifolia	Avocado	**35**	--	E	M	A			X		M
Philodendron amurense	Amur corktree	**50**	--	D	M-D	A			X		L
Pinus attenuata	Knobcone pine	**65**	25	E	M-D/DT	A	N		X		L
Pinus canariensis	Canary island pine	**65**	--	E	M-D/DT	A			D		L
Pinus contorta	Shore pine	**35**	35	E	M	L	N		X		M
Pinus coulteri	Coulteri pine	**65**	40	E	M-D/DT	L	N		D		L
Pinus eldarica	Mondell pine	**65**	--	E	M-D/DT	A			D		L
Pinus muricata	Bishop pine	**50**	40	E	M-D	A	N		D		L
Pinus pinaster	Cluster pine, maritime pine	**>65**	35	E	M-D	L			X		L
Pinus pinea	Italian stone pine	**>65**	60	E	M-D/DT	A			D		L
Pinus roxburghii	Indian longleaf pine	**>65**	--	E	M-D	A			X		L
Pinus torreyana	Torrey pine	**65**	50	E	M-D/DT	L	N		D		L
Platanus racemosa	California sycamore	**>65**	50	D	M-D	L	N		D		L
Podocarpus gracilior	Fern pine	**65**	20	E	M	L			X		M
Podocarpus macrophyllus	Yew pine	**50**	15	E	M/DT	L			D		M
Podocarpus totara	Totara	**35**	25	E	M	A			X		M
Populus fremontii	Fremont cottonwood	**>65**	30	D	W-D	A	N		X		L

Botanical Name	Common Name	Maximum Height	Maximum Spread	Deciduous/Evergreen/ Partially deciduous	W-W, M-M, D-Dry DT-Drought Tolerant	Longevity S-Short,	Indigenous/-Ca Native	Street trees under transmission lines	Street trees-no height	Park	Soil Volume- Small, Medium Large
Prunus ilicifolia	Hollyleaf cherry	**25**	25	E	M-D	A	N	X			S
Prunus lyonii	Catalina cherry	**35**	--	E	M-D/DT	A	N		X		M
Punica granatum	Pomegranate	**20**	--	D	M-D/DT	A				X	S
Quercus agrifolia	Coast live oak	**65**	70	E	M-D	L	N		D		L
Quercus coccinea	Scarlet oak	**65**	60	D	M	L			D		L
Quercus douglasii	Blue oak	**50**	70	D	M-D	L	N		D		M
Quercus lobata	Valley oak	**>65**	>65	D	M-D	L	N		D		L
Quercus rubra	Red oak	**65**	50	D	M	L			D		L
Quercus virginiana	Southern live oak	**50**	100	P	W/M	L			D		M
Rhus lancea	African sumac	**25**	35	E	M-D/DT	A		D			S
Robinia ambigua 'decaisneana'	Pink locust	**50**	20	D	M-D/DT	A			D		M
Robinia ambigua 'idahoensis'	Idaho locust	**50**	30	D	M-D/DT	A			D		M
Robinia ambigua 'purple robe'	Purple robe locust	**50**	--	D	M-D/DT	A			D		M
Salix lasiolepis	Arroyo willow	**35**	--	D	W/M	S	N		X		M
Sambucus caerulea	Blue elderberry	**25**	--	D	W/M	S	N	X			S
Sambucus Mexicana	Hairy blue elderberry	**25**	--	D	M-D	S	N	X			S
Sequoia sempervirens	Coast redwood	**>65**	30	E	M	L	I		D		L
Spathodea campanulata	African Tulip tree	**50**	50	P	M	S			D		M
Stenocarpus sinuatus	Firewheel tree	**35**	15	E	M	A			D		M
Tabebuia avellanedae	Lavender trumpet tree	**35**	--	P	M-D/DT	A			X		M
Tabebuia impetiginosa	Purple Tabebuia	**25**	50	D	WD	--		D			S
Taxodium distichum	Bald cypress	**65**	30	D	W-D	A			D		L
Taxodium mucronatum	Montezuma cypress	**65**	50	P	W-D/DT	A			X		L
Taxus baccata	English yew	**35**	25	E	M-D/DT	L			X		M
Thuja plicata	Western red cedar	**>65**	60	E	M	L	N		D		L
Tipuana tipu	Tipu tree	**50**	60	P	M-D	A			D		M

Botanical Name	Common Name	Maximum Height	Maximum Spread	Deciduous/Evergreen/ Partially deciduous	W-W, M-M, D-Dry DT-Drought Tolerant	Longevity S-Short,	Indigenous/-Ca Native	Street trees under transmission lines	Street trees-no height	Park	Soil Volume- Small, Medium Large
Torreya californica	California nutmeg	**35**	15	E	M-D	L	N		X		M
Tristania laurina 'elegans'	Elegant Brisbane box	**25**	30	E	M	A		X			S
Ulmus parvifolia	Chinese elm	**65**	70	P	M	A			D		L
Umbellularia californica	California laurel	**65**	25	E	M-D/DT	L	N		D		L
Additional species under consideration											
Acacia melanoxylon											
Acer buergerianum											
Acer macrophyllum											
Acronychia baueri											
Agathis robusta											
Albizia julibrissin											
Alnus rhombifolia											
Bauhinia blakeana											
Bauhinia variegata											
Brachychiton acerifolius											
Brachychiton discolor											
Brachychiton gregorii											
Brachychiton x roseus											
Carya illinoensis											
Cedrus atlantica											
Cercidium floridum											
Chamaecyparis lawsoniana											
Diospyros virginiana											
Dombeya cacuminum											
Erythrina crista-galli											

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Erythrina falcata											
Erythrina humeana											
Erythrina latissima											
Erythrina lysistemon											
Eucalyptus cosmophylla											
Eucalyptus torelliana											
Gleditsia triacanthos f. inermis											
Hymenosporum flavum											
Juglans californica											
Khaya nyasica											
Koelreuteria paniculata											
Liriodendron tulipifera											
Melaleuca decora (genistifolia)											
Melaleuca linariifolia											
Pistacia chinensis											
Podocarpus henkelii											
Pyrus calleryana											
Quercus robur											
Quercus suber											
Quercus tomentella											
Quillaja saponaria											
Radermachera sinica											
Rhodosphaera rhodanthema											
Schinus molle											
Syncarpia glomulifera (laurifolia)											
Toona sinensis											

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Ulmus americana Zelkova serrulata											