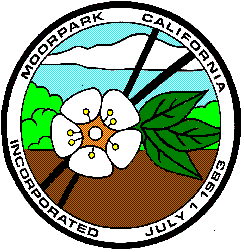
***City of Moorpark***



***Urban Forest Management Plan***

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***January 2013***



**Funding provided by the**

**USDA Forest Service**

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**Urban and Community Forestry Program**



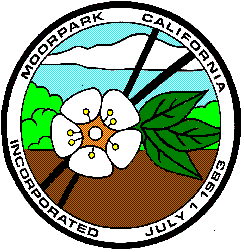
V i s i o n



*Moorpark’s urban forest is a flourishing and sustainable preserve of tree species of all ages that creates an old town feeling promoting a healthy ecosystem, and atmosphere the community can appreciate and all of its citizens to enjoy.*

***Mission Statement***

Moorpark’s Parks and Landscape Department Strives to preserve and improve the quality of the Moorpark’s Urban Forest that through the General Plan continues to retain its “small town” values where neighbors unite to help one another and support business and industry.



***CITY OF MOORPARK***

**URBAN FOREST MANAGEMENT PLAN**

**2013 - 2033**

**PREPARED FOR:**

**CITY OF MOORPARK**

**Steven Kueny, City Manager**

**MOORPARK CITY COUNCIL**

**Janice Parvin, Mayor**

**Mark Van Dam, Mayor Pro Tempore**

**Roseann Mikos, Councilmember**

**Keith Millhouse, Council Member  
David Pollack, Councilmember**

**PREPARED BY:**

**Allen M. Walter, Landscape and Parks Superintendent**

**PLAN APPROVAL DATE:**

**January 2013**

**APPROVED BY:**

**Moorpark City Council**

**January 2013**

**ACKNOWLEDGEMENTS**

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**CITY OF MOORPARK**

Steven Kueny, City Manager

**MOORPARK PARKS, RECREATION AND COMMUNITY SERVICES DEPARTMENT**

Hugh Riley, Assistant City Manager

Jeremy Laurentowski, Park and Landscape Manager

**MOORPARK COMMUNITY DEVELOPMENT DEPARTMENT**

David Bobardt, Community Development Director

**WEST COAST ARBORIST INC.**

Inland Urban Forestry Council

Wikipedia Moorpark

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## 

**EXECUTIVE SUMMARY**

The Urban Forest Management Plan is a 30-year plan that recommends steps the City of Moorpark should take to preserve its trees and the small old town environment appeal Moorpark has established. Moorpark’s urban forest gives the community a feeling of coming home and leaving the big city behind as they enter Moorpark’s public streets, parks, and residential neighborhoods before arriving home.

Moorpark’s urban forest has increased since its incorporation in 1983, with new City parks, private, and commercial developments all regulated to preserve established trees or provide new trees sustaining or increasing the urban forest. However older tree species planted 30-50 years ago with space constraints continue to damage sidewalks and street asphalt and trees damaged from poor trimming techniques are becoming decayed and weak. These well-established senescent trees provide large shade canopies and character to the streets they line which is lost when removed and replaced. The remove trees also impact the global environment losing an average of 260 pounds of oxygen per tree of per year lost, interception and absorption of air pollutants, lower ambient air temperatures, and lower surface air temperature of hard surfaces that reduce the adverse effects of urban heat, achieving healthier air quality.

To counter the loss of tree cover and maintain sustainability, the City has planted thousands of trees and has required new developments to include tree planting in their design plans. Goals of managing growth, enhancing livability, protecting the environment, fostering economic growth, maintaining public space and creating recreational use, have all been achieved and contributed to by trees.

Tree preservation and sustainability is essential to the City’s well-being and must be encouraged through tree planting, protection, and education. The Urban Forest management plan lays out actions to meet these goals ranging from improving tree care to regulating tree planting as well as providing the right tree for the right place, protecting trees through approved standardized tree maintenance practices, and promoting education of the importance of tree preservation and sustainability in the community.

**Chapter 1: INTRODUCTION**

**1.1 Purpose of the Urban forest Management Plan**

The purpose of the Urban Forest Management Plan is to guide a broad range of actions that will achieve a sustainable urban forest in Moorpark. This is a 30-year plan that recommends the steps the City of Moorpark must take to preserve Moorpark urban forest.

The City of Moorpark incorporated in 1983 and saw the benefits trees provided and a need to protect and expand the City's urban forest. A budget and a tree ordinance were developed, and full time staff was assigned to manage the urban forest. To date the City has 8,355 trees on public properties mainly located in parkways, medians, and parks and are valued at $20,000,000. The City tree services budget provides $100,110 to maintain and preserve the City parks and Lighting and Landscape Maintenance District (LMD) trees.

**1.2 What is Moorpark’s the Urban Forest?**

Moorpark’s urban forest consists of all trees in the city on both public as well as private property. This forest includes street trees, park trees open space lands, and trees in many privateownership settings.

The urban forest management plan involves preexisting trees which includes tree on City maintained properties, private property trees and homeowner association trees regulated through tree removal permit process. The City’s urban forest is also regulated before the trees are planted through the City's Community Development, and Planning Department. Before a site is designed, the site development designer receives the City “Landscape Guidelines” that outline approved tree species and planting requirements. Next, before approval the developer design plans are sent to the Landscape and Tree Managing Superintendent to review and make changes. Tree recommendations are made that and more suitable for the proposed site.

**1.3 Why is Moorpark’s Urban forest Important?**

Moorpark’s Urban Forest Management plan provides the benefits of healthy, well managed forests in terms of environmental economic and social value. The City continually maintain or restore its urban forest, realizing the loss when forests are poorly maintained and less healthy. In addition to making the City more livable to its residents the urban forest provides habitat to a variety of wildlife includes native and migratory birds, improves air and water quality, and sequester carbon to reduce global warming.

Trees located throughout Moorpark on public and private property affect our lives and the local economy in ways that aren’t always obvious. Trees provide community, environmental, and economic benefits that range from reducing the effects of density to increasing property values to providing ecological services such as stormwater mitigation, air pollution, and greenhouse gas removal. In order, to regulate and maintain sustainable tree removals and tree replacement requirements, the City has an established City tree removal permit ordinance. For example, during 2011 the City issued forty nine (49) tree removal permits from January 2011 through December 2011 to Homeowners Associations, Private Property Owners, and Commercial Property Owners allowing one hundred forty-nine (149) tree removals that required the planting of one hundred forty-nine (149) twenty-four inch (24”) box trees to replace the removed trees.

The urban forest is important to the community and is supported by several volunteer programs. For example, during 2011 volunteer groups aided the City in planting seventy-one (71) trees in five (5) City Parks. The City also replaced trees removed by the City’s tree services contractor due to dead or diseased. These planting programs serve, maintain, and increase the City’s urban forest.

The City also preserves and protects its historical heritage urban forest. This includes the protection of a one hundred-year old pepper tree grove along High Street. Currently, there are 52 California Pepper trees of various ages and health conditions maintained by the City. Along with the preservation of the trees the City provides a Wildlife Biologist to verify that no wildlife or migratory bird nesting activity is endangered during tree maintenance. The City contracts with an Arborist specializing in mature pepper trees to monitor the trees health and prepare an annual pepper tree evaluation report.

The City promotes Moorpark heritage through two (2) Moorpark Apricot tree groves at two (2) park sites. The Poindexter Park has a Moorpark Apricot grove planted to commemorate the City’s early years as a major producer of Moorpark apricots. Moorpark’s other apricot tree site is at the Arroyo Vista Community Park, where a Moorpark Apricot grove was established as a memorial tree grove. Citizens can also have a Moorpark Apricot trees planted in memory of a loved one.

The City also promotes tree awareness through an annual Arbor Day celebration providing tree information and 100 trees free to the public. The City is also recognized annually as a Tree City USA and with Tree Growth Awards in recognition of the City’s commitment to the environment and urban forest work.

**1.4 Moorpark’s Comprehensive Urban Forest Plan**

Moorpark’s Urban Forest Management Plan will establish a procedure for the long-term management of Moorpark’s urban forest providing management of the City’s valued resource to ensure preservation, restoration, and enhancement.

The Urban Forest Management Plan for the City of Moorpark will integrate management of many issues and opportunities posed by Moorpark’s tree resources. Moorpark’s Urban forest management goals such as increasing tree canopy, improving public safety, and providing native habitat and recreational and educational opportunities will be balanced with other goals such as accommodating growth and preserving public safety.

Additionally, all natural systems change over time. Moorpark’s urban forest will be faced with senescent trees that hold historical value to Moorpark’s old town feel, however, the urban forest old age and death is unpreventable and will change the urban forest. In that respect Moorpark must actively manage its ever-evolving urban forest and proactively manage to keep our trees sustainable and in balance with other urban priorities to mitigate resource deteriorations when human intervention is not a proactive part of management.

**1.5 Moorpark’s Urban Forestry History**

The valley where [Moorpark](http://en.wikipedia.org/wiki/Moorpark) is located was originally inhabited by the [Chumash](http://en.wikipedia.org/wiki/Chumash_(tribe)) Indians. The area was part of the large [Rancho Simi](http://en.wikipedia.org/wiki/Rancho_Simi) [land grant](http://en.wikipedia.org/wiki/Land_grant) given in 1795 to the Pico brothers ([Javier](http://en.wikipedia.org/w/index.php?title=Javier_Pico&action=edit&redlink=1), [Patricio](http://en.wikipedia.org/w/index.php?title=Patricio_Pico&action=edit&redlink=1), and [Miguel](http://en.wikipedia.org/w/index.php?title=Miguel_Pico&action=edit&redlink=1)) by [Governor](http://en.wikipedia.org/wiki/List_of_pre-statehood_governors_of_California) [Diego de Borica](http://en.wikipedia.org/wiki/Diego_de_Borica) of [Alta California](http://en.wikipedia.org/wiki/Alta_California" \o "Alta California).

Robert W. Poindexter, the secretary of the Simi Land Company, received the land that made up the original town site of Moorpark when the association was disbanded in 1887. Moorpark was founded in 1900 when the application for a post office was submitted. The application lists that there was already a railroad depot in the town. The town grew after the 1904 incorporating as a City on July 1, 1983.

The origin of the name "Moorpark" is based on Admiral Lord Anson's estate Moor Park in Hertfordshire where he introduced the apricot in 1688. It is mainly believed that the city of Moorpark is named after the Moorpark Apricot, which used to grow in the area. This was confirmed by Robert Poindexter, the founder of Moorpark, in 1927.

[](http://en.wikipedia.org/wiki/File:Apricots.jpg)

In 1887, Robert W. Poindexter was granted title to the present site of Moorpark. He named the City after the Moorpark apricot which grew throughout the valley. Poindexter plotted Moorpark city streets and planted Pepper trees in the downtown area.

  
**High Street 1920´s:** Photo Courtesy of the Moorpark Historical Society



**Apricot Cutters:** Photo Courtesy of the Moorpark Historical Society

Apricot cutters were a common scene during apricot season. The apricots would be brought from the field in crates and each apricot was cut in half using a special knife. The apricot halves would then be placed on large trays to dry.

  
**Moorpark in 1912:** Photo Courtesy of the Moorpark Historical Society

This is a view of Moorpark circa 1912. In the photo, taken from the northern end of town, you can clearly see the Methodist Church before it was added onto and the Moorpark Elementary School, which was moved to the corner of Charles and Walnut Streets from the Peach Hill area around 1904.

**Moorpark Avenue, 1920s:** Photo Courtesy of the Moorpark Historical Society

This is a view of Moorpark Avenue looking north from Los Angeles Avenue.

  
**Methodist Church, 1930s:** Photo Courtesy of the Moorpark Historical Society

This is a picture of the Methodist Church in the 1930s. The original structure was moved in about 1904 from the small farming community of Epworth, which was located just north of Moorpark in the Fairview district. In 1919, another church, the M.E. Fowler Methodist Church from Somis, was added to the existing structure. This church still stands today and is one of only two county historical landmarks in Moorpark.

  
**Depot:** Photo Courtesy of the Moorpark Historical Society  
This is a picture of the Southern Pacific Railroad Depot that was located roughly on the corner of Moorpark Avenue and High Street. The depot was built in the early 1900s and served as a regular stop on the coast line of the Southern Pacific after the completion of the Santa Susana tunnel in 1904. The depot remained in service for many years and was finally demolished in 1964.

**Moorpark Union High School 1937:** Photo Courtesy of the Moorpark Historical Society

This is a photo of the original Moorpark High School. Construction was started in 1920 and it was named Moorpark Memorial Union High School (the ´Memorial´ in the title was placed there as a remembrance to those who lost their lives during WWI.) It remained in use until 1939 when it had to be shut down due to damage received in an earthquake. In that same year, the second of Moorpark´s high schools was built in the same location on Casey Road (where Walnut Canyon School stands today) and was used until the new high school was built in the late 1980s.

  
***Flory Street School:*** *Photo Courtesy of the Moorpark Historical Society*

*This picture is the front of the Flory Street School, which was built in 1928. It replaced the old one room school house that had been used by the children of Moorpark for over 25 years. It was announced in June of 1968 that the school was unsafe and not up to the earthquake proof standards of the Field Act. In March 1969 the demolition of parts of the school began and new, safer, buildings were erected.*

Urban development since 1900 has significantly impacted the environment and altered thousands acres of native and orchard areas that have been incrementally covered by the building footprints of the new city. Perhaps the most significant impact of early urban development was that the urban forest was not considered and many trees were not afforded enough space and protection to allow for their mature growth. Without early tree protect-in-place regulations during development of the City much of Moorpark’s urban forests was lost. It has been repopulated with trees to comply with the urban development plan. Today more than 70 percent of Moorpark is a new urban forest consisting of a wide diversity of tree species ranging from young to mature trees in age.

The present City of Moorpark was originally a part of the Rancho San Jose De Garcia De Simi Land Grant. This land was given to the brothers Javier, Patricio, and Miguel Pico, by Governor Diego Birico in 1795. In 1842, Don Jose de la Guerra purchased the Rancho for a sum of $800 in cash, $219 in dry goods and a promissory note to pay off the balance due. Shortly after the Civil War, Thomas A. Scott, of the Pennsylvania Railroad, heard of oil seepage from the land in Ventura County. Through his land agent, Thomas Bard, Mr. Scott began acquiring vast amounts of land throughout the County. Rancho Simi, including Moorpark, was included in these purchases. When no great amount of oil was found or recovered by the seepage method, Mr. Scott began selling off his land holdings.

In 1887, the Simi Land and Water Company was formed and acquired a portion of the original Rancho Simi that included the present Simi Valley and Moorpark. Mr. Robert W. Poindexter was the secretary of this company and during a distribution of landholdings to the employees in 1897, he gained title to the present site of Moorpark. It was Poindexter who was responsible for the plotting and mapping of the town, as well as the planting of the giant pepper trees that line today’s streets. It has been generally accepted that Robert Poindexter gave the community the name of “Moorpark” after the delicious Moorpark apricot that grew here in such great abundance. This particular variety of fruit has carried the town’s name to every corner of the globe. It is widely accepted as one of the finest varieties of apricot.

The Southern Pacific Railroad played an important role in the development of the community. Shortly after Mr. Poindexter began laying out the town site, he granted the Southern Pacific a ROW for their rail lines in Moorpark. In 1904, the final link of the Southern Pacific Coast line joined Santa Barbara to Los Angeles with the line running through Oxnard and Moorpark. This linkage to the larger cities gave rise to an almost immediate growth spurt in the community. Approximately two years after the railroad came through the town site, Poindexter sold the property to Mr. M.L. Wicks. Under Wicks’ management, the town continued to flourish and grow.

The agricultural economy continued to play an ever increasing part in the population and economic growth of the community. Land that had originally been used for cattle grazing was now being converted to dry crop farming. Several types of grains and beans were harvested very successfully. With the advent of the railroad, farmers could now produce crops that had a more perishable nature and they were able to ship them to the Los Angeles and Santa Barbara markets quickly. Primary among those crops were varieties of beans. Next came the cultivation of the vast acreage of orchards for which the area was ideally suited. Apricots, walnuts and all types of citrus fruits were found to do exceptionally well in this secluded inland valley area.

Following on the heels of dry crop farming and orchards, came the realization that the area was also ideally suited for the raising of poultry. Turkeys were raised in a great abundance for their meat, and chickens were raised very successfully for their egg production. Agriculture plays an extremely important part in the economy of Moorpark to this very day. Agriculture experts from all over the world come to Moorpark to learn the latest methods.

With each change of economic endeavor that became successful in the community, more and more people were attracted to the area. Moorpark had the reputation at the turn of the century that it still holds today a unique, quaint and charming community. It was and is a community that adheres closely to the values of being a close-knit area where the majority of the residents take an immense amount of pride in all of the area’s activities.

**Chapter 2: STATUS OF THE URBAN FOREST**

**2.1 Urban forest sustainability model**

Moorpark’s Urban Forest Management plan is based on a nationally recognized Model of Urban Forest Sustainability. Consideration was also given to how the resource has been managed in the past, what its value is, how the resource can be sustained over time, and what set of actions will move the City toward its goals.

Moorpark’s Urban Forest Management Plan is informed by “A Model of Urban Forest Sustainability” (Clark et al. 1997). This model recognizes the challenges, benefits, and opportunities unique to city trees. Moorpark’s sustainable urban forest model is built around four principles from this model:

* Sustainability is a broad, general goal that results in the maintenance of environmental, economic, and social functions and benefits over time.
* Urban forests primarily provide services rather than goods.
* Sustainable urban forests require human intervention.
* Trees growing on private lands compose the majority of urban forests.

**Goals and Responsibilities**

A good measure of the health and value of an urban forest is the percentage of land within the City that has tree canopy cover. In order to measure success in canopy cover enhancement, canopy cover goals first must be established, which then will help the City of Moorpark to rally the community around a clear set of common targets. These goals also help to plan implementation steps that consider planting opportunity, planting limitations and other priorities specific to individual land-use types.

To achieve the overall goal of 30% or greater canopy cover in 30 years, goals have been defined for each of the three elements of the plan:

* **Tree Resource Assessment,**
* **Management Framework Assessment**
* **Community Framework Assessment.**

Moorpark’s Urban Forest Management Plan adapted the sustainability model to provide a structure that organizes its goals and the actions needed to achieve them. It incorporates the following three management elements of the model:

1. **Tree Resource**: the trees themselves, as individuals or in forest stands.
2. **Management Framework**: the policy, planning and resources including staff, funding, and tools — brought to bear on the tree resource.
3. **Community Framework**: the way residents are engaged in planning and caring for trees. Because most trees in the urban forest are on private property, a successful program requires that the community plant and maintain trees on their property.

Moorpark’s Urban Forest Management Plan has adapted the sustainability model to provide a structure that organizes our goals and the actions needed to achieve them. Although the main titles are altered, the same three primary management elements are the same as those of the model:

* **Tree Resource**: an understanding of the trees themselves, as individuals or in forest stands.
* **Management Framework**: assignment of responsibility, resources, and best practices for the care of trees
* **Community Framework**: residents are engaged in planning and caring for trees because most trees in the urban forest are on private property, a successful program requires that the community plant and maintain trees on their property.

Short, mid, and long-term actions to achieve these goals have been identified as:

Short-term actions to be implemented within the next 5 years include:

* Increasing tree planting
* Tree selection, planting and care
* Strengthening incentives and regulations for tree preservation and planting on private property
* Improving the City’s internal communication and management structure regarding tree issues
* Increasing community engagement in tree policy and planning
* Increasing community outreach about the value of trees and proper

Mid-term actions to be implemented within the next 10 years include:

* + Determine canopy cover percentage
* Maintain and increase the street tree inventory of 8,355 City-owned trees
* Manage preservation of High Street Heritage trees and City Apricot groves
* Update Arbor Access inventory to record and update new property site trees
* Record citywide tree, additions, replacement trees and new planting sites
* Track implementation of the Urban Forest Management Plan
* Follow annual tree trimming cycles vs. budget for City maintained trees
* Use and increase Boething Tree Lease program of 250 (free) trees to continue tree planting
* Develop tree benefit booklet and provide to anyone who receives a permit to remove a tree
* Develop public information to the City’s urban forest website
* Present K-12 grade school tree education program, evaluate the success and approach.

Long-term actions to be implemented within the next 15 years include:

* Complete management of trees on residential property
* Complete management of trees on commercial and industrial property
* Complete management of trees on institutional property
* Develop and management of trees on 355 acres of forested open space and natural areas
* Develop a monitoring and recording system for replacement trees planted on private property
* After canopy cover percentage is obtained, increase tree planting citywide to assist in meeting 30% canopy cover by 2033
* Support neighborhood volunteer organization and programs to plant trees
* Continue community awareness (Arbor Day, Tree City USA) of the urban forest as a community resource to inspire tree planting & preservation

Moorpark’s urban forest covers all 8,271 plus acres of publicly-and privately-owned land within the City limits. The obvious differences between urban spaces, streetscapes, parklands, open space and other land-use types create a collection of management units that together form Moorpark’s urban forest ecosystem. These following eleven management units provide specific issues, opportunities, goals, and actions associated with each unit will help to determine Moorpark’s canopy cover goals.

Canopy Cover Goals for Moorpark by Management Unit (MU):

Land-use category

* Single-Family
* Apartment/Condo
* HOA Owned
* Industrial
* Commercial
* Institutional Properties
* Transportation Corridors
* Downtown
* Open Space: Natural Areas
* Parks: developed sites
* City Street ROW

Once existing and future canopy cover goals are known and an estimate of the number of trees associated with each are known, the costs and benefits for managing the urban forest can be quantified.

**2.2 Moorpark’s Urban Forest Today**

The development of the Route 23 and Route 118 Freeways, residents have much greater and easier access to both the Conejo Valley to the south and the San Fernando Valley to the east. With this accessibility came the rapid growth spurt of the 70s and 80s. On July 1, 1983, the town of Moorpark incorporated to become the 10th city within Ventura County. The City covers an area of 12.44 sq. miles and has a population of approximately 37,050 residents. Moorpark is a planned community with a balanced concept of growth implemented by a General Plan. The City continues to retain its “small town” values, where neighbors unite to help one another, yet also supports business and industry. (Historical facts provided by the Moorpark Chamber of Commerce.)

The City of Moorpark recognized early on the need to maintain small town values and that growth needed to be balanced with preservation to that end, the City did the following:

* In 1986, voters approved Measure F, a growth control measure and adopted an Open Space Conservation and Recreation Element.
* During 1983-2012, established eighteen (18) City park recreational areas of approximately 162 acres, 155 acres of landscaped parkways, medians, slopes, 325 acres of open space, and two nature trails, all increase walkability and bicycle use with the City.

* In 1992, established Metrolink Commuter Rail & Amtrak service from Moorpark with designation north to Santa Barbara and south to Los Angeles to provide annual air quality improvements.
* In 1992, the completed Highway 118 & 23 freeway connection to reduce vehicle C02 emission build-up caused by slow moving vehicles through the congested areas of Moorpark and contributed to traffic calming.
* Since 1990 approved shopping centers and industrial center construction require City approval of tree species and the amount of trees required are calculated to reduce the surface air temperature of hard surfaces and the adverse effects of urban heat. Trees are also required to provide shade to parking lots to reduce ambient air temperatures and enhance customer comfort.
* In 2000, the City street tree inventory was established recording tree location, tree species, tree diameter, and tree height.
* In 2006, a housing proposal, North Park Village, which would have added 1,680 houses on 3,586 acres (15 km2) in the north-east area of the city, was defeated by a landslide in a City election this preserving open space.
* "Old Town Moorpark" is the area surrounding [High Street](http://en.wikipedia.org/wiki/High_Street), and is the historic center of the City. A feature of the downtown area is the one hundred year old pepper trees that line High Street, planted by Robert Poindexter around 1904 who was also responsible for the plotting and mapping of the town.
* The Peach Hill and Mountain Meadows neighborhoods are south of the Arroyo Simi, and most of the homes here were built within the last 30 years. [Moorpark High School](http://en.wikipedia.org/wiki/Moorpark_High_School) is in this area, as well as many parks, including the Arroyo Vista Park and [Recreation Center](http://en.wikipedia.org/w/index.php?title=Recreation_Center&action=edit&redlink=1), the City's largest park. This area contains a large part of the city's population.
* Campus Park is dominated by [Moorpark College](http://en.wikipedia.org/wiki/Moorpark_College). An additional substantial development is occurring to the north of the existing city, in the area of the Moorpark Country Club.

**2.3 Environmental, Economic, and Social Value of the Urban Forest**

Sustainable urban forests result when “. . . naturally occurring and planted trees in cities are managed to provide the inhabitants with a continuing level of economic, social, environmental, and ecological benefits today and into the future” (Clark et al. 1997). As can be expected, healthy, well-managed forests provide greater amounts of these benefits than forests that are poorly maintained and less healthy.

**Environmental Values**

We know that Moorpark’s urban forest is home to wildlife. Park-owned and open space properties alone, provide habitat to several terrestrial vertebrate species such as, deer, squirrel, skunk, raccoon, opossum, coyote, bobcat, mountain lions, bears, snakes, owls, and several endangered species including the least tern, the blunt-nose leopard and the savannah spar ROW The trees found in Moorpark’s forested areas in parks, streetscapes and watersheds provide valuable terrestrial and aquatic habitat. At the same time, trees provide shade that cools streams, intercepts rainwater and lessens the impacts from storm events. As a result, fluctuations in stream flows are reduced and stream water quality is improved, which positively affects fish and other aquatic life. An aerial view of a typical Moorpark residential neighborhood reveals another interesting environmental benefit. Homeowners tend to plant the back of their property more heavily than the front. When viewed from above, these trees grow together often forming substantial linear forested stretches that provide added habitat and forest connectivity.

In addition to making our City more livable for a growing population, Moorpark’s urban forest provides habitat to a variety of wildlife and native and migratory songbirds. Specific programs like the Wildlife Care of Ventura County administered through the California Department of Fish and Wildlife encourage urban stewards to create habitat that supports dwindling urban wildlife populations. Typically this involves an emphasis on planting native plants. In general, there has been a trend in the Moorpark area to favor native plants over exotic ornamentals when possible.

**Economic Value**

An additional economic value of trees is a stormwater conveyance system. When thinking of public infrastructure such as stormwater drainage systems, we typically think of the highly engineered systems of pipes and pumping stations, built of steel and concrete and requiring major capital investments to develop and maintain. However, “green infrastructure,” notably trees also provides “ecological services” that include the ability to capture and retain rainwater to reduce stormwater runoff and prevent flooding. These ecological services are particularly significant for Southern California area in Ventura County where stormwater control and retention is a very important issue.

Trees also improve air and water quality, and sequester carbon that reduces global warming. Many recent studies estimate a dollar value for these benefits as well. The extent of economic value attributable to the urban forest is directly related to the amount and condition of existing tree canopy. If we manage Moorpark’s urban forest well, we can maximize the ecological services that these trees provide at substantially less cost than the concrete and steel alternatives. It’s a bargain that brings with it many companion benefits. Just as we do for engineered infrastructure, it is important to consider the value of these ecological services when budgeting for the management of the City’s green infrastructure.

In addition to their widely recognized aesthetic worth in an urban setting, trees provide other significant economic value that can be measured. Recent studies have shown that trees positively affect the economic vitality of communities in the following ways:

* Higher property values
* Lower crime rates
* Higher shopping frequency
* Higher office occupancy rates
* Reduced health care costs

**Social Value**

Street trees keep streets and sidewalks cool in the summer and provide interest in the winter. They also calm traffic and separate pedestrians and vehicles. Moorpark’s system of tree-lined bike and pedestrian parks and streetscapes are well used and valued as a resource to promote exercise and a healthier lifestyle. Trees have been shown to improve illness recovery times, reduce air pollution and stress on children with asthma, and improve children’s performance in school.

Trees are often the primary ‘architectural’ element in our developed parklands and, as such, define functional use areas, and add significant aesthetic character. Natural areas provide residents access to trails and environmental learning opportunities that help keep us connected to the needs of fish and wildlife and the experience of being in nature while in the city. The presence of many trees can often define a neighborhood, and conversely, the absence of trees can do the same. As mentioned earlier, many studies show that people enjoy trees and are more comfortable in the presence of trees than they are without them in a landscape. The fact that many people plant a tree in memory of a loved one is a strong indication that we see trees as symbols of life and longevity.

The City of Moorpark understands the importance of maintaining the City’s urban forest both for the aesthetic value and the considerable environmental benefits to the City and community. By the City’s acknowledgement and dedication to the City’s 12.44 square miles of urban forest, the City of Moorpark contributes to both the community and globally by providing:

* An average of 260 pounds per tree of oxygen per year
* Energy savings for cooling
* C02 reduction
* Interception and absorption of air pollutants to achieve public health goals
* Lower the surface air temperature of hard surfaces to reduce the adverse effects of urban heat
* Increase the life span of asphalt streets and roadways providing resurfacing savings
* Reduced storm water runoff
* Contribute to traffic calming
* Increase walkability and bicycle use
* Lower the ambient air temperature to achieve healthier air quality
* Enhance business opportunities
* Enhance customer comfort
* Shade parking lots with 50% canopy reduce ambient air temperatures by 4 degrees
* Parking lots surface temperatures on hot summer days reduced by 37 degrees by shade trees, resulting in the reduction of combined temperatures by 47 degrees, and fuel tank temperatures by nearly 7 degrees
* Parked vehicles reduce evaporative hydrocarbon emissions from by 2% (iton/day)
* Volatile organic compounds *(VOC)* reductions up to 2%
* All resulting in annual air quality savings of millions of dollars

Considering all these factors trees provide above, the City takes management of the Urban forest very seriously devoting funding, full-time City management staff, contract arborist, a tree services contractor, a complete public tree inventory updated annually, contract wildlife biologist, special events (Arbor Day) tree recognition through Tree City USA, and Tree Growth Awards along with volunteer groups from the community and local schools to want to increase the City’s urban forest.

The primary goal of the Urban Forest Management Plan is to identify goals, recommendations, and actions that will preserve, restore, enhance, and sustain the urban forest over the long term. To assist in this rigorous task a nationally recognized Model of Urban Forest Sustainability was used as a guide. Careful consideration was also given to how the resource has been managed in the past, what its value is today, how the resource can be sustained over time, and what set of actions will move us toward our goals. In this section, we discuss the model used to shape this plan, the history and value of the city’s trees and the outcomes we expect to achieve.

Unlike timber forests that are grown primarily to produce forest products, urban forests provide services such as air and water quality improvement. Urban forests are directly affected most notably by the pressures of their location in developed areas. Given this fact, management intervention is necessary to keep city trees and forest lands within cities sustainable and healthy in perpetuity. To that end, the Urban Forest Management Plan uses a planning model framework built around a basic understanding of the unique characteristics of urban forests.

**2.4 Goals of the Plan**

Defining specific goals within each of the three elements of the plan will help guide development and prioritization of the broad range of actions necessary to achieve our vision of a sustainable forest in Moorpark. Some of the overarching considerations that have heavily influenced the direction of the plan include the following:

* **Increased environmental and engineering benefits from trees**. In cities, trees and their understory perform as green infrastructure, slowing and holding stormwater, reducing erosion, buffering water bodies from polluting runoff, and cleaning the air of airborne pollutants. As the extent and health of an urban forest increases, so does its capacity to provide these green infrastructure benefits in greater amounts.
* **Improved condition of the urban forest**. An urban forest that is managed sustainably is healthier—allowing more trees to mature and more species to thrive. Healthy forests ultimately increase the ecological, social, and economic benefits of the forest and improve forest management efficiency.
* **Standardized maintenance practices**. Each of the City departments with responsibility for the urban forest will share standardized maintenance practices. Standardized practices increase overall consistency in how trees are maintained, resulting in better tree health and longevity.
* **Equitable urban forest resource allocation citywide**. It’s important that the City and its partners allocate urban forest management resources in a manner that recognizes geographic and social equity.
* **Optimized opportunity for partnerships in urban forest preservation and enhancement**. A community - residents and businessesalike - that is provided a clear picture of the priorities, scope, timing,and resources for achieving a thriving urban forest is more likely to investtheir energy and resources to help achieve that vision.
* **Policy direction or recommendations for Moorpark’s trees**. Issues like private views versus public trees are commonplace in Moorpark.
* **A document for community education and action**. City trees need to be actively cared for and managed to be healthy, safe, and coexist with homes, streets, businesses, parks, and natural areas. An urban forest management plan that provides the public with a vision for a healthy and sustainable urban forest - as well as a roadmap for getting there - will inspire more people to become informed and involved as stewards to guide and support future sustainable tree practices and policies.

Achieving these goals will result in the following outcomes:

* Improved condition of the urban forest in terms of increased canopy, health, and diversity
* Increased ecological service benefits such as stormwater mitigation benefits
* Clear policy framework to guide City actions
* Consistent approach to urban forest management and public outreach among City departments
* Improved management and accountability within City government
* Equitable distribution of urban forest resources across the city
* Engaged and informed community

**Moorpark’s Urban Forest Framework and Goals**

**Tree Resource Management Framework Community Framework**

Understand the characteristics and Facilitate interdepartmental Enhance public awareness of

complexity of Moorpark’s urban forest. communication and cooperation the urban forest as a

to provide decision makers community resource.

Maintain trees to promote health the information they need to

and longevity. support the UFMP Engage the community in

active stewardship of urban

Maximize canopy cover and optimize Develop and implement forest

age and species diversity resource management

Promote citizen government-

Maximize the ecological and Preserve and protect existing business partnerships.

environmental benefits of the trees, and encourage new tree

urban forest. planting throughout the City by

improving management of trees

on private property

Model good tools in City practices

stewardship

**Chapter 3. Moorpark’s Urban Forest Today**

**2.1 Tree Resource Assessment**

A comprehensive resource management plan must begin with a thorough understanding of the resource itself. This is accomplished through an inventory and assessment process. This process identifies the current state or condition of the resource and highlights both challenges and opportunities for future resource management. For the purposes of the Urban Forest Management Plan (UFMP), the three key elements of the sustainability model provide the framework for this inventory and assessment.

Some of the specific challenges facing Moorpark’s urban forest are listed below. An expanded assessment of Moorpark’s Tree Resource, Management Framework, and Community Framework, found later in this section, describes how Moorpark’s urban forest has held up after decades of these pressures as reflected in current conditions.

The following are the current challenges to Moorpark’s urban forest:

**Tree Resource:**

* The loss of trees due to development
* Competition and damage from invasive plants
* Serious pests and diseases
* pathogens that directly impact specific areas
* Trees sensitive to the compaction and root disturbance urban areas
* Constrained settings like narrow planting strips, tree pits and grates
* Impacts from traffic including air pollution, accidents, etc.

**Management Framework:**

* Limited maintenance budgets to care for City-owned trees
* Inadequate tools for monitoring and managing City-owned trees
* Insufficient incentives and regulations to preserve and encourage planting
  + of trees on private property
* Lack of a plan that defines critical importance of green infrastructure and establishes goals and sets priorities to inform management and budgets for trees

**Community Framework:**

* Lack of broad-based community appreciation of the benefits of professional tree management
* Lack of understanding of proper tree care requirements and practices
* Competition for space lost to development
* Residents’ desire for views and light on their property

**Tree Resource Assessment**

The urban forest can be evaluated using many factors, including extent of tree canopy, species diversity, age, and health of trees. These facts underpin the importance of preserving Moorpark’s existing trees.

Urban trees are under pressures not present in native forests and require active management intervention to sustain them. Urban trees lack some of the natural buffers and protection found in wildlands. In native forests, the correct combination of soil micro-organisms, understory plants, an ample seed source, number of trees, and variance in topography, and stable hydrology all contribute to impede or stop extensive destruction due to diseases, insects, and invasive plants.

Diverse tree composition reduces the risk of major losses to virulent pathogens such as blight or root disease. While experts debate the recommended maximum percentage of a single species in the tree population to be either 5% or 10% (Barker 1975, Miller 1991), the number of genera (subdivisions) and species that thrive in Moorpark allows for increased diversity to safeguard against disease.

Tree selection in the urban environment is usually driven by site conditions that have been shaped by previous development and current land use much more so than to the natural conditions that sustain native open space forests. Sites within the city that are well suited to the protection, planting, and long term management of native species common to our native forests are important to identify and to preserve. Sites that have been significantly altered and constrained by development provide uniquely challenging opportunities for protection, planting, and long term management of species biologically adapted either by nature or by the horticultural industry to thrive under the conditions presented.

Forests are not static—native forests undergo change through succession and urban forests undergo change in reaction to impacts by humans with species selection requiring ongoing adaptation to optimize the potential of the site.

Factors to consider beyond the visually obvious (size, shape, and aesthetic appeal)

include:

* Horticultural requirements for drainage, soil conditions and solar exposure
* Community interests and priorities
* Habitat value for urban wildlife
* Size of available space and location of buildings, paved surfaces and utilities

Other pressures on trees in the urban environment are from development. These threats include land clearing to accommodate growth and views and tree removal to reduce conflicts between trees, power lines, and street signs and to provide sight lines along roadways.

**Street Trees**

Moorpark’s estimated 8,355 street and park trees in a broad range of sizes. Some of our older trees were planted as part of coordinated projects in the 1920s and 1930s and others in the 1990’s In the past 25 years, there have been several focused tree plantings that have created more tree-lined streets organized by the Moorpark Community Development Department and the Moorpark Parks, Recreation and Community Services Department, neighborhood and individual residents. Moorpark street trees range in size, but, overall, tend to be much smaller when compared with other cities with longer histories of street tree planting and with wider planting strips.

Based on inventory data from 2000 and visual observations, the size distribution of street trees in residential areas has not changed much in the last 12 years. Nearly 50% of residential planned community street trees have diameters of 5 inches or less and are relatively young. Many others are larger, with diameters of 6 to 20 inches, yet are young enough to provide benefits for many more years. With the exception of a few streets with mature plantings, private yards provide space and support the growth of many of the larger trees in residential neighborhoods Moorpark’s current tree inventory includes over 160 species that provide a large diversity of tree species. The leading species is the California Sycamore tree at 12%, the California Redwood at 8%, and the White Birch tree at 7%. The remaining 73% is composed of 157 species that provide a wide range of trees through-out the City maintained areas.

A number of issues threaten the viability of Moorpark’s street trees. In downtown root rot is spreading through-out the Historic Pepper Tree grove. Poor pruning practices in the 1970’s, have added to their decline and other City Landscape Maintenance Districts, root/trunk girdling, has occurred shortening the tree’s lifespan. Soil compaction is also stressing these trees and damage their roots and trunks. Vandalism and car crashes also cause some damage and loss. In the mid-1970s in residential areas and along arterials many trees were planted in small parkways. A number of these trees are now outgrowing their parkway areas damaging sidewalks, curbs, and streets. Many public and private trees before the City’s incorporation have been repeatedly topped, which is no longer an acceptable management practice. Tree topping results in poorly attached quickly growing sprouts that require frequent pruning and weaken the tree structure. When street trees are removed, large shade replacement trees may not be an option, due to incompatibility with current planting standards.

Although large trees are a rather small part of Moorpark’s total street tree population, people consider them highly important and resent the aesthetic impact of their loss. Outreach, public notification, and education provide information about why trees are being removed, but public response can be emotional and focused on saving individual trees regardless of their condition.

The City requires developers to preserve healthy street trees with an extended useful life when they are compatible with projects. Redevelopment may require tree removal when preservation is not an option. With new construction, however, stressed or ill-suited trees get replaced with trees better suited to site conditions and new construction allows for introductions of new species.

**Park Trees**

Trees in Moorpark’s parks are found in two types of areas: developed parks or open space areas

**Developed Parks**

The approximately 3,124 trees in Moorpark’s developed parks have great species diversity as well as size distribution. This distribution is a result of the staged growth of the park system. In addition, the older and larger trees of Moorpark are typically found in parks across the City. Parks typically offer large areas free of the buildings and paved surfaces associated with developed properties. These parks provide trees with the space to grow and fully mature.

**Open Space Trees**

Moorpark’s open space tree area is approximately 322 acres. Trees located within Moorpark’s open space areas have not been counted or evaluated as to species, diversity, or condition to determine the urban forest contribution of deciduous, evergreen, native and non-native trees and invasive plants compared with native ecosystems to the urban forest. Determining this data can increasing the production of ecological benefits such as air cleaning and storm water retention and interception.

**Moorpark Street and Parkland Tree Inventory (2012)**

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| |  | | --- | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | | [**Botanical Name**](http://moorpark.wcainc.com/Inventory/EstimatedValue.asp?Sort=1) | [**Common Name**](http://moorpark.wcainc.com/Inventory/EstimatedValue.asp?Sort=2) | [**Total**](http://moorpark.wcainc.com/Inventory/EstimatedValue.asp?Sort=3) |  | [**Value**](http://moorpark.wcainc.com/Inventory/EstimatedValue.asp?Sort=0) | | [Sequoia sempervirens](JavaScript:naDa();) | COAST REDWOOD | [758](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Sequoia%20sempervirens%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $3,237,180 | | [Platanus acerifolia](JavaScript:naDa();) | LONDON PLANE | [1,090](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Platanus%20acerifolia%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $2,589,180 | | [Schinus molle](JavaScript:naDa();) | CALIFORNIA PEPPER | [575](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Schinus%20molle%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $2,512,220 | | [Platanus racemosa](JavaScript:naDa();) | CALIFORNIA SYCAMORE | [349](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Platanus%20racemosa%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $1,031,660 | | [Pinus canariensis](JavaScript:naDa();) | CANARY ISLAND PINE | [241](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Pinus%20canariensis%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $998,930 | | [Eucalyptus sideroxylon](JavaScript:naDa();) | RED IRONBARK | [195](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Eucalyptus%20sideroxylon%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $884,360 | | [Lophostemon confertus](JavaScript:naDa();) | BRISBANE BOX | [410](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Lophostemon%20confertus%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $803,340 | | [Betula pendula](JavaScript:naDa();) | EUROPEAN WHITE BIRCH | [654](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Betula%20pendula%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $777,880 | | [Pinus eldarica](JavaScript:naDa();) | AFGHAN PINE | [161](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Pinus%20eldarica%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $508,890 | | [Pinus halepensis](JavaScript:naDa();) | ALEPPO PINE | [73](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Pinus%20halepensis%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $430,550 | | [Lagerstroemia indica](JavaScript:naDa();) | CRAPE MYRTLE | [533](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Lagerstroemia%20indica%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $425,460 | | [Quercus agrifolia](JavaScript:naDa();) | COAST LIVE OAK | [255](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Quercus%20agrifolia%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $415,650 | | [Liquidambar styraciflua](JavaScript:naDa();) | AMERICAN SWEETGUM | [276](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Liquidambar%20styraciflua%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $397,440 | | [Alnus rhombifolia](JavaScript:naDa();) | WHITE ALDER | [72](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Alnus%20rhombifolia%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $296,100 | | [Melaleuca quinquenervia](JavaScript:naDa();) | CAJEPUT TREE | [106](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Melaleuca%20quinquenervia%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $287,980 | | [Pyrus kawakamii](JavaScript:naDa();) | EVERGREEN PEAR | [188](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Pyrus%20kawakamii%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $225,120 | | [Schinus terebinthifolius](JavaScript:naDa();) | BRAZILIAN PEPPER | [60](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Schinus%20terebinthifolius%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $206,910 | | [Ceratonia siliqua](JavaScript:naDa();) | CAROB | [30](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Ceratonia%20siliqua%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $202,740 | | [Fraxinus uhdei](JavaScript:naDa();) | SHAMEL ASH | [34](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Fraxinus%20uhdei%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $194,200 | | [Magnolia grandiflora](JavaScript:naDa();) | SOUTHERN MAGNOLIA | [87](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Magnolia%20grandiflora%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $154,310 | | [Eucalyptus cladocalyx](JavaScript:naDa();) | SUGAR GUM | [11](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Eucalyptus%20cladocalyx%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $133,830 | | [Quercus suber](JavaScript:naDa();) | CORK OAK | [22](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Quercus%20suber%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $129,680 | | [Ulmus parvifolia](JavaScript:naDa();) | CHINESE ELM | [46](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Ulmus%20parvifolia%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $127,960 | | [Pistacia chinensis](JavaScript:naDa();) | CHINESE PISTACHE | [103](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Pistacia%20chinensis%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $120,940 | | [Betula nigra](JavaScript:naDa();) | RIVER BIRCH | [60](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Betula%20nigra%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $118,880 | | [Other tree](JavaScript:naDa();) | OTHER TREE | [152](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Other%20tree%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $114,240 | | [Cupaniopsis anacardioides](JavaScript:naDa();) | CARROTWOOD | [78](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Cupaniopsis%20anacardioides%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $109,520 | | [Eucalyptus globulus](JavaScript:naDa();) | BLUE GUM | [18](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Eucalyptus%20globulus%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $101,880 | | [Ligustrum lucidum](JavaScript:naDa();) | GLOSSY PRIVET | [125](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Ligustrum%20lucidum%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $100,200 | | [Pyrus calleryana](JavaScript:naDa();) | ORNAMENTAL PEAR | [95](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Pyrus%20calleryana%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $95,620 | | [Quercus ilex](JavaScript:naDa();) | HOLLY OAK | [39](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Quercus%20ilex%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $88,480 | | [Koelreuteria paniculata](JavaScript:naDa();) | GOLDENRAIN TREE | [39](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Koelreuteria%20paniculata%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $82,540 | | [Eucalyptus spp.](JavaScript:naDa();) | EUCALYPTUS | [31](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Eucalyptus%20spp.%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $78,460 | | [Eucalyptus nicholii](JavaScript:naDa();) | NICHOLS WILLOW LEAFED PEPPERMINT | [75](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Eucalyptus%20nicholii%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $78,180 | | [Fraxinus oxycarpa 'Raywood'](JavaScript:naDa();) | RAYWOOD ASH | [16](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Fraxinus%20oxycarpa%20'Raywood'%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $71,890 | | [Eucalyptus leucoxylon](JavaScript:naDa();) | WHITE IRONBARK | [50](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Eucalyptus%20leucoxylon%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $69,500 | | [Ficus benjamina](JavaScript:naDa();) | WEEPING FIG | [46](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Ficus%20benjamina%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $67,880 | | [Podocarpus gracilior](JavaScript:naDa();) | FERN PINE | [30](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Podocarpus%20gracilior%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $64,160 | | [Prunus cerasifera](JavaScript:naDa();) | PURPLE-LEAF PLUM | [130](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Prunus%20cerasifera%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $64,000 | | [Geijera parviflora](JavaScript:naDa();) | AUSTRALIAN WILLOW | [86](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Geijera%20parviflora%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $63,600 | | [Jacaranda mimosifolia](JavaScript:naDa();) | JACARANDA | [44](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Jacaranda%20mimosifolia%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $63,260 | | [Cinnamomum camphora](JavaScript:naDa();) | CAMPHOR TREE | [27](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Cinnamomum%20camphora%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $61,590 | | [Pinus pinea](JavaScript:naDa();) | ITALIAN STONE PINE | [10](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Pinus%20pinea%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $57,700 | | [Cercis canadensis](JavaScript:naDa();) | EASTERN REDBUD | [42](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Cercis%20canadensis%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $56,600 | | [Myoporum laetum](JavaScript:naDa();) | MYOPORUM | [67](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Myoporum%20laetum%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $53,020 | | [Eucalyptus polyanthemos](JavaScript:naDa();) | SILVER DOLLAR GUM | [14](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Eucalyptus%20polyanthemos%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $52,470 | | [Pittosporum undulatum](JavaScript:naDa();) | VICTORIAN BOX | [9](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Pittosporum%20undulatum%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $50,350 | | [Dodonaea viscosa](JavaScript:naDa();) | HOPSEED | [56](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Dodonaea%20viscosa%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $48,720 | | [Eucalyptus ficifolia](JavaScript:naDa();) | RED FLOWERING GUM | [25](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Eucalyptus%20ficifolia%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $47,790 | | [Pinus spp.](JavaScript:naDa();) | PINE | [8](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Pinus%20spp.%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $43,940 | | [Cupressus sempervirens](JavaScript:naDa();) | ITALIAN CYPRESS | [38](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Cupressus%20sempervirens%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $40,720 | | [Ulmus pumila](JavaScript:naDa();) | SIBERIAN ELM | [8](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Ulmus%20pumila%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $37,880 | | [Tamarix aphylla](JavaScript:naDa();) | ATHEL TREE | [13](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Tamarix%20aphylla%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $34,750 | | [Juglans regia](JavaScript:naDa();) | ENGLISH WALNUT | [5](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Juglans%20regia%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $32,260 | | [Ginkgo biloba](JavaScript:naDa();) | MAIDENHAIR TREE | [28](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Ginkgo%20biloba%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $31,160 | | [Eucalyptus robusta](JavaScript:naDa();) | SWAMP MAHOGONY | [13](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Eucalyptus%20robusta%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $31,060 | | [Brachychiton populneus](JavaScript:naDa();) | BOTTLE TREE | [19](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Brachychiton%20populneus%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $28,720 | | [Ficus microcarpa 'Nitida'](JavaScript:naDa();) | INDIAN LAUREL FIG | [26](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Ficus%20microcarpa%20'Nitida'%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $27,240 | | [Umbellularia californica](JavaScript:naDa();) | CALIFORNIA BAY | [3](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Umbellularia%20californica%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $26,560 | | [Melia azedarach](JavaScript:naDa();) | CHINABERRY | [3](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Melia%20azedarach%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $25,740 | | [Sambucus caerulea](JavaScript:naDa();) | BLUE ELDERBERRY | [21](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Sambucus%20caerulea%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $25,420 | | [Pinus radiata](JavaScript:naDa();) | MONTEREY PINE | [13](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Pinus%20radiata%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $24,170 | | [Callistemon citrinus](JavaScript:naDa();) | LEMON BOTTLEBRUSH | [18](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Callistemon%20citrinus%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $23,740 | | [Albizia julibrissin](JavaScript:naDa();) | SILK TREE | [18](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Albizia%20julibrissin%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $23,000 | | [Pyrus calleryana 'Aristocrat'](JavaScript:naDa();) | ARISTOCRAT PEAR | [18](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Pyrus%20calleryana%20'Aristocrat'%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $22,770 | | [Morus alba](JavaScript:naDa();) | WHITE MULBERRY | [4](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Morus%20alba%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $22,520 | | [Eucalyptus camaldulensis](JavaScript:naDa();) | RED GUM | [6](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Eucalyptus%20camaldulensis%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $21,950 | | [Acer saccharinum](JavaScript:naDa();) | SILVER MAPLE | [4](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Acer%20saccharinum%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $21,360 | | [Pinus thunbergiana](JavaScript:naDa();) | JAPANESE BLACK PINE | [11](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Pinus%20thunbergiana%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $21,340 | | [Prunus armeniaca](JavaScript:naDa();) | APRICOT | [15](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Prunus%20armeniaca%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $20,700 | | [Koelreuteria bipinnata](JavaScript:naDa();) | CHINESE FLAME TREE | [10](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Koelreuteria%20bipinnata%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $19,660 | | [Quercus lobata](JavaScript:naDa();) | VALLEY OAK | [2](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Quercus%20lobata%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $19,660 | | [Magnolia grandiflora 'Russet'](JavaScript:naDa();) | RUSSET MAGNOLIA | [11](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Magnolia%20grandiflora%20'Russet'%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $19,650 | | [Gleditsia triacanthos](JavaScript:naDa();) | HONEY LOCUST | [5](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Gleditsia%20triacanthos%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $19,120 | | [Eucalyptus citriodora](JavaScript:naDa();) | LEMON-SCENTED GUM | [9](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Eucalyptus%20citriodora%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $18,580 | | [Erythrina caffra](JavaScript:naDa();) | KAFFIRBOOM CORAL TREE | [2](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Erythrina%20caffra%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $17,220 | | [Fraxinus spp.](JavaScript:naDa();) | ASH | [1](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Fraxinus%20spp.%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $17,220 | | [Yucca gloriosa](JavaScript:naDa();) | SPANISH DAGGER | [10](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Yucca%20gloriosa%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $16,880 | | [Ficus spp.](JavaScript:naDa();) | FIG | [8](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Ficus%20spp.%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $12,760 | | [Fraxinus 'Rosehill'](JavaScript:naDa();) | ASH ROSEHILL | [2](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Fraxinus%20'Rosehill'%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $12,160 | | [Magnolia stellata](JavaScript:naDa();) | MAGNOLIA | [11](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Magnolia%20stellata%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $10,420 | | [Salix spp.](JavaScript:naDa();) | WILLOW | [15](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Salix%20spp.%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $10,060 | | [Heteromeles arbutifolia](JavaScript:naDa();) | TOYON | [7](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Heteromeles%20arbutifolia%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $9,660 | | [Lycianthes rantonnei](JavaScript:naDa();) | PARAGUAY NIGHTSHADE | [11](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Lycianthes%20rantonnei%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $7,700 | | [Eucalyptus maculata](JavaScript:naDa();) | SPOTTED GUM | [6](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Eucalyptus%20maculata%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $7,600 | | [Liriodendron tulipifera](JavaScript:naDa();) | TULIP TREE | [6](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Liriodendron%20tulipifera%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $7,600 | | [Acacia longifolia](JavaScript:naDa();) | SYDNEY GOLDEN WATTLE | [2](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Acacia%20longifolia%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $6,780 | | [Melaleuca nesophila](JavaScript:naDa();) | PINK MELALEUCA | [1](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Melaleuca%20nesophila%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $6,080 | | [Tipuana tipu](JavaScript:naDa();) | TIPU | [1](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Tipuana%20tipu%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $6,080 | | [Robinia pseudoacacia](JavaScript:naDa();) | BLACK LOCUST | [3](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Robinia%20pseudoacacia%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $5,990 | | [Fraxinus velutina 'Modesto'](JavaScript:naDa();) | MODESTO ASH | [4](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Fraxinus%20velutina%20'Modesto'%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $5,740 | | [Juniperus chinensis 'Torulosa'](JavaScript:naDa();) | HOLLYWOOD JUNIPER | [6](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Juniperus%20chinensis%20'Torulosa'%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $5,560 | | [Acacia baileyana](JavaScript:naDa();) | BAILEY ACACIA | [7](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Acacia%20baileyana%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $4,900 | | [Quercus spp.](JavaScript:naDa();) | OAK | [4](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Quercus%20spp.%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $4,840 | | [Olea europaea](JavaScript:naDa();) | OLIVE | [4](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Olea%20europaea%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $4,840 | | [Calocedrus decurrens](JavaScript:naDa();) | INCENSE CEDAR | [2](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Calocedrus%20decurrens%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $4,640 | | [Nerium oleander](JavaScript:naDa();) | OLEANDER | [10](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Nerium%20oleander%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $4,420 | | [Rhus lancea](JavaScript:naDa();) | AFRICAN SUMAC | [6](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Rhus%20lancea%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $4,200 | | [Ligustrum japonicum](JavaScript:naDa();) | JAPANESE PRIVET | [4](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Ligustrum%20japonicum%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $4,160 | | [Acer oblongum](JavaScript:naDa();) | EVERGREEN MAPLE | [2](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Acer%20oblongum%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $4,140 | | [Melaleuca linariifolia](JavaScript:naDa();) | FLAXLEAF PAPERBARK | [3](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Melaleuca%20linariifolia%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $4,140 | | [Platycladus orientalis](JavaScript:naDa();) | ORIENTAL ARBORVITAE | [2](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Platycladus%20orientalis%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $3,960 | | [Fraxinus velutina](JavaScript:naDa();) | ARIZONA ASH | [3](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Fraxinus%20velutina%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $3,460 | | [Casuarina equisetifolia](JavaScript:naDa();) | HORSETAIL TREE | [1](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Casuarina%20equisetifolia%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $3,260 | | [Prunus lyonii](JavaScript:naDa();) | CATALINA CHERRY | [1](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Prunus%20lyonii%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $3,260 | | [Bischofia javanica](JavaScript:naDa();) | TOOG | [1](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Bischofia%20javanica%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $3,260 | | [Erythrina spp.](JavaScript:naDa();) | CORAL TREE | [1](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Erythrina%20spp.%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $3,260 | | [Prunus amygdalus](JavaScript:naDa();) | ALMOND | [1](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Prunus%20amygdalus%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $3,260 | | [Ulmus americana](JavaScript:naDa();) | AMERICAN ELM | [1](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Ulmus%20americana%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $3,260 | | [Eucalyptus microtheca](JavaScript:naDa();) | COOLIBAH | [1](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Eucalyptus%20microtheca%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $3,260 | | [Callistemon viminalis](JavaScript:naDa();) | WEEPING BOTTLEBRUSH | [2](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Callistemon%20viminalis%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $3,100 | | [Grevillea robusta](JavaScript:naDa();) | SILK OAK | [1](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Grevillea%20robusta%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $3,040 | | [Chorisia speciosa](JavaScript:naDa();) | SILK-FLOSS TREE | [4](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Chorisia%20speciosa%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $2,800 | | [Pyrus betulifolia](JavaScript:naDa();) | DANCER PEAR | [4](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Pyrus%20betulifolia%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $2,800 | | [Paulownia tomentosa](JavaScript:naDa();) | EMPRESS TREE | [2](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Paulownia%20tomentosa%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $2,760 | | [Citrus reticulata](JavaScript:naDa();) | TANGERINE | [2](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Citrus%20reticulata%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $2,760 | | [Bauhinia variegata](JavaScript:naDa();) | PURPLE ORCHID TREE | [2](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Bauhinia%20variegata%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $2,760 | | [Psidium guajava](JavaScript:naDa();) | GUAVA | [3](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Psidium%20guajava%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $2,100 | | [Araucaria columnaris](JavaScript:naDa();) | STAR PINE | [3](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Araucaria%20columnaris%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $2,100 | | [Ficus microcarpa](JavaScript:naDa();) | WEEPING INDIAN LAUREL FIG | [3](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Ficus%20microcarpa%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $2,100 | | [Psidium cattleianum](JavaScript:naDa();) | STRAWBERRY GUAVA | [3](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Psidium%20cattleianum%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $2,100 | | [Prunus domestica](JavaScript:naDa();) | PLUM | [3](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Prunus%20domestica%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $2,100 | | [Prunus caroliniana](JavaScript:naDa();) | CAROLINA LAUREL CHERRY | [2](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Prunus%20caroliniana%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $2,080 | | [Catalpa speciosa](JavaScript:naDa();) | WESTERN CATALPA | [2](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Catalpa%20speciosa%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $2,080 | | [Tabebuia chrysotricha](JavaScript:naDa();) | GOLDEN TRUMPET TREE | [2](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Tabebuia%20chrysotricha%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $2,080 | | [Liquidambar orientalis](JavaScript:naDa();) | ORIENTAL SWEETGUM | [1](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Liquidambar%20orientalis%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $2,070 | | [Pinus roxburghii](JavaScript:naDa();) | CHIR PINE | [1](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Pinus%20roxburghii%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $2,070 | | [Cotoneaster lacteus](JavaScript:naDa();) | RED CLUSTERBERRY | [1](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Cotoneaster%20lacteus%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $1,630 | | [Robinia pseudoacacia 'Purple Robe'](JavaScript:naDa();) | PURPLE ROBE LOCUST | [1](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Robinia%20pseudoacacia%20'Purple%20Robe'%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $1,380 | | [Eucalyptus macrocarpa](JavaScript:naDa();) | BIG FRUIT RED FLOWERING GUM | [1](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Eucalyptus%20macrocarpa%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $1,380 | | [Ficus microcarpa 'Green Gem'](JavaScript:naDa();) | GREEN GEM INDIAN LAUREL FIG | [1](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Ficus%20microcarpa%20'Green%20Gem'%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $1,380 | | [Juniperus chinensis](JavaScript:naDa();) | CHINESE JUNIPER | [1](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Juniperus%20chinensis%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $1,380 | | [Cupressocyparis leylandii](JavaScript:naDa();) | LEYLAND CYPRESS | [2](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Cupressocyparis%20leylandii%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $1,380 | | [Maytenus boaria](JavaScript:naDa();) | MAYTEN TREE | [1](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Maytenus%20boaria%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $1,380 | | [Robinia ambigua 'Idahoensis'](JavaScript:naDa();) | IDAHO LOCUST | [1](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Robinia%20ambigua%20'Idahoensis'%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $1,380 | | [Fraxinus pennsylvanica](JavaScript:naDa();) | GREEN ASH | [1](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Fraxinus%20pennsylvanica%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $1,380 | | [Rhaphiolepis 'Majestic Beauty'](JavaScript:naDa();) | INDIAN HAWTHORNE | [1](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Rhaphiolepis%20'Majestic%20Beauty'%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $1,030 | | [Magnolia grandiflora 'Majestic Beauty'](JavaScript:naDa();) | MAJESTIC BEAUTY MAGNOLIA | [1](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Magnolia%20grandiflora%20'Majestic%20Beauty'%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $1,030 | | [Tabebuia avellanedae](JavaScript:naDa();) | LAVENDER TRUMPET TREE | [1](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Tabebuia%20avellanedae%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $1,030 | | [Prunus serrulata](JavaScript:naDa();) | JAPANESE FLOWERING CHERRY | [1](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Prunus%20serrulata%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $700 | | [Prunus persica](JavaScript:naDa();) | PEACH | [1](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Prunus%20persica%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $700 | | [Ficus elastica](JavaScript:naDa();) | RUBBER TREE | [1](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Ficus%20elastica%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $700 | | [Eriobotrya deflexa](JavaScript:naDa();) | BRONZE LOQUAT | [1](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Eriobotrya%20deflexa%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $700 | | [Syzygium paniculatum](JavaScript:naDa();) | BRUSH CHERRY | [1](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Syzygium%20paniculatum%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $700 | | [Cedrus deodara](JavaScript:naDa();) | DEODAR CEDAR | [1](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Cedrus%20deodara%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $700 | | [Eriobotrya japonica](JavaScript:naDa();) | EDIBLE LOQUAT | [1](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Eriobotrya%20japonica%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $700 | | [Strelitzia nicolai](JavaScript:naDa();) | GIANT BIRD OF PARADISE | [1](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Strelitzia%20nicolai%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $700 | | [Juglans californica](JavaScript:naDa();) | SO CAL BLACK WALNUT | [1](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Juglans%20californica%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $700 | | [Bauhinia blakeana](JavaScript:naDa();) | HONG KONG ORCHID TREE | [1](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Bauhinia%20blakeana%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $700 | | [Acer palmatum](JavaScript:naDa();) | JAPANESE MAPLE | [1](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Acer%20palmatum%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $700 | | [Acer saccharum](JavaScript:naDa();) | SUGAR MAPLE | [1](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Acer%20saccharum%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $700 | | [Salix lasiolepis](JavaScript:naDa();) | ARROYO WILLOW | [1](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Salix%20lasiolepis%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $690 | | [Ailanthus altissima](JavaScript:naDa();) | TREE OF HEAVEN | [1](http://moorpark.wcainc.com/Inventory/SearchResultsMulti.asp?SPP=Ailanthus%20altissima%09&MaxRecords=100&ViewSPP=Bot&Sort=HouseAdd) |  | $380 | |  | | | | | | **Palm Trees:** | | | | | | [Washingtonia robusta](JavaScript:naDa();) | MEXICAN FAN PALM | 76 |  | $87,675 | | [Syagrus romanzoffianum](JavaScript:naDa();) | QUEEN PALM | 31 |  | $24,360 | | [Phoenix canariensis](JavaScript:naDa();) | CANARY ISLAND DATE PALM | 2 |  | $13,800 | | [Phoenix roebelenii](JavaScript:naDa();) | PYGMY DATE PALM | 5 |  | $5,250 | | [Phoenix dactylifera](JavaScript:naDa();) | DATE PALM | 1 |  | $2,850 | | [Trachycarpus fortunei](JavaScript:naDa();) | WINDMILL PALM | 1 |  | $1,350 | | [Ravenea rivularis](JavaScript:naDa();) | MAJESTY PALM | 1 |  | $1,200 | |  | | | | | |  | **Totals:** | **8,355** |  | **$20,075,355** | |

**Private Trees**

A large percentage of Moorpark’s land base is privately owned and includes a wide spectrum of land-use types ranging from single-family to industrial and institutional. Although there is no inventory, it is apparent from looking at trees on private property, that there is a wide spectrum of tree density, age, and sizes throughout Moorpark’s neighborhoods. Some neighborhoods have mature tree canopy cover with opportunities to plant new trees.

The greatest loss of Moorpark’s tree canopy has been from private property. While most Moorpark residents value and enjoy trees, there are situations where trees are regarded as troublesome and either removed or topped (a very poor maintenance practice) for blocking views and sunlight or dropping leaves or fruit. While trees in business districts may be appreciated by shoppers, business owners may have concerns with their signs being visible and with maintenance.

Trees in parking lots offer shade but may reduce the number of stalls. On institutional and industrial campuses trees soften buildings, absorb noise and dust, and provide outdoor space for employees and visitors to enjoy, but trees require an investment in maintenance. Improper maintenance impairs tree health and shortens tree lifespan. Being the owner of healthy trees requires an investment in proper maintenance.

Moorpark has attempted to heighten public awareness that tree topping is bad for tree health and creates ugly and unsafe trees. Education is an ongoing process, but even for people who know how to prune, it is difficult and sometimes costly to prune mature trees that require climbing, large equipment, and specialized skills. These challenges have led to relatively poor tree maintenance practices on private property overall.

**Tree Removal**

As part of any comprehensive forest management plan, sometimes trees need to be removed. The conditions that require such action include hazard tree reduction, changes in facility use, new development, trees that have outgrown their space due to poor initial tree selection and for similar reasons. The removal of trees can cause substantial community concern and even litigation. Even the removal of trees at designated public viewpoints can be controversial. The City takes these community concerns quite seriously and seeks to do its best in demonstrating to the public sufficient justification for the removal of trees.

**Trees and Climate Change**

The debate may still be underway regarding how human actions may influence and impact the scope and timing of potential global warming and companion climate change. However, one thing we do know with greater certainty is that many plant species do not require a substantial change in their environmental conditions to be greatly effected. It is entirely possible that the species composition of Moorpark’s urban forest 50 or 100 years from now will include species that we currently do not or cannot g ROW The city’s urban forester, and landscape architects will need to be particularly attentive to changes and trends in the environment that may require them to make adjustments to our planting palettes. As well, changes in climate may also make it easier for invasive non-native species, flora and fauna, to find a new home in Moorpark to the detriment of our indigenous species.

**Invasive Species**

Over the years many tree and shrub/ground cover plant species have been introduced to the Moorpark region only to see them become invasive, threatening the native species. Trees like Pepper tree, Alder, Crepe Myrtle, and others now flourish in our urban forests in place of more desirable native species. Likewise, shrubs and ground covers like English ivy, Himalayan blackberry and creeping bent grass threaten our forest floors and riparian corridors. Not only should we avoid planting these species, but also support the Moorpark Landscape Design Standards and Guidelines (2010) and remove these invasive plants over time.

**Trees and Views**

Private views, or the potential for private views, often include publicly-owned trees. For some, there is value in seeing distant panoramas and for others their view out to the street is an important value that contributes to quality of life. For many, neighboring trees either frame a ‘territorial’ view or are the view. Views are subjective and are defined by changing landscapes that often involve other property ownership. Being situated on a set of hills, Moorpark is a city of views. To ensure that all residents can enjoy the opportunity many of Moorpark landscape developments view or view corridor has been carefully mapped to provide these sites.

Current City of Moorpark policy on private views and public trees is that public trees cannot be topped or removed for the purposes of retaining or creating a private view. And view relief is only if it can be accomplished through pruning that meets the City of Moorpark’s arboricultural standards,and is performed by certified arboricultural contractors under the direction of the City.

**3.2. Management Framework Assessment**

This section describes the current City of Moorpark framework for managing the urban forest resource.

**Interdepartmental Coordination**

Effective interdepartmental coordination is essential for consistent delivery of urban forestry programs. “A Model of Urban Forest Sustainability” (Clark et al.1997) describes this ability as the “. . . degree to which all city departments operate with common goals and objectives.”

**The Director of Community Services**

The Director of Community Services Department was formed in 1983 to provide a venue for coordinating development of tree-related policy, programs, and budget that needed Citywide direction. It is a cooperative effort of four City departments that have tree management responsibilities the primary role of the Urban Forest management falls on the Parks, Recreation and Community Services Department, as reflected in its annual work plan, tree inventory and maintenance and operations budget to maintain the Urban Forest Management.

**Many Trees — Many Missions**

Trees are managed within departments to meet differing functional goals that match each department’s mission:

* Moorpark Parks, Recreation, and Community Services Department maintains 8,355 street and park trees and regulates planting and maintenance of another 200 street and park trees. They must balance canopy cover goals with the need to minimize tree conflicts with surrounding infrastructure and transportation safety requirements.
* Moorpark Parks, Recreation and Community Services Department manages approximately 3,124 trees in developed parks. Parks must balance a wide range of recreational goals including the desire for picnic, sports, and play areas.
* Moorpark Community Development Department regulates tree preservation and planting during design and construction to protect special trees and critical areas while allowing development.

Moorpark Parks, Recreation and Community Services Department Tree Management Responsibilities:

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | |  |  |  |  | | | | | |  | |
| **Planting:** | | New sites, replacement trees, and schedules. | | | | |  |  |  |  |  | |
|  | |  | | | | |  |  |  |  |  | |
| **Pruning:** | | Budget, tree maintenance, and hazards. | | | | |  |  |  |  |  | |
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| **Tree removal:** | | Hardscape damage, safety (flood control, fire safety, etc). | | | | |  |  |  |  |  | |
|  | |  | | | | |  |  |  |  |  | |
| **Root system work:** | | Planting, city construction projects, hardscape repairs | | | | |  |  |  |  |  | |
|  | |  | | | | |  |  |  |  |  | |
|  | |  | | | | |  |  |  |  |  | |
| **Permits** | | Private property tree removal permits | | | | |  |  |  |  |  | |
| **Outreach/education:** | | Tree City USA. Arbor Day, City Ordinance tree questions | | | | |  |  |  |  |  | |
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Moorpark Parks, Recreation and Community Services Department manages trees distributed over 1,500 acres of developed parks, streetscapes, parkways, natural areas, and other publicly-owned open spaces.

The staff consists of a Parks, Recreation and Community Services Director, Park Manager and Park and Landscape Superintendent. The Park and Landscape Superintendent administers the tree services agreement with an independent contractor. The Superintendent is responsible for tree maintenance, regulates planting, pruning, and removal of street trees, permitting and response to citizens and City staff on tree-related issues.

**Department Responsibilities**

Parks, Recreation, and Community Services Department have primary urban forest responsibility for tree pruning, trimming, and removal. Other City responsibilities include emergency tree removal replacement program, notification of the public before routine pruning, The Director of Community Services and specifically tasked with coordinating the following: Providing interdepartmental coordination. Achieve broader awareness in City government of the economic, social and environmental value of the urban forest, responsible for planting and maintaining trees on public and private property enforcing regulations relating to trees on private properties.

**Communication with other Agencies**

As important as it is for good communication between City departments on urban forestry matters, it is equally important that similar communication exist between the City and other agencies such as the County of Ventura, DOT Caltrans, and even commercial entities such as the railroads. These organizations are often engaged in activities that can or do impact Moorpark’s urban forest.

**Maintenance**

Urban trees typically require maintenance. The goals of maintenance are to promote health, provide safe and functioning public spaces, and maximize the environmental, social, and economic benefits of trees.

Tree maintenance tasks and frequency vary depending on age, species, establishment, and site characteristics. Generally, the first three years of a tree’s life, also known as the plant establishment period, are the most maintenance intensive. Establishment requires attention to tree selection, site preparation, planting, watering, staking, pruning, and mulching to assure their survival. Pruning, disease and insect management are critical throughout a tree’s life.

Street trees may require additional watering beyond the plant establishment period because of the impervious paved surfaces, which also radiate heat that increases evaporation. Street trees also require care to protect the tree as it grows in a confined setting. Such care could be removing tight pavers, lawn edging, weed barrier, or tree grates and even making larger tree pits. If not removed, these materials can girdle and kill a tree by cutting off the flow of nutrients and water between the leaves and the roots.

Pruning is a specialized type of maintenance. Pruning can be done reactively to eliminate hazards such as clearing obstructed signs or removing branches at risk of falling or preventively for tree health and safety. Proactive pruning for health and safety is pruning to remove diseased or insect-infested wood, improve air flow to reduce disease and insects, remove crossing or rubbing branches, develop a strong structure, remove broken limbs to encourage wound closure and prevent hazards, and prevent obstructions with signs and pedestrian traffic. The City’s best management practices (BMPs) are guided by the American National Standards Institute (ANSI) 300 Industry standards that define how to prune trees for health, structural integrity, and clearance.

An important benchmark for urban forestry program performance is how often trees are pruned. The City of Moorpark employs (Contractor) one 3-person tree crew for every 2,500 trees. As a result, Moorpark’s tree maintenance cycle is well within the industry standard of managing pruning of all trees on a 5- to 7-year cycle. (Miller 1988). The advantage of shorter pruning cycles is longer lived, healthier trees that are able to provide maximum environmental, economic, and social benefits over time.

**What is Tree Maintenance?**

Tree maintenance is the sum of all activities required in the life cycle of a healthy tree, including proper selection and planting, watering, pruning and ultimate removal at old age. Establishment of all aged trees requires attention to tree selection, site preparation, planting, watering, staking, pruning and mulching

**Managing Wood waste Products**

City of Moorpark forestry operations generate considerable amounts of byproducts from tree services. These so-called ‘waste’ products are recycled back into City landscapes in the form of mulch or compost. In 2011, Chipped waste that is relatively free of leafy material was delivered directly to City public landscaped areas for use as mulch in landscape beds. the City’s managed urban forest waste products removed 62 tons of green waste from the landfill.

**Maintenance of Private Trees**

While the City of Moorpark does have some influence on preserving trees on private property (Tree Removal Ordinance 12.080.MMC), ensuring that private citizens know what appropriate tree maintenance is can be a challenge as evidenced by the all too frequent topping practice still employed by some tree maintenance firms. Encouraging private citizens to preserve trees can also be a challenge given concerns with leaf drop, views, solar access, competing uses of space, and the cost of hiring professional tree care workers. Likewise, encouraging private homeowners to plant more trees can be a challenge for the same reasons. Additionally to educate and inform the public about the value of trees that will lead to more tree preservation and planting City government channel tree care segments on watering, trimming and general care information, City grade-school student tree resources education program, providing City staff to educate tree owners of the future.

**Standards of Practice**

The City requires all Contractors follow industry standards as defined in the International Society of Arboriculture’s (ISA) *Tree Pruning Guidelines* and/or those in the ANSI A300 pruning standards and the Z133.1 Safety standards.City urban forest managers will encourage the public to plant the right tree in the right place to avoid interference with power lines and impacts on sidewalks and underground infrastructure, and distribute attractively-illustrated booklets. This public information gives the characteristics and requirements for a number of tree species. The City web-site will provide information on how to “hire a tree services contractor and pruning guide” providing tree services contractor be a licensed arborist and is following proper tree pruning guidelinesand/or those in the ANSI A300 pruning standards and the Z133.1 Safety standards are followed.

**Tools for Inventory and Assessment**

A common requirement for all tree resource managers is a thorough understanding of the resource itself. To that end, Moorpark needs better assessment tools to evaluate the condition, values, benefits, needs and opportunities associated with its urban forest. A more complete picture will help the City better plan and manage all tree-related work.

The following are three critical needs:

1. Updated current tree inventory

2. On-going tree replacement records linked to current inventory data

3. Better tools/models for determining the value and benefits of the urban forest

As stated earlier, having a good understanding of the resource and its condition is always the first requirement of good resource management. In addition, detailed information on resources expended for maintenance would help staff better plan and budget work. The ability to assign value to the benefits of the forest would aid in creating a business case for valuing green infrastructure in the same way the City considers the capital investment and maintenance needs of its engineered infrastructure. In turn, this could lead to creative mechanisms for funding appropriate levels of maintenance of the urban forest resource.

**Developed Areas Tree Inventory**

A current inventory of tree locations, species, age, health, and size is critical for planning tree replacement, pruning, disease management, and planting. Moorpark’s street tree inventory is contained in West Coast Arborist, Arbor Access is neither complete nor adequate. The street tree inventory was not designed to be readily updated. Most of its information was collected in 2001, making records outdated. Likewise, it’s difficult to summarize tree age, size, condition, and canopy as a basis for estimating upcoming workloads, costs, and benefits based on 2001 data. Having a complete and up-to-date inventory is essential to good resource management. For that reason, obtaining the inventory information referenced above should be given a high priority for continued funding. In addition to the tree inventory a citywide canopy cover percentages needs to be assessed. Together, these two sets of data provide an excellent inventory of our urban forest.

**Open space Tree Inventory**

Moorpark’s 322 acres of open space forests has not been inventoried, and need to be undertaken thorough an ecosystem-based analysis of all the City’s open space forests. The City can be involved in this project in an advisory capacity using volunteer groups such as the Boy Scout, eagle scout candidates to collect the tree count and species information.

**Maintenance Record Keeping**

Moorpark’s lack of updated tree inventory and replanting records reduces the ability to better track maintenance activities required for tree establishment, pruning, inspection, removal, and other procedures making workload planning difficult. Having such information available also assists greatly in answering questions regarding how and where tree maintenance resources are being used.

**Performance Measures**

Though departments track program information such as the number of trees planted or removed, there is currently no citywide system for comprehensively evaluating the condition of the urban forest and tracking our progress in implementing actions that are the goals of this plan. Because the City lacks a performance monitoring system, it cannot as effectively make program and budget decisions, adapt to changing conditions over time, or effectively communicate with senior management and the public.

**Tree Policies/Regulations**

The City has a number of policies, programs, regulations, and documents that establish a framework for tree preservation, planting and care. The City’s wide ranging effort reflects the complexity of tree management issues in urban settings. This complexity leads to challenges in aligning policy between competing goals.

As the pressure to redevelop land within Moorpark continues and the region’s population increases, density goals and development pressures need to be balanced with tree protection and planting goals. Finding the right balance is crucial to maintaining the city’s livability and encouraging new development within already developed areas rather than pushing it to the metropolitan fringe.

One of the significant gaps in the City of Moorpark’s current regulations is the limited ability to ensure ongoing tree preservation and planting on private property. Balancing private property rights with the public goal of increasing a healthy urban forest is one of our biggest challenges. Moorpark’s development of the Moorpark Green Factor is to provide property developers with innovative options for increasing the amount of ‘green’ associated with their developments. It contains a greater consideration in a nontraditional landscape design solutions while still encouraging trees and expanded tree canopy.

**3.3 Community Framework Assessment**

A sustainable urban forest is a community asset. Community appreciation for the benefits and needs of trees and engagement in planning, planting and caring for trees is essential to the long-term health of the asset. Citizen input and volunteer participation are critical to the success of City programs that support trees. Without the active support and engagement of the community, urban forestry programs cannot succeed. This section describes the ways the community is currently informed about and participates in stewardship of the urban forest.

**Outreach**

The City has an important role in fostering residents’ understanding of the environmental, economic, and community benefits of trees as well as proper tree selection, planting and care. City departments can provide information through the City’s website, brochures, government access channels, school education programs and during volunteer events.

**Volunteer Opportunities**

Moorpark citizen volunteer organizations provide many hours of support for the City’s urban forestry programs each year. Volunteers have planted several hundred trees in City parks over several years, many of the groups contain young participants that will carry on working knowledge obtained during their volunteer experience.

**Planning and Policy Development**

Moorpark residents have opportunities to participate in urban forest planning and policy development through public comment during planning commission meetings and through City Council meetings. Neighborhoods have become the basic unit of Moorpark’s ongoing comprehensive planning virtually all Moorpark neighborhood plans, adopted by the City Council, contain tree planting plans.

The Moorpark Planning Commission also provides advice on policy matters in Moorpark development taking public comment into consideration, while the City has these mechanisms in place for community input on specific projects.

The Planning Commissions focus on urban forest issues rather than the broader array of interconnected environmental issues that face urban areas. Therefore, the Commission may miss innovative opportunities that lie at the intersection of urban environmental initiatives. Only in the last decade has there been a full appreciation of these connections as for example the link between stormwater and trees and air quality and trees.

A more effective approach would be to bring stakeholders representing air quality and climate change, and urban forestry together. This would provide opportunities to increase understanding of these individual issues among all stakeholders as well as to work toward solutions that have benefits and leverage opportunities across all these urban environmental priorities.

**Partnerships**

In working with volunteer organizations on tree programs, the City continues to illustrate that urban forestry is about community as much as it is about trees. In addition re-establishing forest tree canopy the partnership will restore the ecological services of Moorpark’s Urban Forests. Volunteers are the key to the success of the program.

Examples of successful partnerships with volunteer groups that focused on new tree planting provide the City over 300 new trees during the years of 2009 to 2011. This would not have happened without individuals and organizations contributing their talents and energy to ensure that there is a green Moorpark legacy established for future generations.

**Inter-City Cooperation**

Inter-City cooperation involves promoting interaction among private property owners homeowner associations, state agencies to collaborate on urban ecology projects and issues. As an example, the City’s involvement in tree removal on non-public property to preserve the City’s urban forest requiring a tree replacement for every tree removed of 24” box or larger.

**3.4 Recommended Goals and Actions**

This section identifies goals and specific actions needed to enhance and preserve Moorpark’s trees. Establishing the City’s goals for canopy coveroverall and by management unit is a necessary first step and will help guide the identification and prioritization of actions.

**Why Does the City Need Canopy Cover Goals?**

A good measure of the health and value of an urban forest is the percentage of land within the city that has tree canopy cover. In order to measure success in canopy cover enhancement, canopy cover goals must first be established. These goals will help the City of Moorpark to rally the community around a clear set of common targets. They also help to plan implementation steps that consider planting opportunity, planting limitations, and other priorities specific to individual land-use types. With canopy cover goals, we can target available funding to areas with the greatest potential for new trees or the greatest lack of trees. Finally, having canopy cover goals allows us to target new tree plantings to maximize the ecological services potential (e.g. stormwater mitigation, carbon sequestration) across the city. Within this context, 30-year citywide canopy cover goals have been established to increase existing canopy cover by 2/3 to a canopy cover of 30%.

**How to Derive Canopy Cover Goals?**

American Forests, a leading urban forest management, conservation and research group, measured tree cover in 440 communities. Their research recommends that a canopy cover goal of 40% would be appropriate for Moorpark. In developing canopy cover goals for Moorpark, the American Forests recommendation was reviewed. The process to define a canopy goal for the Urban Forest Management Plan for a 30-year planning horizon used the American Forests’ recommendations and benchmarked with other cities, considering land-use mix in Moorpark and other City land-use goals. Defined goals for each land-use type factored in the percentage of the total land base within each land-use type and individual land-use goals to calculate the recommended citywide goal of 30%. An example, Baltimore, MD has a current canopy cover of 19.8% and set a goal to double (39.6%) canopy cover citywide within 30 years.

The forest canopy of a city can be measured in a variety of methods. For this plan, Moorpark’s canopy was measured using LIDAR. LIDAR measures the height and location of objects based on reflection of a laser. The data collected is high definition—five measurements for each 1 meter square. The elevations, which are within 2 feet of actual heights, were used to create a topographic map of the city. A by-product of this data is a highly accurate, 3-dimensional map of Moorpark’s tree canopy. Existing GIS data for the management units was used to develop values for canopy cover in each unit.

**Chapter 4. Goal Rationale and Action**

The goals and actions have beengrouped into the three elements of the urban forest sustainability model: TreeResource, Management Framework, and Community Framework.Each goal statement is followed by the supporting rationale for the goal,which is then followed by short, mid- and long-term recommendations/actionsto achieve the goals. Implementation will require policy, program, andbudget coordination, as well as long-term and stable funding. Accomplishingthese goals is essential for the City of Moorpark to achieve urban forest sustainability.

**Urban Forest Inventory and Estimates**

* Short-term actions will be done within the next 5 years. Typically these are actions that are either already partially implemented, budget neutral, or have agreed upon new funding in place.
* Mid-term actions are 5 to 10 years out. These are actions that might require operational restructuring or reorganization, limited additional funding, or ‘tooling-up’ on the part of internal or external partners.
* Long-term actions are 10 or more years on the horizon. These actions may have significant budget implications, may involve organizational change, and might require significant fund raising.

**4.1 Tree Resource**

Goals Rationale Short-term Mid-term Long-term

* Understand the characteristics and complexity of Moorpark’s urban forest a fundamental requirement for effective resource management is a thorough understanding of the resource itself. This is accomplished through inventory and analysis and is essential for implementation of all resource management tools from cost/benefit analysis to workload management. An inventory of the urban forest needs to be comprehensive, dynamic, and available to forest managers within all applicable departments.
* Coordinate inventory data from Arbor Access with City needs for inventory and assessment of open space areas. Develop long-term tree management strategies that consider the unique characteristics of the major City land-use types Develop modeling for tree ages and sizes and life expectancy, accounting for species and site factors, to facilitate costs projections.
* Develop vegetation data analyses, models and reports for input to policy, planning, and budget decisions. Inventory street trees, trees in developed parks, and trees along park owned boulevards. Identify and catalog landmark and heritage trees building on existing
* program.
* Examine canopy-cover effects on views, solar access and property values across land-use types. Develop a dynamic inventory process that can be updated and maintained.
* Maintain trees to promote health and longevity Healthy trees contribute more to Moorpark’s environment and quality of life than do unhealthy trees. Trees maintained on a regular cycle are healthier, live longer and reduce the City’s liability from hazards such as dead limbs.
* City maintenance practices should be consistent with the most current industry standards. Maintain trees on a regular, more frequent cycle for health and longevity Maintain trees based upon commonly accepted ANSI or ISA practices/ BMPs. Determine the desired tree maintenance cycle for all urban forest management units.
* Request additional tree maintenance resources in future budgets. Use current and future modeling to determine resources required to adequately preserve, restore and enhance urban forest.
* Develop an urban forest maintenance plan for all City-owned trees. Consider alternative models for street tree management. Continue to make budget requests to increase tree maintenance capacity and to reduce annual pruning cycles.
* Use more understory species, where appropriate, for increased and multilayered canopy.
* Continue to make budget requests to increase tree maintenance capacity and to reduce annual pruning cycles Seek and acquire tree maintenance resources required to maintain public trees at industry standards.
* Maximize canopy cover and optimize age and species diversity The many benefits provided by trees increase as the tree population and overall canopy coverage increase.
* Significant species diversity helps ensure no single pathogen or insect can decimate an entire population.
* A range of tree ages helps ensure continuity and sustainability of the forest.
* Continue planting the right tree in the right place to ensure healthy, stable sustainable trees.
* Define appropriate age/size/species distribution and life-expectancy goals for different areas and land uses Determine the most strategic locations for new or replacement tree plantings and give them highest priority for planting in the short-term.
* Place high priority on replacement of missing trees on public property. When possible, transplant trees that would otherwise be removed as the result of construction work.
* Plant large trees where they have room to mature and plan shorter rotations of small- and medium-sized trees in areas with limited growing area.
* Develop tree selection lists for the same.
* Fund and coordinate City programs to provide trees to the public and support stewardship.
* Achieve tree canopy cover percentage goals by land-use type.
* Maximize the ecological and environmental benefits of the urban forest
* Trees provide ecological services including storm water mitigation and air and water quality improvement.
* Maximizing these services saves money and improves quality of life but also requires an investment of resources.
* Effectively measuring (using financial values whenever possible) and communicating these benefits is necessary to inform decisions about resource allocation so that decision makers and the community can fully understand the benefits that tree management investments return.
* Define the economic and environmental benefits derived from the ecological services provided by a healthy urban forest in Moorpark (at current and proposed canopy coverage percent (%) levels).
* Continue funding of Parks Forest Restoration Program. As part of implementing all urban forest projects and programs, consider potential environmental enhancements.
* Think citywide when implementing projects to capitalize on potential synergies for environmental enhancements between departments.
* Consider ecological services values as the basis for creative funding considerations for urban forest restoration and maintenance.
* Consider environmental functions in BMPs.
* Seek sufficient funding in budget process to meet operation and maintenance objectives.
* Ensure an adequate budget to finance the highest priority activities identified in the management plan.
* Examine canopy-cover effects on views, solar access, and property values across different land-use types.
* Look at the forest as a population, balancing concern for individual trees with the values and functions of the entire system.
* To better contribute to wildlife habitat, encourage planting designs that have grouped rather than evenly spaced trees.

**4.2 Management Framework**

Goals Rationale Short-term Mid-term Long-term

* Facilitate interdepartmental communication and cooperation to provide decision makers the information they need to support and implement the Urban Forest Management Plan (UFMP) in the City of Moorpark involves many departments. Multiple departments each with its own primary mission also manage trees. It’s vital that City departments have effective processes in place to communicate with one another regarding common urban forestry issues.
* Integrate urban forest management planning with other City efforts affecting vegetation, open spaces and sustainable development – most notably the factor being applied in neighborhood commercial zones and under consideration for the City’s multi-family zones.
* Coordinate all City policies and regulations related to trees.
* Track cost-effectiveness of current organizational structure and management practices.
* Examine canopy-cover effects on views, solar access and property values across different land-use types.
* Review urban forestry staff functions, roles and responsibilities toward achievement of management efficiencies.
* Develop and implement resource management tools The UFMP will provide the basis from which departments can develop urban forest resource management system tools over time. These systems-based management tools include inventory and analysis of the tree resource itself, tree maintenance workload forecasting, documentation of work performed, performance metrics and processes for determining progress on performance goals. All information made available through such systems will be transferable into dollars to enable urban forest managers and policy makers to make well-informed decisions on the levels of funding for various urban forest management programs.
* Update or create City tree inventories and link them to work record systems.
* Develop performance metrics for City tree maintenance operations.
* Complete development of the UFMP and obtain budget resources for selected early actions.
* Develop an urban forest maintenance plan for all City-owned trees.
* Develop a dynamic inventory process that can be continuously updated and maintained.
* Link work record system with inventory so updates are frequent and automatic.
* Preserve and protect existing trees, and encourage new tree planting throughout the City by improving management of trees on private property.
* The primary mission of the City’s urban forest staff is preservation, restoration, and enhancement of the urban forest so that it can be sustained in perpetuity.
* Accomplishing this task and meeting long-term canopy coverage goals will require many actions. Many of these will be policy/regulatory environment actions. This is especially true for private property of Moorpark’s land base. While a sensitive subject, the development and implementation of incentives and regulations for private land can be effective tools for encouraging tree preservation and new planting. The City will work with private property owners to encourage them through public information and incentives to both plant new trees and preserve existing ones, and practice good stewardship through BMPs.
* Review existing tree preservation and planting incentives and regulations.
* Engage community stakeholders to identify opportunities and barriers for tree planting and preservation on private property.
* Enforce existing regulations and incentives that preserve trees on private property.
* Develop new regulations that require preservation of trees or planting new trees on private property.
* Increase developers’, builders’ and private property owners’ awareness about the value of trees and provide incentives for tree retention and management.
* Develop new incentive programs that encourage planting new trees on private property.
* Research tree preservation and planting incentives, ordinances, policies and regulations that are working in other cities.
* Establish incentives to promote the appropriate maintenance and preservation of trees on private property.
* Evaluate the effectiveness of incentives and regulations and make changes as needed.
* Recommend regulations to protect landmark trees.
* Recommend regulations to protect trees on all property undergoing development including tree protection and retention requirements.
* Create incentives for developers to adopt tree protection practices, including facilitating permitting processes.
* Seek private and/or public funding to encourage tree planting on private property.
* Model good stewardship in City practices.
* The City needs to be the leader and ‘walk its talk’ on the need to preserve, restore and enhance the urban forest.
* The City should be a model of excellent forest stewardship practices in order to effectively manage the trees it owns and to provide an example to the community by demonstrating sustainable urban forestry practices on all City projects.
* Continue to provide good examples of sustainability, such as forest restoration or tree friendly public works approaches that enhance trees and the general condition of the forest.
* Conduct all City tree management practices to ISA or equivalent standards and encourage compliance by private industry.
* Consistently follow up tree planting projects with maintenance reminders, training opportunities and stewardship activities.
* Require that all tree care companies/individuals doing business on City property be ISA Certified Arborists.
* Continue to revise and update City BMPs for tree and forest maintenance on a 5-year cycle (next revision due in 2015).

**4.3 Community Framework**

Goals Rationale Short-term Mid-term Long-term

* Enhance public awareness of the urban forest as a community Resource.
* Experts are quick to point out that the urban forest cannot and will not survive without active interaction with and management by humans. For this active care, trees provide many social benefits including aesthetic/architectural, shade, color, fragrance, green in an otherwise gray environment, and opportunities for recreation and even active stewardship.
* Sustainable urban forests require community involvement. For citizens to become active in caring for, enhancing and advocating for the urban forest, they must first be made aware of the benefits and value it provides. They also need to understand the challenges facing the urban forest and the actions they can undertake personally, or as groups, to enhance forest vitality.
* Use UFMP vision as starting point to define and adopt a vision for the future of the City’s urban forest.
* Create a citywide approach to communicating about trees.
* Develop communication tools that explain urban forestry benefits and programs, using promotional themes and ideas.
* Provide all tree owners access to City tree maintenance BMPs on the City’s web site.
* Capitalize on the research being undertaken by others to quantify the financial value associated with the social benefits afforded by the urban forest.
* Identify special trees and mark their historic, biological or other noteworthy traits with signs or other means. (Heritage Tree Program).
* Involve community in inventories and assessments as a follow-up to neighborhood planning efforts and current outreach efforts.
* Create tree curricula for K-12 schools, providing resources for both classroom and neighborhood-based learning.
* Develop community service opportunities with schools and other institutions for urban forest stewardship projects.
* Engage the community in active stewardship of the urban forest.
* Continue to support and encourage growth of open space.
* Expand volunteer stewardship opportunities.
* Provide continued support to volunteer organizations.
* Involve community in inventories and assessments as a follow-up to neighborhood planning efforts and current outreach efforts.
* Promote expanded and coordinated urban forest efforts at a neighborhood level.
* Explore funding opportunities with the business community and with regional donors, particularly for special projects identified in a management plan.
* Create the mechanism that will allow an active partnership with the community service element of the Moorpark Public Schools. As another large landowner.
* Partnerships between city government and citizen or business groups can benefit the urban forest. (Partnerships with nonprofit groups).
* Financial or volunteer labor contributions from private businesses’ for forest restoration and other tree planting projects.
* Develop a coordinated approach to seek funding from sources such as local and regional foundations, industry and corporations.
* Enact the Moorpark Green Factor as an update to landscaping requirements. The Green Factor is a new menu of landscaping strategies that will be required for new development in neighborhood business districts. It is intended to increase the amount and quality of urban landscaping in these dense urban areas while allowing increased flexibility for developers to efficiently utilize their properties.
* The Green Factor encourages the planting of layers of vegetation including the use of larger trees and tree preservation.
* Partner with nurseries and landscape industry to make quality information and plant materials available, particularly information to discourage the sale and planting of known non-native invasive plant species.
* Institute a program to acknowledge and publicize contributions to urban forestry by citizens, businesses, institutions, and neighborhood group organizations.
* Facilitate opportunities to collaborate with universities and the private sector on urban forestry science.

**Chapter 5: Goals and Actions by Management Units**

**5.1 Implementing the Moorpark Urban Management Plan:**

This Urban Forest Management Plan provides a roadmap for City staff and the community to move forward together to work toward a common set of ambitious goals. For the plan to be implemented, it needs to be institutionalized as a document requiring implementation. It also will require a stewarding group and a sense of urgency to get things started.

A broad range of actions that will forward the goal of a sustainable urban forest in Moorpark over the next 30 years are presented throughout this document. This first ever comprehensive plan for the managing and improving the condition of the Moorpark urban forest presents a renewed beginning.

There is much to be done over time to improve the condition of Moorpark’s urban forest. The plan should be revisited every 5 years to celebrate accomplishments, validate assumptions, adjust goals and actions and revise data as new information is made available.

Moorpark’s urban forest consists of all trees in the City on both public as private property. This urban forest includes street trees, park trees, open space trees, trees on institutional campuses, and trees in many private ownership settings. The urban forest touches the lives of Moorpark’s citizens every day. Whether it’s enjoying a day at the Park or the majestic woodlands along Tierra Rejada Road, it is trees that comprise the urban forest and trees that make the experience.

Trees located throughout Moorpark on public and private property affect our lives and the local economy in ways that aren’t always obvious. Trees provide community, environmental, and economic benefits that range from reducing the effects of density to increasing property values to providing ecological services such as stormwater mitigation, air toxics removal, and greenhouse gas sequestration.

**5.2 The Comprehensive Urban Forest Plan**

While having a positive impact, these efforts have not been enough to preserve Moorpark’s urban forest. A resource of this magnitude requires careful management to ensure its preservation, restoration, and enhancement. For that reason, the Urban Forest Management Plan has been developed as a roadmap for the long-term management of Moorpark’s trees.

Managing trees in a City differs from managing forests in natural settings. Urban forest management goals such as increasing tree canopy, improving public safety, and providing native habitat and recreational and educational opportunities must be balanced with other goals such as accommodating growth and facilitating transportation. The Urban Forest Management Plan is the City of Moorpark’s plan to integrate management of the many issues and opportunities posed by Moorpark’s tree resource.

Additionally, all natural systems change over time. If we want these changes to enhance the urban forest, they must be actively managed. Nationally-based studies repeatedly support the fact that the resource deteriorates when human intervention is not a proactive part of urban forest management. This decline can be seen in some of Moorpark’s streetscapes where pest and disease has caused several species to decline. It is also evident where trees are planted in places that either don’t allow for growth or that conflict with power lines or sidewalks. Proactive management is needed to keep our trees sustainable and in balance with other urban priorities.

**5.3 Goals and Actions**

Moorpark’s urban forest covers 12.44 square miles of publicly and privately owned land within the city limits. Because of the obvious differences between urban spaces, streetscapes, parklands, remnant forests and other land-use types, the urban forest cannot be viewed as a single unit for management purposes.

Instead, it is a collection of management units that together form Moorpark’s urban forest ecosystem. This plan defines eight (8) management units (MU) that cover all the lands in the city. The MUs were selected based upon unique physical characteristics. They generally conform to land-use types the City uses for comprehensive planning. Using those land-use types allows for easy coordination of GIS mapping layers (Figure 3) and for related planning initiatives.

The following are the six MUs for the plan:

1. Methods
2. Residential Property
3. Public Property
4. Downtown Moorpark
5. Commercial Property
6. Industrial Property
7. Developed Park lands
8. Open Space and Natural land

**5.4 Methods**

Moorpark does not have a complete inventory of trees in the City. However, to determine the total tree benefits, costs, and planting goals for Moorpark required that we estimate the total number of existing trees. To obtain this critical information, we used two different sets of data. The first set of data was the measure of total tree canopy in Moorpark. The second set of data was past inventories of City-owned trees on street right of ways and in developed parks. This combined data was then processed through tree benefit models developed for the region to determine costs/benefits.

Canopy cover for the City can be determined from remote sensing data known as LIDAR, essentially Laser radar, which uses the reflection of light back to a receiver. The study that provided this information was a regional topographic project done in 2000. The data provided spatial information for each meter of the City’s surface. By separating out buildings and overhead structures from the LIDAR data we were able to determine the shape and size of a majority of Moorpark’s tree canopy. The number of trees this canopy represented was derived by dividing the estimated average canopy width for an average tree within the MU into the total canopy area for the unit.

Basing upon currently available national and regional models, the number of trees within each unit was multiplied by estimated costs to plant an average tree in the unit, the cost to maintain the tree within the unit, and the benefits to be derived from each tree within the unit. Another specific importance to Moorpark is the stormwater retention values and the air quality improvement values.

**5.5 Residential Property**

Approximately 7.0 square miles of all property within Moorpark is single-family residential. This element of the City’s urban forest is found on private land and does not include the trees that may be growing along the adjacent street. The percentage of canopy cover within Moorpark’s single-family neighborhoods varies widely. Some neighborhoods are characterized by large trees species while other neighborhoods have canopy cover characteristic of smaller tree species.

Because single-family properties occupy so much of Moorpark’s land base, they also provide the greatest opportunity for increasing the city’s overall tree canopy cover. This fact is all the more important as more trees are removed from privately-owned single family zoned property.

The City can do more to encourage tree planting and retention through education, tree planting programs, and expanding the scope of a tree protection ordinance to include trees on private property. City tree planting programs may also add new plantings along residential streets.

**Current Condition**

The current canopy coverage in this unit is has not been determined. Therefore collectively canopy coverage for City has not been determined.

**Desired Condition**

The 30-year canopy cover goal for this unit is 30%.

Continued tree diversity with a balance of both native and non-native tree species to prevent the complete loss of tree population.

**Issues/Opportunities:**

**Rich Legacy of Large Trees**

Many of Moorpark’s oldest and largest trees are located on single-family property. Preserving these specimen trees should be a priority for the City.

Providing citizens with information on the value of these trees to Moorpark should likewise be a priority. The City should consider expanding the scope of the Tree Protection Ordinance to apply to regulate removal of trees of a minimum tree diameter on all private property. Forming partnerships with agencies and business involved in property transfer would increase awareness of the City’s tree preservation and canopy goals.

**Significant Planting Potential**

Single-family residential property represents over 7.0 square miles of all the land in the City. It holds the greatest opportunity for tree canopy cover enhancement. Homeowners should be encouraged, perhaps via incentive programs, to plant additional trees on their property for their enjoyment and to benefit the overall community.

**Standards of Tree Care**

Too many trees on single-family property are harmed by poor maintenance practices such as tree topping, girdling, volcano mulching, changing the soil grade, and lack of water. Likewise, too many tree care and landscape businesses do unprofessional work on trees and set a bad example for others. Very good public information on tree maintenance practices is available from the City through printed material, classes, and on City web sites.

**Tree Planting Incentives**

The Arbor Day free tree give-away program provides incentive for homeowners plant trees, and an excellent opportunity to educate the public on proper tree selection, planting, and care.

**Fall Leaves and Other Debris**

Sometimes homeowners decide to remove perfectly healthy trees because they drop leaves in the fall or other debris at other times of the year. There may be an opportunity for groups like the scouts or composters to volunteer or offer leaf collection services to clean up fall leaves and take them to a composting site. It’s even possible that the City might be able to provide a location in the future for tree debris to be taken for recycling.

**Goals and Actions: Tree Resource**

* Select tree to maximize canopy for the size of the tree planting space (i.e., large space with no overhead obstructions = large tree).
* Focus on tree preservation.
* Complete a more thorough tree inventory.

**Management Framework**

* Develop Moorpark’s private tree preservation program.
* Develop/increased incentives for tree preservation.
* Increase street sweeping frequency for leaf control.

**Community Framework**

* Produce and distribute tree education materials that address tree concerns and guide good tree care practices.
* Provide widely distributed education materials on tree stewardship and the value of planting and preserving trees.
* Provide directed tree education materials to realtors.

**5.6 Public Property**

About 2.44 square miles of all property in Moorpark is zoned multi-family. Public Property properties tend to be located along major transportation corridors, and adjacent to the downtown core. The amount of available tree planting space is limited in some multi-family developments. In others, the tree canopy is more generous.

**Current Condition**

Multi-family properties canopy coverage has not been determined therefore collectively canopy coverage for City has not been determined.

**Desired Condition**

Canopy cover goal in 30 years is 30%.

Continued tree diversity with a balance of both native and non-native tree species to prevent the complete loss of tree population.

**Issues/Opportunities:**

Public areas increased monitoring and control of species purposed to provide the right tree for the right location to prevent future tree problems.

**Owner/Developer Education**

Typically, much less tree space is available in multi-family developments than in single-family. The greatest opportunity for trees begins with design and the developer. Multi-family development design takes on many forms with some being much more conducive to planting of trees. Incentive programs might allow variations on development regulations in return for planting and retaining trees.

**Turnover Rates**

Multi-family developments have high turnover rates. Even though multifamilytenants are not owners and may not reside at one location verylong, that does not mean that they can’t be great tree advocates. Thesame level of interest afforded other residential groups needs to beafforded multi-family residents in order to gain their support for the urban forestry in general.

**Goals/Actions:**

**Tree Resource**

Develop a list of tree species that would thrive in the often smaller planting spaces found within this MU.

**Management Framework**

* Consider incentives that would encourage the preservation and planting of trees.
* Consider applying some of the proposed Moorpark Green Factor strategies to this MU to expand the potential for additional trees and related greenery.

**Community Framework**

* Work with condominium homeowner associations to educate these owners and encourage them to plant additional trees.
* Educate apartment building owners about the positive aspects of providing well-maintained trees and green spaces as part of their rental environment.

**5.7 Commercial**

This MU includes Moorpark’s commercial developments along the major transportation corridors and in various commercial hubs. This unit includes the private property within these commercial areas as well as publicly-owned and managed street trees

**Current Condition**

There are approximately 3.0 square miles of land within this Moorpark’s commercial developments MU. The current number of trees within the MU has not been estimated, therfore the area of canopy coverage has not been determined.

**Desired Condition**

The opportunity for tree plantings in this MU is varied and generally more limited than in others. Historically, the majority of tree plantings in Commercial/ Mixed Use areas are street trees. The Community Development Department landscape development and tree retention regulations guide the opportunity for canopy enhancement within Moorpark commercial areas. Some of these areas are designated urban villages or urban centers for future land use. This distinction will have some bearing on forest management opportunities within this MU, which has a 30-year canopy coverage goal of 30%.

Continued tree diversity with a balance of both native and non-native tree species to prevent the complete loss of tree population.

**Issues/Opportunities:**

**Increased Population Density**

As Moorpark moves toward an Urban village model, increasingly it will be necessary to both plant and preserve trees in parts of the City as the City increases in density. Choosing to both plant and preserve trees now will prepare Moorpark for new residents. Strategic purchase of available open space can help preserve wildlife habitat within dense residential areas.

**Working with Business Owners**

It’s not uncommon for some business owners to look at trees as a problem or nuisance rather than a benefit. Cleaning up fall leaves takes time. Trees must be well-sited and appropriate species selected for a successful commercial streetscape. However, repeated studies have shown that shoppers prefer tree-lined streets and, even in Moorpark, the shade produced by trees can be truly appreciated on a hot summer day. Opportunities exist to work with business owners to better educate them about the value of trees in a commercial setting and to partner with the City to make repairs and improvements.

**Green Roofs and Parking Lots**

This MU typically is associated with a high percentage of area given to building footprints (roofs) and parking lots. Opportunities exist, possibly through incentive programs, to increase the green associated with these necessary elements to effectively increase the canopy coverage in the MU.

**Goal/Actions: Tree Resource**

Develop a desired tree species palette for commercial areas that takes into consideration the needs and concerns of business owners.

Place a high value on preserving existing trees via monitoring construction practices, encouraging professional maintenance practices, educating business owners on trees’ value to their business and community.

Work with local businesses and business associations to develop programs for planting additional trees.

Over time, calculate and achieve desired canopy coverage goal for the MU.

**Management Framework**

* Undertake an inventory of existing trees within the Commercial/Mixed Use MU and document in a citywide database.
* Enforce existing code requirements regarding tree preservation and planting.
* Consider the full range of incentives to encourage new tree planting as well as the preservation of existing trees.
* Explore existing codes to determine existing authority over private trees and consider expanding if possible.
* Establishing tree planting guidelines/standards for Urban Villages and other areas designated for greater population density will be essential to ensure the livability of the communities that are envisioned: trees/ green space = livability = density
* Focus forested open space acquisitions and development of neighborhood- scale parks with trees in areas designated for greater population density.
* Consider expansion of Neighborhood Business grants for tree planting.
* Encourage other means of incorporating trees into this MU through greenways and green parking lots.
* Consider providing incentives for adding trees and other landscape assets as part of a building renovation or construction project.

**Community Framework**

* Make tree preservation and planting a part of the City Council, Park Commission and Planning Commission discussions and have City staff prepared and available to participate in those discussions.
* Create or modify existing education programs for business owners, property owners and residents regarding the value of planting and preserving trees.
* Make tree maintenance brochures and standards available to property owners so that they will know how trees should be maintained and will hire qualified arborists for tree work.
* Whenever possible, notify the public in advance of the need to remove trees.

**5.8 Downtown Moorpark**

Trees in this MU are found in the City’s urban core most of the trees in downtown Moorpark are located within the street ROW. Downtown Moorpark contains the High Street Heritage peppertrees some over a hundred years old and protected under the 2007 California Pepper Tree Maintenance Plan for High Street. The trees have endured through limited planting space, a harsh downtown environment, very poor soils, poor irrigation and drainage, and abuse from human activity.

**Current Condition**

This MU is 2.44 square miles of the City land base. The current tree canopy coverage is unknown. The estimated 3,040 trees in this unit are equal to less than 25% of the city total, but they are critical in terms of their ability to soften the harsh urban environment. The heritage pepper trees in downtown Moorpark are frequently under stress due to limited planting space with soil infected with incurable root rot disease. Given these environmental stresses, the average tree in this MU is typically smaller than in other units and has a shorter lifespan. Changes in development and land-use patterns downtown can also be a challenge to tree preservation.

**Desired Condition**

As stated, the current canopy cover percentage for this MU is unknown. Moorpark’s canopy cover goals for this MU are 30% within 30 years. These numbers are within expected national averages.

Remove the diseased pepper trees and infected soil and replant with new healthy pepper trees.

Continued tree diversity with a balance of both native and non-native tree species to prevent the complete loss of tree population.

**Issues/Opportunities:**

**Canopy Cover Percentage**

The current canopy cover for downtown Moorpark is unknown finding planting space to achieve 30% canopy coverage in the downtown core will be a significant challenge. The availability of new planting sites for street trees is limited.

It’s possible that advancements in green building (roofs) technology or new and innovative planting incentives may provide some of the benefits that would otherwise be provided by trees thus allowing for a more modest actual tree canopy goal for the downtown area.

**Heritage High Street Pepper Tree Removal**

Removal of a High Street Heritage Pepper Trees is met with resistance since the trees were planted by the City’s founding fathers removal of a senescent pepper tree over a hundred years old found structurally unsound has incurred legal action by the community groups against the City.

**Perceptions of Business Owners**

It’s not uncommon for business owners to have strong opinions about trees. Some are strong advocates for trees and others are not, or are even opposed to having trees near their businesses. Some business owners raise concerns about trees blocking signs, creating debris or producing too much shade. For other business owners, the benefits trees provide are very important to their business environment. Without a doubt, there is considerable opportunity to provide more and better information to Moorpark’s downtown businesses on the value that trees can bring to commerce and the hazards of healthy trees that are structurally unstable and could fail at anytime, even though appear to be in good health as represented in the High Street Heritage Pepper Tree Grove.

**Tree Protection**

Tree protection in downtown Moorpark is very important because growing trees in the urban core is difficult. Growing trees to a large size in healthy condition is particularly challenging.

**Illegal Activity and Trees**

In recent years the relationship of vegetation and illegal activities has resulted in the modification of several downtown landscapes. The need for public landscapes that are safe and inviting to use has led to new terms like Crime Prevention through Environmental Design (CPTED), which have become part of our landscape design and management lexicon.

The process of making parks safer for legal use can impact trees including pruning, removal, replanting in alternate locations, and/or replanting with different species.

**Tree Planting Incentives**

Along with greater public education, it’s desirable to offer incentives to business and property owners in the downtown core to encourage them to seek opportunities to plant more trees. Most planting opportunities, of course, are within street ROW a continuing challenge will be to work with business and property owners to plant more street trees.

**Goals and Actions: Tree Resource**

* Preserve trees in this MU whenever possible.
* Due to the challenges of the downtown planting environment, select tree species with particular care to help ensure long-term success.
* Maintain the High Street Heritage tree grove preserving the over one-hundred year old pepper trees as long as the public can remain safe.

**Management Framework**

* Develop landscape design guidelines that will consider safety, maintainability and other factors as a means of helping to preserve and/or enhance tree plantings. Encourage implementation of the Moorpark Green Factor for new or re-development.
* Promote designs that create more space for tree growth above and below ground.

**Community Framework**

* Meet with Downtown Business Association(s) to discuss tree canopy and preservation goals.
* Seek partnerships and financial support from downtown businesses in order to plant additional trees.
* Also seek financial support from downtown for the maintenance of trees.

**5.9 Transportation Corridors/Street Trees**

Of the more than 5,315 trees along Moorpark’s streets, the Community Services Department regulates tree removals, and contributes directly to the population citywide-managed street trees via preservation and installation of new trees within most street-side parkways and planters. The existing canopy coverage percentage is not been determined, but this MU has a goal of 30%.

The Community Services Department alsoworks cooperatively with the Community Development Department to ensure preservation, replacement, planting of new trees, and maintenance of trees required by land-use code for private development projects.

**Current Condition Diversity**

City street trees have good species diversity including trees in retail and commercial zones. Several tree species is generally discouraged such as Red Gum, Chinese Flame tree, African Sumac, Locust, Peruvian pepper tree, and Brazilian pepper. The Average spacing between residential street trees is between 10 and 20 feet, a desirable distance for a medium to large maturing tree.

**Distribution**

Moorpark’s street trees have a broad range of size classes (a proxy for age) although the number of 40-inch-diameter (large) trees has decreased. More trees are being planted than lost, precluding any sudden barrenness as trees reach the end of their lifespan. In residential areas, the size distribution of street trees has been virtually unchanged for a decade. Nearly half of these trees are relatively young and have diameters of 15 inches or less.

Many others are larger, with diameters of 6 to 20 inches, yet are young enough to provide benefits and services for many more years. In residential areas, off street trees are on average generally larger than on-street trees, but no data have been collected on their sizes.

The Community Service Department estimates that about .5% of street trees are candidates for removal due to improper location (large trees under utility lines or insufficient growing space) or structural and health issues. The Community Service Department currently removes trees only if they pose an imminent hazard or if removal allows the City to take advantage of opportunities to remove or replace trees as part of a larger planting project.

**Desired Goals**

The Community Service Department goals are to have a healthy mix of species and age distribution, with a maximum of 5% for any one species. New trees should be planted as part of a regular, phased program to meet the desired canopy cover goals. A maintenance cycle for small trees of 1 to 2 years and 3 to 4 years for larger trees should be pursued. The Community Service Department will also develop a tree management plan, including a hazard tree mitigation program to ensure that street trees are being managed proactively. Trees planted in substandard tree pits will be identified and the pits expanded if feasible. If not, the trees will be prioritized for removal and replanting where conditions warrant. Continued tree diversity with a balance of both native and non-native tree species to prevent the complete loss of tree population.

**Conflicting Tree Management Responsibilities**

Many property owners are unaware of their responsibility to maintain street trees adjacent to their property, or are unable or unwilling to maintain those trees. The Public Works crew is frequently dispatched to prune or remove privately-maintained trees that pose a risk to pedestrians and motorists.

Many opportunities are available to improve management of the street tree resource. In particular, the public and policymakers are increasingly aware of the importance of sustainably managing our urban forest.

Recognition is growing for the environmental, economic, and aesthetic value of trees. An aggressive public education program can increase understanding and build support for a strong maintenance program as the most effective way to preserve our urban forest. Furthermore, a tradition of civic mindedness among Moorpark citizens provides opportunities to build strong volunteerism to supplement the Community Service Department maintenance of street trees.

**Conflicts with Other ROW Infrastructure**

Providing space within the limited ROW to plant trees is a major challenge. Trees must compete for space with sidewalks, underground utilities, overhead power lines, the desire to retain views, and a variety of street furniture, such as bus stops, curb space for vehicles, traffic signs, etc. Additionally, many planting strips are too small to accommodate large trees and cannot be expanded. It will be a challenge to plant the new trees recommended in this plan to meet canopy cover goals citywide once determined.

**Street Tree Regulations**

The current street tree ordinance is inadequate to properly regulate theplanting, pruning and removal of trees in the ROW For example, thepenalties the City can levee against a citizen or property owner whoremoves or otherwise damages a privately-maintained tree in the ROW areminor in comparison with the value of the resource that is lost. Similarly,private companies working on ROW trees are not required to havequalifications to ensure proper pruning. The result is that many trees arestructurally damaged by companies with little or no knowledge of properpruning techniques. The existing ordinance should be strengthened toenable better management of street trees, and protect trees from thesetypes of activities.

**Inadequate Maintenance of Privately-Maintained Street Trees**

As Moorpark’s street-tree population grows older and larger, it is becoming increasingly evident that not all Moorpark citizens are willing or able to take on the task of adequately maintaining the street tree in front of their home, even though it is their responsibility. As a result, many street trees are receiving improper maintenance or no maintenance at all. This will lead to premature death and loss of the asset and the benefits it provides. As important as it is to preserve existing trees, a very important question that the City will need to take on at some point in time will be, “should all street trees be actively maintained by the City?” Doing so will dramatically increase the need for the Community Service Department forestry funding. However, it will also have a substantial positive impact on the health and longevity of the street tree population, will make it much easier to ensure that replacement trees are planted when needed and, in the long run, will encourage better relationships with those citizens who may now have generally negative opinions regarding the presence of street trees in their neighborhood.

**Goals and Actions**

We have used the urban forest sustainability model to present goals and actions the City should take to create a sustainable forest. The actions described below and the timeframe within which they occur reflect a two-part approach:

1). reverse the trend in which trees are lost each year to development,

2). increase the number of street trees and canopy over the long term.

**Tree Resource**

* Plant 2 new trees for every tree that has to be removed.
* Make sure that new trees are sufficiently watered.
* Increase number of trees pruned annually.
* Continue to evaluate and update Community Development Department plant list.
* Initiate phase 1 of a landscape assets inventory and condition assessment.
* Develop a risk assessment plan.
* Initiate phase 2 and 3 of the landscape inventory and condition assessment. Be sure to include undeveloped ROW, alleys and street ends.
* Update existing tree inventory.
* Reduce pruning cycle from current cycle to acceptable national standards.
* Implement a hazard tree abatement program.
* Expand the use of tree planting strips rather than tree pits with grates to provide greater rooting area as well as enhanced storm water mitigation.
* Use tunneling to bury more power/communication wires to allow larger, healthier trees in areas with adequate space.

**Management Framework**

* Develop a budget adequate to implement ROW trees and landscaping management over the next 5 years.
* Revise the street tree ordinance; submit it for management and executive review.
* Increase enforcement of BMPs; pass information among tree care and landscape companies.
* Explore creative financing mechanisms to ensure alternative funding to supplement general fund revenues.
* Develop a long range (30 year) street tree management budget.
* Identify and establish dedicated funding sources for street trees.
* Utilize asset management and cost-benefit analysis to ensure urban forest sustainability.

**Community Framework**

* Increase and improve education of the public on tree care responsibilities.
* Continue to promote Heritage Tree program.
* Continue to promote Arbor Day/Tree City USA.
* Develop tree information documents in languages that reflect the diversity of Moorpark.
* Develop a plan for community involvement in tree management activities.
* Educate developers in tree retention benefits and techniques to implement a community involvement plan.

**5.10 Institutional Property**

Moorpark College campus comprises the Institutional Property MU. For the purpose of this plan, we have also included Moorpark Public Schools. The landscapes found on these properties vary widely in design and use, often containing many park-like plantings, amenities and features.

The trees found on these institutional properties may or may not have been inventoried. They are managed as individuals and as groupings, usually within a landscape setting. Some of these trees are of significant size and character and highly valued by students, staff, visitors, and patients receiving medical care as well as providing nesting sites and habitat for birds.

**Current Condition**

Moorpark’s institutional lands like parklands, trees in institutional properties have considerable species diversity and are found in all sizes, many quite large. It is not known which institutions have tree inventories and to what extent the trees are actively managed.

**Desired Condition**

Institutional lands are typically designed landscapes. The selection of tree species and their location in the landscape must be thoughtful. However, that planting opportunities do exist throughout the range of institutional properties. The 30-year canopy coverage goal for this MU is 30%.

Continued tree diversity with a balance of both native and non-native tree species to prevent the complete loss of tree population.

**A Source of Significant Trees**

Institutional properties represent a small percentage of Moorpark’s acreage, but they contribute to the city’s tree canopy in a significant way. Many of these properties, such as Moorpark College campus, already has many beautiful and large trees. Some of these properties also have space available for additional tree planting.

**The Challenge of Maintenance**

The level of grounds and tree maintenance can be quite variable between institutional campuses. When budgets are tight, maintenance may be reduced in lieu of reducing budgets for educational programs. This often can have the double impact of reducing funding for tree preservation as well as new tree planting.

**Goals and Actions:**

**Tree Resource**

* Optimize age and species diversity.
* Work with institutional land managers to preserve existing trees.
* Encourage institutional land managers to focus on replanting removed trees first providing that the current function of the landscape can accommodate the tree(s).

**Management Framework**

* Protect existing healthy trees and encourage tree planting whenever possible and practical.
* Maximize opportunities for wood and byproduct salvage and reuse.

**Community Framework**

* Engage the institutional community as urban forest partners.
* Identify and work with the largest institutions first.
* Provide opportunities for education based groups such as clubs and community service organizations to become involved with planting trees on their campuses.

**5.11 Developed Parklands**

Since it was founded in 1983, Moorpark Parks and Recreation has grown to eight (18) parks. Of this total, about 150 acres are classified as developed parklands. Parkland developed properties have been developed for specific uses, and are actively maintained, and are not in a natural state. Over 3,040 trees are located within these developed parks.

Specific recreation amenities found within this MU include sports fields, picnic facilities, play areas, maintained lawns, shrub beds, and other plantings, parking lots, Apricot groves and numerous other park amenities. These facilities are typically maintained on a routine (daily) basis. These properties are also heavily used and replacement of assets due to use and sometimes abuse is not uncommon.

**Current Condition**

The urban forest in this MU tends to be made up of individual or small groupings of trees rather than large stands such as would be found in a natural area. These trees need to be individually inventoried and managed. The size and species composition varies widely. Many of these trees are now of great size. Because the park system continues to grow, smaller trees also constitute a part of the standing tree inventory. Hazard tree mitigation is a high priority within this MU because trees are located in high-use facilities. On average, park trees are currently on a 10-year maintenance cycle. The current canopy cover percentage is unknown.

**Desired Condition**

Trees in Moorpark’s Developed Parks MU need to continue to represent considerable species and age diversity. The 30-year canopy cover goal for this MU is 30%.

Maintain the apricot tree grove at Poindexter park and increase community development in Memorial Apricot Tree Grove at Arroyo Vista Community Park.

**Issues/Opportunities:**

Apricot tree pest that could infect and devastate the apricot tree grove and destroy the memorial apricot tree grove.

**Tree Maintenance**

Currently, Parks has one, 3-person contracted tree crew. This crew is funded through the 1983-1984 Lighting and Landscape Assessment District(s) Each contract crew is fully outfitted with an aerial lift truck, support truck, and a large chipper. The work unit also has a stump grinder. The current pruning cycle for these crews is 10 years. It is recognized that a preferred pruning cycle is 5 to 7 years depending on location, indicating a need for additional tree maintenance resources. The $23,000 spent each year on hazard tree removal and replanting is a strong indicator that the current pruning cycle is leading to the premature death of park trees.

**Current Replanting Capacity**

Currently, Parks lacks a single, well-defined plan for tree replacement. Trees are removed from some parks without replacement. However, new capital projects typically do include trees as do major maintenance funded landscape restoration projects. A modest number of trees are planted each year within Parks’ general fund programs. Still, these planting programs lack a coordinated plan that will ensure that trees removed from any park are ultimately replaced if so desired. New tree planting should focus first on replacement trees so that the original architecture/design of a park can be restored as desired.

**Tree Preservation**

Tree preservation in parks is more than simply acquiring additional maintenance resources. Situations arise in which park trees conflict with park use, CIP projects, and park safety. When this occurs, it is important that consideration be given to protection and preservation of park trees and other vegetation. If trees have to be removed, consistent with City tree policy, they should be replaced at the original site at a 2-to-1 ratio or at an alternate location as close as possible.

**Hazard Trees**

Parks tree services budget in recent years was reduced. As a result, many trees prematurely declined or have lost major limbs disfiguring tree many requiring removal. In 2005, Parks implemented a Hazard Tree Mitigation Program to methodically locate and remove trees that are most hazardous.

**Wood and Green Waste Recycling**

Parks produces one-third (1/3) of chipped wood mulch annually. Clean-green waste is produced through tree maintenanceoperations and used back in Moorpark parklands

**Tree Species Selection**

Because most parks have substantial areas for planting of trees, large, long-lived trees should be the preferred choice. And tree diversity with a balance of both native and non-native tree species to prevent the complete loss of tree population.

**Goal/Actions:**

**Tree Resource**

* Inventory existing trees.
* Continue to plant new trees and to replace trees that have been removed.

**Management Framework**

* Determine annual maintenance requirements.
* Improve tree management to track work performed on park trees.
* Work within the City budget process to request desired additional tree maintenance resources.
* Train staff in tree protection practices.
* Develop BMPs for saving trees.
* Provide public education regarding rationale for tree removals.
* Link Vegetation Management Plan hazard tree needs to the work order system in priority order for removal.

**Community Framework**

* Increase public education information on “Park Trees.”
* Work with the business and nonprofit (Park Foundation) community to create a tree donation account.

**5.12 Open Space / Natural Areas**

The property in this MU is in public ownership and includes Moorpark’s true open space and natural forests typically located within undeveloped areas. These properties include established forests, riparian corridors, meadows, wetlands, and portions of parks that are in a natural state of varying ecosystem complexity and value. This MU contains a total of 320 acres. Much of it is steep hillsides and watershed ravines

This MU also contains most of Moorpark’s habitat to a variety of wildlife and to favor native plants over exotic ornamentals when possible. Also to create habitat that supports dwindling urban wildlife populations and migratory songbirds.

**Current Condition**

Because this unit contains a wide variety of ecosystem types, the ‘state of the forest’ cannot be easily defined. In general, however, Moorpark’s open space and natural area forest provides a diversity in plant species, unregulated resembling Moorpark’s history.

**Desired Condition**

The lands within this MU have the greatest potential for stormwater mitigation, enhancement of water quality, carbon sequestration, and wildlife habitat. These forested lands provide ecological services at a level expected of fully functioning ecosystems. It is vital that the open space and natural area forests continued, providing watersheds, removal of major invasive plant species and replanting with native species taken place. In addition, City resources are required to monitor, maintain, and manage the open space and native areas is required. The current canopy cover percentage is unknown for this MU. The 30-year canopy cover goal is 30%.

**Issues/Opportunities:**

The Impacts of receiving open space and natural areas left unmaintained for several years, decline, they create openings in the forest canopy allowing sunlight to enter. When that happens, it produces ideal conditions for non-native species like English ivy and Himalayan blackberry to invade the forest. As invasives take over, the ecology of the forest is radically altered, and the many benefits that the forest provides are diminished. Today, over 30% of Moorpark’s remnant forests have some invasive plants and about 25% are moderately to heavily invade provided through site evaluations by the Moorpark staff.

**The Loss of Woodland Area**

Moorpark’s woodland areas (355 acres) distributed across the catchment areas of our urban watersheds where it had maximum effectiveness in reducing stormwater volumes and peaks, could absorb air and water pollutants from wide areas, and provided larger and better connected areas for wildlife must remain and increase.

**An Ambitious Plan to Restore Moorpark’s Forests**

Although seriously compromised, Moorpark’s remnant forests remain an extremely valuable component of Moorpark’s overall urban forest ecosystem. The Urban Forest Sustainability Model objective to “maintain wildlife corridors to and from the City” is adequately fulfilled by Moorpark’s woodland. Birds and small mammals (up to the size of coyotes, raccoons, fox, and opossums) move freely. Similarly, the creeks within these forests are witnessing thanks in large part to the efforts to keep the area open and natural. One only needs to look at the condition of the flora in many of the so-called forests to realize that the habitat values are soon to change for the worse forever if protective action isn’t taken.

**The Role of the Community**

The community must play a large role if urban remnant forests are to be sustained in perpetuity. Community Services Department must establish an open space and natural area working model that maintains and restores of Moorpark’s open space, natural areas and trails. Moorpark’s open space and natural areas model must continue into the future, providing annual hours of volunteer organization support of the program peaking in 2018.

**Private Views and Public Trees**

The City landscape division manages many acres of forests on steep hillsides. Many homes are located above the forests. These homes in many cases would have dramatic views of mountains if it not for City-owned trees. City policies on private views have not varied over the years. Trees are not allowed to be topped for views at homeowner’s request because topping kills trees, therefore not allowed. Trees can be pruned for private views but cannot be topped or removed solely for that purpose.

**Goals and Actions**

**Tree Resource**

* Continue to work with the WCA to inventory, assess, and validate existing and new data on Moorpark’s remnant forests.
* Continue to restore Moorpark’s forest open space and native lands
* Establish a standalone riparian corridor forest inventory.
* Establish evergreen canopy guidelines to support watershed protection and wildlife habitat.
* Use more understory species, where appropriate, for increased and multi-layered canopy.
* In general use native plants whenever possible with a high percentage of them being coniferous trees. Be sensitive to the needs/opportunities of microenvironments that would support California natives.
* Remember that the shrub layer is very important in woodland plantings.

**Management Framework**

* Establish a common nomenclature for describing forest open space and natural area assets and the services they provide.
* Develop BMPs for forest open space and natural area restoration work and implementation.
* Develop database management tools to assist with monitoring, documentation, and evaluation of forest open space and natural area.
* Develop the framework for long-term management of Moorpark’s forests open space and natural area, including support for volunteer stewardship.
* Establish long-term funding for maintenance of Moorpark’s open space and natural area forests.

**Community Framework**

* Increase volunteer outreach education on open space and natural areas
* Engage additional business/corporate sponsors for forest open space and natural area restoration.
* Nurture existing volunteer support groups. *Community volunteers are the backbone to restoration of Moorpark’s forested areas”*

**Chapter 6: Implementing the Plan: Early Actions**

The Urban Forest Management Plan is a roadmap for a strategic approach to manage Moorpark’s urban forest. The plan contains goals and supporting actions that are critical to the long-term vitality of the forest. However, in order for the Urban Forest Management Plan to actually have an impact on the forest resource, it requires a stewarding group and financial resources to begin implementation. Further, it needs to be institutionalized as a document requiring implementation with a sense of urgency to get things started.

The Director of Community Services will steward the plan beginning City leadership understands that a healthy urban forest is critical to guaranteeing the long-term health and vitality of the community, and that it is not a luxury but an absolute necessity. In order to accomplish the plan goals, the approach to overall plan implementation will include the following:

The Director of Community Services will have overall responsibility for plan implementation. The Director of Community Services annual work plan will be focused on delivery of specific actions and outcomes as recommended in this plan.

The Director of Community Services will have responsibility for coordinating program-based biennial budgets that bring together all of the initiatives and proposals from the different departments in support of the City’s urban forest goals and plan implementation.

The Director of Community Services annual work plan will be formatted in such way that it doubles as a tool for annual performance measurement.

The Director of Community Services will report to the Sustainability & Environment City Council for annual work plan approval and performance reviews.

The Director of Community Services will, as needed, present specific projects and initiatives pertaining to plan implementation to the City Council on Sustainability & Environment for their review and comment.

The Urban Forest Management Plan will be updated every 5 years.

**6.1 TREE RESOURCES**

* Maintain trees to promote health and longevity
* Restoration on 355 acres of forested open space and natural areas
* Maintain trees in developed parks on an 10-year pruning cycle
* Maintain Street trees managed trees on a 12-year pruning cycle
* After canopy cover percentage is obtained, increase tree planting citywide to assist in meeting 30% canopy cover by 2018
* Support neighborhood volunteer organization and programs to plant trees citywide
* Through the City’s Boething Tree Lease program continue land lease for tree exchange program.
* Continued tree diversity with a balance of both native and non-native tree species to prevent the complete loss of tree population.

**6.2 MANAGEMENT FRAMEWORK**

* Conduct tree inventory and improve management of trees on residential property
* Conduct tree inventory and improve management of trees on commercial and industrial property
* Conduct tree inventory and improve management of trees on institutional property
* Conduct tree inventory and improve management of trees on open space and natural areas
* Determine canopy cover and environmental benefits for the city of Moorpark
* Update 2001 Arbor Access to include new property site trees and citywide tree additions
* Improve Arbor Access inventory to record and update City new and replacement tree replanting sites
* Encourage and educate the community pertaining to tree preservation and planting on private property
* Track the condition of the urban forest and implementation of the plan
* Develop and implement an Urban Forest Management Plan performance monitoring system
* Implement resource management tools to update and maintain the street tree inventory of 8,355 City-owned trees (4-year process)
* Facilitate interdepartmental cooperation and information flow
* Determine tree services budget amount to meet recommended tree trimming cycles

**6.3 COMMUNITY FRAMEWORK**

* Enhance community awareness of urban forest as a community resource to inspire tree planting & preservation
* Develop Government Channel broadcast addressing tree benefits and tree preservation, selection, planting and care
* Create a booklet addressing tree benefits and tree preservation, selection, planting and care
* Provide tree benefit/tree planting booklet to anyone who receives a permit to remove a private tree
* Provide Public information add to the City’s urban forest websites to improve access to information and strengthen connections between departmental websites
* Provide information to private property owners who will be impacted by tree trimming services
* Develop K-12 grade school tree education program to present two (2) tree information sessions (1st as a pilot and evaluate success and approach)
* Expand Volunteer engagement

**Chapter 7: Monitoring the Plan**

**7.1 Monitoring Plan Goal**

The City’s monitoring plan goal is to protect large and exceptional trees, preserve and enhance the City’s physical and aesthetic character and environment to promote health and longevity.

**7.2 Monitoring the Plan**

* Maintain the street tree inventory of 8,355 City-owned trees
* Manage preservation of High Street Heritage trees and City Apricot groves
* Update Arbor Access inventory to record and update new property site trees
* Record citywide tree, additions, replacement trees and new planting sites
* Track implementation of the Urban Forest Management Plan
* Follow annual tree trimming cycles vs. budget for City maintained trees
* Use Boething Tree Lease program of 250 (free) trees to continue tree planting
* Provide tree benefit booklet to anyone who receives a permit to remove a tree
* Update public information to the City’s urban forest website
* Present K-12 grade school tree education program, evaluate the success and approach
* Management of trees on residential property
* Management of trees on commercial and industrial property
* Management of trees on institutional property
* Management of trees on 355 acres of forested open space and natural areas
* Monitor replacement tree planting on private property
* After canopy cover percentage is obtained, increase tree planting citywide to assist in meeting 30% canopy cover by 2018
* Support neighborhood volunteer organization and programs to plant trees
* Continue community awareness (Arbor Day, Tree City USA) of the urban forest as a community resource to inspire tree planting & preservation
* Promote tree diversity with a balance of both native and non-native tree species to prevent the complete loss of tree population.

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**Appendix A: Nursery Stock and Planting Selecting Nursery Stock**

Container material is the most common type of nursery stock in California, however bare root tree stock in the winter is a good alternative when appropriate.

**Selecting Quality Container Nursery Stock**

Trees should meet the following minimum standards. Trees that do not meet these requirements will be rejected. The (agency name) retains the right to inspect the root mass of each tree or a representative same of each species.

Tree planting specifications for selection of quality tree stock shall be as follows:

* + All trees shall be true to type or botanical name as ordered or shown on planting plans or contract orders.
  + All trees shall have a single, relatively straight trunk with a good taper and branch distribution vertically, laterally and radially with a live crown ratio (distance from bottom of canopy to tree top/tree height) of at least sixty percent (60%). All branches in the canopy should be less than two-third (2/3) the trunk diameter and free of included bark. The trunk and main branches shall be free of wounds except for properly made pruning cuts, damaged areas, conks, bleeding and signs of insects or disease.
  + All trees shall be healthy, have a form typical for the species or cultivar, be well-rooted and pruned as appropriate for the species.
  + All trees shall have sufficient trunk diameter and taper so that it can remain vertical without the support of a nursery stake within six months.
  + The root ball of all trees shall be moist throughout and the crown shall show no sign of moisture stress.

Individual tree specifications are as follows:

* + The tree shall be well rooted in the soil mix. The point where the topmost root in the root ball emerges from the trunk should be visible at the soil surface of the root ball. When the container is removed, the root ball shall remain intact. When the tree is lifted, the trunk and root system shall move as one.
  + All trees shall comply with federal and state laws requiring inspection for plant diseases and pest infestations.
  + No tree shall be accepted that has been severely topped, headed back or lion-tailed.
  + No tree shall be accepted with co-dominant stems or excessive weak branch attachments that cannot be correctively pruned without jeopardizing the natural form of the species.
  + No tree shall be accepted that is root bound, shows evidence of girdling or kinking roots, or has roots protruding above the soil (a.k.a. “knees”).
  + No tree shall be accepted that has roots greater than one-fifth (1/5) the size of the trunk diameter growing out of the bottom of the container.

**Contract Growing Criteria**

The City will continually make a concentrated effort to secure newly introduced species through contract growing. Contract growing will also be considered for large scale City public improvement projects and street tree planting involving newly introduced species. Tree species that may be difficult to obtain in the nursery trade can be grown on contract by an experienced nursery. Each species requires a different specification based on project requirements. Trees produced for a contract growing project must meet the tree planting specifications listed under “Selecting Quality Container Nursery Stock.”

**Percolation and Soil Fertility**

Prior to planting, the following procedures shall be followed:

* + Test the soil for percolation to determine if it drains properly. If it does not drain at least .5 inches per hour, then recommendations should be made to improve drainage, if feasible.
  + Check the soil fertility and structure. If the soil is compacted, then it should be physically cultivated and have organic material added. If soil fertility issues are suspected, soil should be tested and approved by the Community Forester. Soil remediation measures shall be reviewed and approved by the Community Forester. All recommendations shall be implemented prior to planting trees.

**Sites for New Street Trees**

Typically street trees will be planted where there is an existing vacancy that is unoccupied, as a replacement tree, or if there is a break in the established street tree pattern that should be filled.

**Street Tree Spacing**

The following guidelines shall be followed when planting new street trees. The standard street tree spacing is as follows:

* + 30’-35’ feet on center
  + 30’ feet from the corner property line
  + 20’-25’ feet on center for smaller statured trees
  + 10’ feet from driveway approaches
  + 10’ feet from light poles
  + 5’ feet from utility meter boxes

Street trees will not be approved for planting under the following conditions:

* + The tree would interfere with the growth of other trees in the area.
  + The vacant tree well site is overshadowed by other trees nearby creating an unsuitable growing condition for the proposed new tree.
  + Utility meters are in the way.
  + The tree could block scenic views or views of oncoming traffic.
  + The tree is not on the Street Tree Designations List.

**Appendix B: Planting Specifications and Procedures** (for cities)

1. **General**

City of Moorpark shall be the responsible authority for determining the appropriate species or variety of trees planted within the public rights-of-way or easements.

1. **Specific Planting Policies**
   1. Trees shall be planted in conformance with the approved master plan and in accordance with (name of dept.) Standard Specifications.
   2. A minimum of one street tree shall be planted per lot. Property with frontage of 65 feet or more shall have trees planted at an average maximum spacing of 35 feet (tree to tree) on center. The actual number of trees and spacing for planting will be based on the established canopy width of the designated species as approved by the (department name). To preserve the integrity of the street pattern, where site constraints preclude planting of a street tree within the right-of-way trees may be planted on private property in those instances where an easement for that purpose has been provided.
   3. Property owners may plant trees at the owner’s expense in accordance with Department standards and subject to prior written approval of the Department.

Planting of street trees shall be required at the time the property abutting the right-of-way is developed. The owner of the abutting property shall be responsible for the costs of furnishing, installing and providing a minimum of the first two years of maintenance for all street tree plantings.

* 1. To maximize the square footage of tree canopy and its benefit to the City, all new and redeveloped properties both residential and commercial shall be required to provide funding for public trees. Fees are established by the City Council. The City through its (contractor or in house staff) will schedule planting of the street trees on or before the time occupancy permits are issued.
  2. The Department within 120 days of removal shall replace trees removed by the Department. If possible, no trees will be planted by the City between June 1st and September 30th.
  3. Tree removal through a permit by other agencies shall be subject to both a mitigation and replacement fee and shall be replaced by the City’s (dept. responsible) within 120 days. If possible no trees will be planted by the city between June 1st and September 30th.
  4. Watering of all street trees within the City shall be the responsibility of the abutting property owner, except in reverse frontage and median strips that are maintained by the city. The Department is responsible for all other maintenance after completion of the maintenance period and the written acceptance by the Department.
  5. Trees shall not be required to be planted in street right-of-way abutting undeveloped property. If the property owner desires to plant the street right-of-way abutting the owner’s undeveloped property, the owner must provide an automatic irrigation system and shall be responsible for the cost of installation and maintenance. The Director may require the posting of a bond of a sufficient amount to guarantee the installation and care of the appropriate improvements.
  6. When the sidewalk is located next to the curb, the trees shall be planted a minimum of one foot from the right –of-way line within the public street right-of-way line or easement. Where right-of-way is not available adjacent to the sidewalk, the trees should be planted in easements behind the sidewalk whenever possible. When a tree well in he sidewalk is the only possible solution, a tree will be selected that will not cause or result in long-range curb and or sidewalk damage.

1. **Public safety and maintenance trees shall be planted:**
   1. A minimum distance from the intersection to provide adequate sight distance. Minimum distance shall be 30 feet from beginning of curve at the curb return, except at secondary and arterial streets; the minimum shall be 50 feet.
   2. Five (5) feet minimum from fire hydrants, service walks and driveways.
   3. Ten (10) feet minimum from sewer laterals, other utility services laterals and water meters.
   4. Fifteen (15) feet minimum from lamp standards.
   5. With consideration given to those varieties of trees that will not create a conflict with existing overhead electric utility lines.
   6. All trees, other than palm trees, shall be planted a minimum 15-gallon size in residential areas and 24” box size in commercial areas. A 15-gallon or 24” box is defined/determined by the American Association of Nurserymen. Smaller/larger sizes may be permitted/required by the City if warranted.
   7. All newly planted trees shall have the nursery stakes removed and replaced with others per Department standards.
   8. All staked trees shall be inspected twice a year and the stakes are to be adjusted or removed as necessary.
   9. All trees planted in tree wells shall be installed and irrigated in a manner to promote deep rooting per Department standards. All trees in wells shall be installed with an automatic irrigation system.

**Appendix C: Tree Planting Procedures**

All planting locations shall be checked for underground conflicts. It is mandatory that Dig Alert is notified to detect all underground utilities prior to any digging.

* + Dig planting holes 2-3 times as wide as the container. The depth of the planting pit shall be equal to the size of the rootball. Place the tree in the planting pit so the trunk flare or the top of the rootball is at least one-half inch to 1 inch (1/2” to 1”) above finish grade. In grass covered parkways the top of the rootball shall be higher than the surrounding soil by one-half inch to one inch (1/2” to 1”). In a concrete tree well, the rootball shall be one inch (1”) above the level of the finished surface of the surrounding concrete.
  + When obtaining a tree from a nursery, always carry the tree by its container or rootball, never by the trunk.
  + After removing the tree from the container, cut circling roots and matted roots off the bottom. Check for any circling roots missed during initial inspection. Any roots less than one-third (1/3) the size of the trunk shall be removed with a sharp pruning tool.
  + Before placing the tree in the planting pit, examine the root ball for injured roots and the canopy for broken branches. Damaged roots shall be cleanly cut off at a point just in front of the break. Broken branches shall be cut out of the canopy making sure that the branch collar is not damaged.
  + Backfill with soil removed from the planting hole. Only add fertilizer or compost if soil analysis indicates it is required. Build a temporary four to six inches (4” to 6”) water retention berm around the root ball to allow for establishment watering. Immediately after planting the tree, water it thoroughly by filling the water retention basin twice.
  + Eliminate all air pockets while backfilling the planting pit by watering the soil as it is put into the hole. Do not compact the backfill by tamping it down.
  + All trees shall be staked with two wooden lodge poles and two ties per pole. The minimum diameter of a lodge pole is two inches (2”), but may be larger for 36” and 48” box trees. Place the tree ties at one-third (1/3) and two-third (2/3) of the trunk height. Drive the stake into the ground approximately twenty-four to thirty inches (24” to 30”) below grade making sure not to penetrate the root ball.
  + Mulch with a two to four inch (2” to 4”) layer of mulch where appropriate to conserve soil moisture, provide protection from extreme temperatures and prevent damage from weed eaters. Mulch shall be kept three to four inches (3” to 4”) away from the tree trunk and shall extend at minimum to the boundary of the water retention basin. It may extend further if desired.
  + The soil around the new tree shall be kept moist, but not saturated, by watering at least once a week during the cooler winter months and twice a week during the hot summer months.

**Appendix D:Tree Preservation Guidelines**

Trees are an essential element of City of Moorpark‘s image and quality of life. Hardscape elements, such as sidewalks, curbs, gutters, and driveways are also indicative of the (organization) ‘s commitment to maintain its infrastructure. Over the years, broken and damaged sidewalks, curbs, and gutters and driveways will have to be replaced throughout the City, University, etc. As a result, many trees will be involved. Whenever possible, curbs, gutters, and sidewalks should be meandered away from the tree thereby providing more growing space for roots.Trees will probably also be impacted during new construction and need to be protected. To mange this process and protect existing trees, the following guidelines have been established:

1. **Root Pruning** 
   1. Whenever sidewalk, curb gutter or driveway replacements occurs within four feet of a tree, the site will be inspected by the (Urban Forester, Arborist, Name of responsible party or organization) for tree impact assessment. Root pruning may be performed on any tree that the (dept., name) determines can be safely performed without jeopardizing the life of the tree.
   2. All roots greater than two (2) two inches in diameter must be cleanly cut to encourage good callus tissue. It is recommended that roots be pruned back to the next root node.
2. **Sidewalk Renovation**

Trees that would be seriously impacted by root pruning during sidewalk replacements will be inspected by a certified arborist or urban forester in coordination with the (dept., or body doing the work) to determine whether:

* 1. The repair work can be deferred and a temporary asphalt patch used to eliminate any hazard until other steps can be reviewed and implemented.
  2. The tree can be saved by narrowing the sidewalk near the tree, while still leaving sufficient sidewalk width for disabled access. Standard disability access width is four (4) feet with variances given to 38 inches where absolutely necessary.
  3. Relocating the sidewalk onto private property and negotiating the appropriate easement with the adjacent property owner can save the tree.

* 1. The tree can be saved by replacing the sidewalk with minimal disruption of the roots (alternatives: a temporary asphalt sidewalk; rubberized sidewalk; use of root barrier fabric; raising the grade over the roots; and immoral walkway; or other options).
  2. To remove the tree and replace it with a minimum 24” boxed replacement tree.

1. **Curb and Gutter Replacement**

Trees that would be seriously impacted by root pruning during curb/gutter replacement will be inspected by a Certified Arborist or Urban Forester in coordination with the (dept. or org doing the work) to determine whether:

* 1. The repair work can be deferred if it does not create drainage problems or otherwise increase street maintenance unnecessarily and is not a hazard.
  2. The tree can be saved by relocating the curb and gutter into the street at lease one foot (ideally two (2) to six (6) feet), thereby narrowing the street width, which in effect may cause the elimination of some street parking.
  3. Where six or more trees along one side of a block are severely affected, consideration is to be given to relocating the curb and gutter into the street along the entire block.
  4. The tree can be saved by replacing the curb and gutter with minimal disruption of the roots (alternatives: temporary asphalt curb and gutter, use of root barrier fabric: or other similar options).

1. **Recovery Period**

When significant root pruning on two sides of a tree is required, there will be a 24-month separation between sidewalk and curb/gutter repair to allow time for the tree roots to recover. An exception to this policy may be made if the curb/gutter or sidewalk is relocated away from the tree or other measures are employed that reduce or eliminate root involvement or it is otherwise determined by the (responsible party, department etc.) that the root involvement is minimal.

1. **Construction Projects**

The following guidelines have been developed to protect trees on (agency) property during construction projects:

* 1. A root protection zone shall be defined by a minimum 42” high barrier constructed around any potentially impacted tree. This barrier shall be at the drip line or at a distance from the trunk equal to 6 inches for each inch of trunk diameter 4.5 feet above the ground if this method defines a larger area.
  2. Should it be necessary to install irrigation lines within this area, the line shall be located by boring, or an alternate location for the trench is to be established.

The minimum clearance between an open trench and a street tree shall be one (1) foot or six inches for each inch of trunk diameter measured at 4.5 feet above existing grade if this method defines a larger distance. The maximum clearance shall be ten (10) feet. The contractor shall conform to these provisions unless otherwise directed by the (city or name of organization).

* 1. At no time shall any equipment, materials, supplies or fill be allowed within the prescribed root protection zone unless otherwise directed by the agency.

It is recognized that failure to abide by these provisions will result in substantial root damage to trees that may not be immediately apparent. The (City or name of organization) will therefore assess damages according to the International Society of Arboriculture standards and bill the responsible party.

1. **Release Requirements**

In order for construction work to begin that will impact a tree, a signed release form must be issued by the (dept., agency, or person responsible). This release shall be based on the condition of the tree and an assessment of the impact of the proposed construction. Mitigation measures necessary to protect the tree will also be stated.

In the event a tree must be removed, the (responsible party) will issue a Tree Removal Permit.

1. **Protecting Tree Roots from Vehicular Compaction.**

In order to protect our Urban Forest and this (organization)’s assets; it shall be unlawful for any vehicle to be parked under the drip line of a (agency name) tree in non-paved areas such as parkway strips.

In summary, it is the City of Moorpark’s policy to protect its valuable resources and also to provide useable, safe sidewalks, curbs, gutters, and other infrastructure features. Although this policy may cost more in the short run, the long-term solutions will benefit the (agency or organization name) both aesthetically and fiscally.

**Appendix E: Tree Pruning Guidelines**

**Need for Pruning**

Trees are pruned principally to preserve their health and appearance and to prevent damage to human life and to property. Broken, dead, or diseased branches are pruned to prevent decay from spreading. Live branches are removed to permit penetration of sunlight and air circulation which helps maintain a strong and healthy tree.

All trees should be completely pruned on a periodic basis based on species needs. Frequency also depends on funding levels.

Additional tree pruning is done on an “as needed” basis. Specific examples of where ‘”as needed” work is authorized are:

* Pruning tree limbs that interfere with utility lines.
* Pruning tree limbs that interfere with street, parking lot or security light illumination.
* Pruning tree limbs that interfere with buildings or other private or public facilities.
* Pruning hazardous limbs, such as large dead limbs greater than two (2) inches in diameter, hangers, and structurally unsound limbs.
* Pruning tree limbs that interfere with safe vehicular or pedestrian traffic.
* Sucker pruning.

**Tree Pruning Specifications**

Any tree work performed on a (City, University, HOA, etc.) tree must be done according to the specifications outlined here in. There are different criteria for pruning depending on the purpose for the pruning.

* Complete Pruning Specifications are used when the entire tree needs to be fully pruned.
* Safety Pruning Specifications require less pruning and are used when specific, possibly hazardous (dead/dying) limbs need removal to eliminate all safety concerns. Safety pruning may be recommended in some circumstances instead of complete pruning. Safety pruning specifications are used for “as needed” pruning and address only safety concerns. Safety pruning includes only the basic requirements to address the problem.
* Where overhead wires pass through trees, safety and reliability of service demand that tree trimming be done in order that the wires may clear branches and foliage by a reasonable distance. The minimum clearances must be followed as established by the California Public Utilities Commission General Order No. 95.
* The following guidelines are designed to maintain required clearance of City trees from high voltage distribution and transmission lines with a minimum of resprouting and fewer pruning cycles. These guidelines are based on the biological response of trees to pruning techniques and should only be used when combined with safe work practices.
* Tree growth adjacent to utility lines shall be managed with lateral or directional pruning (thinning cuts). Directional pruning removes a branch from the trunk or large lateral branch growing away from the conductor. Heading cuts are prohibited. Pruning cuts should be determined by structure and branching habit of the species. Branches should not be arbitrarily cut to a pre-established clearance limit.

* + All trees should be examined for hazards prior to line clearance work. Hangers and dead wood should be removed first. Climbing spikes on live trees is prohibited. Only dead trees may be climbed with spikes. Whenever possible, trees should be allowed to attain a normal height, with the crown developing away from high voltage conductors to develop a V-shaped canopy structure. When foliage loss on a branch exceeds one-half (1/2), it should be removed from the parent stem. Final drop-crotch cuts should be made outside of the branch bark ridge on the main stem or lateral branch. The remaining branch shall be no smaller than one-third (1/3) the size of the branch being removed. The removed portion should be pruned to direct the remaining growth away from the conductors.
* The use of multiple small diameter cuts to create an artificially uniform crown form, commonly known as “rounding over,” is not an acceptable pruning practice for utility line clearance.
* All specifications are based on International Society of Arboriculture, National Arborist Association, and American National Standards Institute criteria.

The following trimming specifications are for the use of any pruning of City of Moorpark trees.

**Method of Operation**

1. Lightly trim all trees to lighten and balance the trees, removing no more than 15 to 20% of the tree.
2. Remove dead wood and cross branches.
3. Remove all suckers.
4. Remove all diseased branches.
5. Encourage radial distribution of all branches to provide sufficient number of scaffold branches to fill the circular spaces as concentrically as possible around the trunk.
6. Final trimming cuts shall be made without leaving a stub. Cuts shall be made just outside the shoulder ring area. Extremely flush cuts, which produce large wounds and weaken the tree at the cut, shall not be made.
7. All trimming shall provide adequate clearance for any obstructed (street, directional etc.) sign, streetlight, safety light or other approved standard.
8. Over sidewalks, limbs shall be raised a minimum of seven and a maximum of eight feet from grade to wood. Where sidewalks do not occur or are located on the street side of a parkway, limbs may be retained below the minimum elevation as long as they conform to the natural shape of the species.
9. Over residential streets, limbs shall be raised gradually from ten (10) feet to fourteen (14) feet over traffic lanes from grade to wood giving the appearance of an arch rather than an angle. Near driveways where automated refuse containers are placed, it is imperative to have fifteen (15) feet of clearance.
10. Over arterial streets, limbs should be raised a minimum of twelve (12) and a maximum of fourteen (14) feet from grade to wood. A major arterial street may require a higher maximum over central traffic lanes for existing, mature canopy-forming limbs. (Use if appropriate)
11. Whether over sidewalk or street, where the lowest limb is attached to a trunk above the desired elevation but extends below that elevation, if possible, rather than removed all together, in order to avoid giving the trunk a skinned appearance.
12. Trimming shall not exceed the amount necessary to achieve the specified elevation at the time of raising. NO attempt to trim to a higher elevation to allow for future growth shall be permitted.
13. No limb over three inches in diameter will be removed without prior City approval.
14. No lion-tailing. An effect known as “lion-tailing” results from pruning out the inside lateral branches. Lion-tailing, by removing all the inner foliage, displaces the weight to the ends of the branches and may result in sunburned branches, water sprouts, weaken branch structure and limb breakage.
15. Topping, stump cutting, hat raking pollarding, etc. is not acceptable.

**Trees with known pathogens**

Trees with known pathogens that can be spread with pruning tools shall be pruned using additional caution.

Avoid pruning on windy days in order to reduce the transmission of spores - Sterilize tools in between cuts on diseased trees that can be transmitted on pruning tools. Acceptable sterilization methods include fifty percent (50%) bleach solution for ten (10) minutes or handheld butane torch heating for fifteen (15) seconds per side.

Wood with known wood boring insect infestations shall be chipped into pieces smaller than four inches (4”) and spread. - Wood that is infected with disease shall be handled and disposed of in a manner that minimizes the possibility of transmission of disease. This may include:

1. Not working on windy days to reduce transmission of spores.

b. Transporting greenwaste in covered containers.

**General Staff Requirements**

1. **Certified Tree Workers** – All persons performing tree work on City trees should be trained according to tree care standards accepted by the International Society of Arboriculture.
2. **Certified to Work Around Electric Lines** – All persons performing tree work on trees in and around primary electrical lines must be trained to do so according to the “Electrical Safety Orders” of the State of California, including all amendments and revisions.

Line-clearance tree workers shall be trained to work around high voltage conductors. The United States Occupational Safety and Health Act (OSHA) and the American National Standards Institute (ANSI) have established minimum distances to be maintained by tree workers from electrical conductors. All line-clearance work involving City trees shall adhere to these standards as well as the utility pruning standards established by the International Society of Arboriculture (ISA) and the Utility Arborists Association (UAA).

1. **Certified Arborists** – Any contracted tree company shall employ a full-time, permanent Certified Arborist, as accredited by the International Society of Arboriculture. This person is responsible for ensuring that the contractor’s crews are performing work according these specifications. This individual must be present along with the crew at all times.
2. **Contractor Qualifications** – All contractors are required to have a state contractor’s license for tree work (C-61) and that the contractor adheres to the specifications provide in the bid documents.

**General Work Site Requirements**

1. Proper disposal of all tree green products generated is required mindful of recycling.
2. Assure good traffic control and minimum disruptions to the public.
3. Assure adequate safety of employees and the public.

**Wildlife Avoidance/Migratory Bird Treaty Compliance**

The Migratory Bird Treaty Act, the Endangered Species Act and local laws protect birds and wildlife located in trees. An arborist that is also a Certified Wildlife Protector can inspect trees. To minimize conflicts with nests, trees should be inspected carefully for nests and cavities using binoculars prior to pruning.

The recommended criteria shall apply to tree pruning or removal activities to protect wildlife:

* As feasible, trees should be scheduled for removal during non-breeding/non-nesting season.

Trees scheduled for pruning or removal during the breeding/nesting seasons shall be visually inspected at ground-level.

* If wildlife is located in the tree, the tree shall not be pruned and the (responsible person) shall be notified.

**Safety Tree Pruning Specifications**

Safety tree pruning shall consist of the total removal of those dead or living branches as may menace the future health, strength and attractiveness of trees. Specifically, trees shall be pruned according to the Tree Pruning Specifications as outlined.

**Appendix F: City Regulations (Ordinances) for**

**Tree Protection, Preservation, Removal, Planting, and Care.**

**12.12.050 Urban development proposals—Report guidelines.**

A. Where one or more native oak trees, historic trees or mature trees are associated with any proposal for urban development, the director of community development or his or her designated representative, shall cause a report to be prepared on those trees, otherwise, tree removals (public and private) shall be processed through the community services department.

B. An applicant for a proposal for urban development shall provide to the city the precise vertical and horizontal location within plus or minus one (1) foot of each mature tree on the subject parcel and the generalized locations of all mature trees within twenty (20) feet of the project boundary.

C. Tree reports shall be prepared by an arborist, horticulturist or registered landscape architect who are on a list approved by resolution of the city council. Tree reports shall include the following information:

1. Tree type by common name and genus and species;

2. The diameter of trunks or main stems as measured four and one-half (4½) feet above the root crown;

3. The average spread of each tree;

4. A letter grade for the health of each tree. Grades employed shall be “A” for outstanding, “B” for good, “C” for average, “D” for below average;

5. A letter grade for the aesthetic quality of each tree employing those grades defined in subsection (C)(4) of this section;

6. Disclosure of any significant disease or insect infestations, heart rot, fire, mechanical or wind damage;

7. Recommended tree surgery, chemical treatment or other remedial measures intended to improve the health, safety or life expectancy of the tree;

8. Appraisal value of each tree which shall be established and provided to the city using the most recent edition of the Guide for Establishing Values of Trees and Other Plants, prepared by the Council of Tree Landscape Appraisers.

D. The director of community development, or his or her designated representative, may waive the requirement for a tree report or may waive the requirement for survey of one (1) or more trees based upon the director’s judgment that the tree(s) would have little or no value in that location. (Ord. 101 § 1 (part), 1988)

**12.12.060 Urban development proposals—Tree preservation guidelines.**

A. Initial project layout, design and grading shall recognize the desirability of preserving native oak trees, historic trees or mature trees with appropriate modifications and adjustments to accommodate preservation and maintenance by locating the best candidates in areas where preservation is feasible. Design of the grading and other improvements shall reflect consideration of the following safeguards:

1. Location in minimum growing areas as required by individual species;

2. No disruption or removal of structural feeder roots;

3. Fencing of trees at or beyond their driplines during grading and construction activities;

4. No filling, cutting, development or compaction of soils within the dripline;

5. Such other measures required by the species of tree to be preserved as recommended by the consulting arborist, horticulturist or landscape architect.

B. It is recognized that the complete preservation of healthy trees may sometimes conflict with normal land developmental considerations such as proper drainage, grading, circulation, safety and provision of utilities. Within a given development, it may not be practical to preserve all healthy trees, and therefore, the city and the developer must be willing to compromise the goal of complete tree preservation in order to address other public safety and design concerns. In such instances, the design of the development must address preservation of the most desirable and significant of the healthy trees and the developer is encouraged to utilize creative land planning techniques to achieve this end.

C. The planning commission of the city, when reviewing development plans, shall determine the adequacy and appropriateness of the proposed preservation plan.

D. Following approval of such a development, the developer shall submit grading, improvement and precise landscaping plans detailing the approved preservation plan. Such plans shall be approved by the city engineer and/or the director of community development, as appropriate. Prior to use inauguration, the preserved trees shall be trimmed for balance, structural integrity, ornamental appearance and treated for any diseases.

E. The precise vertical and horizontal locations plus or minus one (1) foot of all mature trees shall be shown on an exhibit as part of the initial application for any project unless that project would involve no exterior construction activities. (Ord. 101 § 1 (part), 1988)

**12.12.070 Tree removal permits—Requirements.**

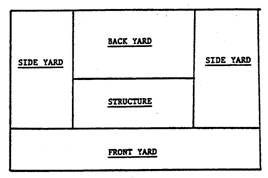
The appropriate department shall give priority to inspection of those requests based upon hazardous conditions, and may refer any request to the appropriate commission for determination.

A. Permit Required. No native oak tree, historic tree or other mature tree, where that tree is on public or private property, except as provided for in subsection B of this section, or is associated with a proposal for urban development, shall be removed, cut down, or otherwise destroyed, unless a tree removal permit has been issued by the city. The director of community services shall establish the format and information required for a tree removal permit consistent with this chapter. In no event shall a permit be denied if to do so would cause interference with the economic use and enjoyment of the property.

B. Single Parcel Review Requirement. Permits for removal of trees on any single parcel shall be required from the appropriate commission or director or designee as follows:

1. For any historic tree on the parcel;

2. For removal of one or more historic trees, mature trees or native oak trees when such trees are in the front yard, side yard or rear yard which abuts a public street. For purposes of this section only, “front yard” means that portion of the property extending from the front of a structure, forward to the front property line; the “side yard” means that portion of the property extending from the side of a structure in front to the rear property line; “rear yard” means that portion of the property extending from the rear of a structure backward to the rear property line, as shown in the following diagram:



C. Site Inspection. Prior to the issuance of such permit, the appropriate director, or designee, shall inspect the premises involved and shall designate the tree(s) to be removed or moved. Failure to provide access to the premises shall be grounds for denial of the permit.

D. Project Approval Required. No tree removal permit shall be issued for the removal of any tree on any lot associated with a proposal for urban development unless the project has been approved by the city or unless the director of community development, or designee, determines that the immediate removal of the tree is required because of the condition of the tree with respect to disease, danger of collapse of all or any portion of the tree, proximity to an existing structure, or interference with utility services.

E. Removal Not Associated with a Proposal for Urban Development. Where tree(s) are proposed for removal that are not associated with a proposal for urban development, the director of community services, or designee, may condition a tree removal permit upon the replacement of the certain tree(s). Any applicant for a tree removal permit shall not be required to expend more on the replacement tree(s) than the appraised value of the tree(s) for which a permit is required. An appraisal shall be done in accordance with Section 12.12.050(C).

F. Removal Associated with a Proposal for Urban Development. Where tree(s) are proposed for removal that are associated with a proposal for urban development, the director of community development, or designee, shall cause an appraisal of the value of said tree(s) to be prepared in accordance with Section 12.12.050(C).

The resulting value shall be applied to upgrading the size of tree plantings associated with the project. Trees for which no tree report has been required pursuant to Section 12.12.050(D) shall not be subject to appraisal or replacement by value.

G. Tree Replacement Waiver. In no case shall an applicant for a tree removal permit be required to replace or otherwise pay for the value of any tree which:

1. The city has directed the applicant to remove so that a public street may be constructed along an alignment determined or approved by the city engineer or adequate line-of-sight distance may be achieved in order to assure public safety; or

2. Removal was necessitated due to the health of the tree. (Ord. 107 § 1, 1989; Ord. 101 § 1 (part), 1988)

**12.12.090 Exemptions.**

The following are exempt from the provisions of this chapter:

A. Emergency Situation. Cases of emergency where the director of community services or designee, or any member of a law enforcement agency or the Ventura County Fire Protection District, in the performance of his or her duties, determines that a tree poses an imminent threat to the public safety, or general welfare. If conditions and circumstances permit, the public official shall consult with the director of community development, or designee, prior to ordering the removal of any mature tree;

B. Traffic Engineer. Removal or relocation of trees necessary to obtain adequate line-of-sight distances as required by the city traffic engineer;

C. Public Improvement Damage. Removal of trees from within public right-of-way, which in the opinion of the director of public works, or designee, will cause damage to existing public improvements;

D. Public Utility Damage. Actions taken for the protection of existing electrical power or communication lines or other property of a public utility;

E. Trees for Sale. Trees planted, grown or held for sale by a private individual or nursery;

F. Pruning and Trimming. Pruning or trimming which does not endanger the life of the tree. (Ord. 101 § 1 (part), 1988)

**12.12.100 Damaging of trees prohibited.**

No person shall injure, deface or scar any historic tree, native oak tree or mature tree. (Ord. 101 § 1 (part), 1988)

**12.12.110 Liability.**

Nothing in this chapter shall be deemed to impose any liability or duty upon the city or upon any of its officers, employees or agents, nor to relieve the owner and occupant of any private property from the duty to keep historic trees, mature trees or native oak trees upon such property or under his control, in a safe condition. (Ord. 101 § 1 (part), 1988)

**12.08.010 City policy.**

Consistent with Chapter 12.12 of this title regulating the preservation, cutting and removal of historic trees, native oak trees and mature trees and with Resolution 88-520 setting forth Guidelines for a Master Tree Plan, it shall be the city’s policy to utilize whatever techniques, methods and procedures are required to preserve, whenever feasible, all trees in the city including, but not limited to, trees which are creating damage to surface improvements or underground facilities or which are diseased, or located where construction is being considered or will occur. (Ord. 102 § 1 (part), 1988)

**12.08.020 Enforcement and implementation authority.**

The director of community services (“director”) shall enforce, implement and carry out the policy, provisions and regulations of this chapter in a manner which is consistent with other established policies of the city. (Ord. 102 § 1 (part), 1988)

**12.08.030 Trees on public property—Responsibility.**

The director of community services shall be responsible for the preservation of, and when required, the removal of all trees on public property. (Ord. 102 § 1 (part), 1988)

**12.08.040 Trees on private property—Responsibility.**

A. It shall be the responsibility of the property owner or the occupant to prevent any tree, shrub or plant on his private property from overhanging or projecting into public property. The director shall have the authority to require the property owner or the occupant to prune, trim, cut down or remove any such tree, shrub or plant, or parts thereof, if it appears to the director to be dead, liable to fall, dangerous, an obstruction to public travel, or is not pruned or trimmed to a height of fourteen (14) feet, six (6) inches above the paved portion of the street to accommodate such vehicles as garbage trucks, buses, moving vans and street maintenance trucks. Except in a case of manifest public danger and immediate necessity, no such tree, shrub or plant shall be pruned, trimmed, cut down or removed by the director unless the director has given the property owner and the occupant ten (10) days’ written notice to take corrective action. If the necessary corrective action is not taken by the property owner or his occupant within (10) days, the director shall perform the services and the cost thereof shall be assessed to the property owner, including the cost of labor (including overhead), equipment and materials.

B. It shall be the responsibility of the property owner or his occupant to treat or remove any tree, shrub, plant, grass or other vegetation on his private property, if it is so diseased or insect-infected as to constitute a hazard to other trees, shrubs or plants. The director shall have the authority to require the property owner or the occupant to take such action as is necessary to control insects, scales, parasites, fungi and other injurious pests or diseases. The director shall notify the property owner and the occupant in writing, describing the conditions, stating the control necessary for correction, and provide thirty (30) days within which the required steps must be taken. If the property owner or the occupant questions the necessity for such action, the director shall refer the matter to a plant pathologist whose decision shall be final. If necessary corrective action is not taken within the time specified, the director is authorized in the public interest, to enter on the property in question and to spray, trim, prune or treat or remove all or any part of the tree, shrub, plant, grass or other vegetation determined to be infested or diseased. The charge assessed to the property owner shall be equal to the cost of labor (including overhead), equipment and materials. Nothing in this section prevents the director from taking immediate action for removal if he determines that such action is necessary for the public health, safety or welfare. (Ord. 102 § 1 (part), 1988)

**12.08.050 Diseased or infested trees—Removal or replacement.**

A. If any tree on public property is infected or infested with insects, pests or disease, the director shall cause such condition to be treated or, if any such tree is infected or infested to such a degree that the condition cannot be eradicated by treatment, the director may order the removal and/or replacement of the tree.

B. The director, after unsuccessfully utilizing all techniques, methods and procedures which he deems reasonable to save trees planted on public property which are dead, dying, in a dangerous condition, unsafe or likely to cause damage, shall remove and/or replace such trees. (Ord. 102 § 1 (part), 1988)

**12.08.060 Prohibited acts.**

No person, except authorized city personnel, shall remove, destroy, deface or injure any tree on public property by any means including, but not limited to, the following:

A. By pouring any material on any tree or on the ground which would be harmful to the tree;

B. By attaching any sign or notice or other object on any tree or fastening any guy wire, cable, rope, nails or screws or any other device to any tree, except that agencies may, under the supervision of the director, temporarily affix no-parking signs to trees when necessary in conjunction with activities in the public interest, such as street improvement work, tree maintenance work or parades;

C. By causing or encouraging any unnecessary fire or burning near or around any tree;

D. By constructing a concrete, asphalt, brick or gravel surface, or otherwise covering the ground within a one (1) foot radius of any tree so as to shut off air or water from the roots, except under written authority from the director. (Ord. 102 § 1 (part), 1988)

**12.08.070 Native plants.**

It is unlawful for any person to dig up, pick, break off, cut or destroy any native tree, plant, berry-bearing shrub, fern or any wild flower, or to pick, break off or cut any bud, bloom or blossom from any of said plants, trees or shrubs within three hundred (300) feet of the middle of any leveled road or highway within the county, unless, in the case of private lands, the owner thereof gives his written consent thereto. (Ord. 6 § 14 (part), 1983)

**12.08.070 Native plants.**

It is unlawful for any person to dig up, pick, break off, cut or destroy any native tree, plant, berry-bearing shrub, fern or any wild flower, or to pick, break off or cut any bud, bloom or blossom from any of said plants, trees or shrubs within three hundred (300) feet of the middle of any leveled road or highway within the county, unless, in the case of private lands, the owner thereof gives his written consent thereto. (Ord. 6 § 14 (part), 1983)

**12.08.090 Interference with visibility at intersections prohibited.**

No trees shall be planted within twenty (20) feet of the intersection of one county highway right-of-way line with another county highway right-of-way line. (Ord. 6 § 14 (part), 1983).

**12.08.100 Excavations or street work—Protection of trees.**

A. Any tree growing upon public property near any excavation, construction or street work shall be sufficiently guarded and protected by those responsible for such work so as to prevent any injury to the tree.

B. No person shall excavate any ditches, tunnels or trenches, or install pavement within a radius of four (4) feet from any tree on public property without the written permission of the director. (Ord. 102 § 1 (part), 1988)

**12.08.110 Development landscape fee.**

A. The development of projects of residential, commercial and industrial nature removes land from its natural state and replaces the natural state and natural landscape with manmade structures.

B. In order to ensure that there is a certain amount of landscape remaining in the city in the way of trees, plants and shrubs, the city shall impose a landscape fee on each new project in an amount to be determined by resolution of the city council. The fee shall be used for the installation, maintenance and replacement of trees, plants and shrubs on public property.

C. Landscape work in the city will provide a benefit to those living and/or working in the new developments by preserving the visual environment and the air quality, both of which are impacted by new development. This fee is separate and distinct from any other fee imposed. (Ord. 102 § 1 (part), 1988)

**12.08.120 Nonliability of city.**

Nothing in this chapter shall be deemed to impose any liability upon the city or upon any of its officers or employees nor to relieve the owner and occupant of any private property from the duty to keep trees and shrubs upon private property or under his control or upon sidewalks and parkways in front of such private property in a safe condition. (Ord. 102 § 1 (part), 1988)

**12.08.130 Appeals.**

A. Any decision by the director shall be appealable by any aggrieved person to the city manager.

B. An appeal of the city manager shall be appealable to the parks and recreation commission. Appeals of the commission shall be heard by the city council.

C. All appeals shall be in writing, stating the decision appealed from and reasons for the appeal, and filed within ten (10) days of the decision being appealed. (Ord. 102 § 1 (part), 1988)

**12.12.080 Tree removal permits—Standards for grant or denial.**

Determination by the city to issue a tree removal permit, shall be based upon the following criteria:

A. The condition of the tree with respect to disease, danger of collapse of all or any portion of the tree, proximity to an existing structure, or interference with utility services or, in the case of a native oak tree, interference with an addition to an existing single-family detached home;

B. The necessity to remove a historic tree, native oak tree or mature tree in order to construct improvements which allow economic enjoyment of the property;

C. The number of historic trees, native oak trees and mature trees existing in the neighborhood;

D. Good forestry practices, i.e., the number of healthy mature trees that a given parcel of land will support;

E. Whether or not removal of the tree is necessary to construct required improvement within the public street right-of-way or within a flood control or utility right-of-way; and

F. The suitability of the tree species for use in that location. (Ord. 101 § 1 (part), 1988)

**SECTION 12.12.130. VIOLATION – PENALTY Misdemeanor**

**Appendix G: Recommended Tree List**

**(2010)**

Plant species listed in bold are native to California, and those noted with (f) are fire retardant and may be suitable for use in fuel modification zones.

**TREES**

**Botanical Name:** **Common Name:**

**Aesculus californica California Buckeye**

Agonis flexuosa Peppermint Myrtle

Albizia julibrissin Silk Tree

Alnus rhombifolia White Alder

Arbutus ‘Marina’ NCN

**Arbutus menziesii Madrone**

Arbutus unedo Strawberry Tree

Bauhinia variegata Purple Orchid Tree

Brachichiton acerifolius Flame Tree

Brachychiton populneus Bottle Tree

Callistemon citrinus (f) Lemon Bottlebrush

**Calocedrus decurrens Incense Cedar**

Callistemon viminalis (f) Weeping Bottlebrush

Cassia leptophylla Gold Medallion Tree

Cedrus deodara Deodar Cedar

Cercidium floridum Blue Palo Verde

Cercidium microphyllum Foothill Palo Verde

Cercidium praecox Sonoran Palo Verde

**Cercis Canadensis Eastern Redbud**

**Cercis occidentalis (f) Western Redbud**

Cercocarpus betuloides Mountain Mahogany

**Chilopsis linearis Desert Willow**

Chitalpa x tashkentnesis Chitalpa

Cinnamomum Camphora Camphor Tree

Cupaniopsis Anacardiodes Carrotwood

**Cupressus arizonica Arizona Cypress**

**Cupressus forbesii Tecate Cypress**

Cupressus glabra Smooth Arizona Cypress

Cuppressocyparis leylandi Leyland Cypress

Dracaena draco Dragon Tree

Eriobotrya japonica Loquat

Eriobotrya deflexa Bronze Loquat

Fraxinus ornus ‘Raywood’ Raywood Ash

Fraxinus veluntina ‘Modesto’ Modesto Ash

Fraxinus veluntina ‘Rio Grande’ Rio Grande Ash

Geijera parviflora Australian Willow

Ginko biloba (Male only) Maidenhair Tree (grafted male)

Gleditsia triacanthos spp. Honey Locust

Heteromeles arbutifolia Toyon

Jacaranda mimosifolia Jacaranda

**Juglans hindsii Northern California Black Walnut**

**Juglans californica California Black Walnut**

Koelreuteria paniculata Golden Rain Tree

Lagerstroemia indica Crape Myrtle

Laurus nobilis Sweet Bay

Leptospermum laevigatum Australian Tea Tree

Ligustrum japonicum Japanese Privet

Liquidambar styraciflua (cultivars) Sweet Gum

Liriodendron tulipifera Tulip Tree

Lophostemon confertus Brisbane Box

**Lyonathamnus floribundus var. asplenifolius Island (Catalina) Ironwood**

Magnolia grandiflora var. Southern Magnolia

Maytenus boaria ‘Green Showers’ Showers Mayten Tree

Melaleuca linarifolia Flaxleaf Paperbark

Melaleuca nesophila Pink Melaleuca

Melaleuca styphelioides Black Tea Tree

Melalueca quinquenervia Cajeput Tree

Metrosideros excelsus New Zealand Christmas Tree

**Myrica californica Pacific Wax Myrtle**

Olea europaea (fruitless) Olive

**Olneya tesota Desert Ironwood**

**Parkinsonia aculeate Mexican Palo Verde**

Photinia serrulata Chinese Photinia

**Pinus spp. Pine**

Pistacia chinensis Chinese Pistache

Pittosporum rhombifolium Queensland Pittosporum

Platanus acerifolia ‘Bloodgood’ (f) Bloodgood Plane Tree

Platanus acerifolia ‘Yarwood’ (f) Yarwood Plane Tree

**Platanus racemosa (f) California Sycamore**

Podocarpus gracilior Fern Pine

Podocarpus macrophyllus Yew Pine

**Populus fremontii (f) Western Cottonwood**

Prosopis alba Argentine Mesquite

Prosopis chilensis Chilean Mesquite

**Prosopis glandulosa Texas Mesquite**

**Prosopis juliflora Mesquite**

Prunus caroliniana (f) Carolina Laurel Cherry

**Prunus ilicifolia Hollyleaf Cherry**

**Prunus lyonii Catalina Cherry**

Prunus cerasifera ‘Atropurpurea’ Purple Leaf Plum

Prunus cerasifera ‘Krauter Vesuvius’ Black-leaf Plum

Prunus lyonii (f) Catalina Cherry

Pyrus calleyana ‘Aristocrat’ Aristocrat Pear

Pyrus calleryana ‘Bradford’ Bradford Pear

Pyrus calleyana ‘Capitol’ Capitol Pear

Pyrus calleyana ‘Red Spire’ Red Spire Pear

Pyrus calleyana ‘Chanticleer’ Chanticleer Pear

Pyrus kawakamii Evergreen Pear

**Quercus douglasii. Blue Oak**

**Quercus agrifolia Coast Live Oak**

**Quercus engelmanii Mesa Oak**

Quecus ilex Holly Oak

**Quercus lobata Valley Oak**

Quercus suber Cork Oak

Quecus virginiana Southern Live Oak

Rhaphiolepis ‘Majestic Beauty’ Rhaphiolepis Tree

**Rhus laurina (f) Laurel Sumac**

**Sambucus mexicana Mexican Elderberry**

**Sambucus caerulea Blue Elderberrry**

Sapium sebiferum Chinese Tallow Tree

**Sequoia sempervirens Coast Redwood**

Sophora japonica Japanese Pagoda Tree

Tabebuia chrysotricha Gold Trumpet Tree

Tabebuia impetiginosa Pink Trumpet Tree

Ulmus parvifolia Evergreen Elm

**Umbellularia californica California Laurel**

**Appendix H: Provisionally Acceptable Tree List**

In no case are these plants to be used in or adjacent to natural or open space areas.

**TREES**

**Botanical Name: Common Name:**

Acacia spp. NCN

Eucalyptus spp. Red Gum

Koelreuteria bipinnata Chinese Flame Tree

Rhus lancea African Sumac

Robinia (tree form) Locust

Schinus molle Peruvian pepper tree

Schinus terebinthifolius Brazilian pepper tree

**Appendix I: Recommended Trees for Streets**

These plants are only intended to be installed in urban areas away from native hillsides or natural areas. Prior City approval is required.

**TREES**

Agonis flexuosa Peppermint Myrtle

Arbutus unedo Strawberry Tree

Bauhinia variegata Purple Orchid Tree

Brachychiton populneus Bottle Tree

Callistemon citrinus Lemon Bottlebrush

Callistemon viminalis Weeping Bottlebrush

Cassia excelsa Crown of Gold Tree

Cassia leptophylla Gold Medallion Tree

Chitalpa x tashkentensis Chitalpa

Cinnamomum Camphora Camphor Tree

Fraxinus ornus ‘Raywood’ Raywood Ash

Geijera parviflora Australian Willow

Ginko biloba (Male only) Maidenhair Tree (grafted male)

Gleditsia triacanthos ‘var.’ Honey Locust

Jacaranda mimosifolia Jacaranda

Koelreuteria paniculata Golden Rain Tree

Lagerstroemia indica Crape Myrtle

Liriodendron tulipifera Tulip Tree

Magnolia grandiflora var. Southern Magnolia

Melaleuca linarifolia Flaxleaf Paperbark

Melalueca quinquenervia Cajeput Tree

Photinia serrulata Chinese Photinia

Pinus eldarica Mondell Pine

Pinus halepensis Aleppo Pine

Pinus pinea Italian Stone Pine

Pistacia chinensis Chinese Pistache

Platanus acerifolia ‘Bloodgood’ London Plane

Platanus acerifolia ‘Yarwood’ Yarwood Plane Tree

Podocarpus glacilior Fern Pine

Podocarpus macrophyllus Yew Pine

Prunus cerasifera ‘Atropurpurea’ Purple Leaf Plum

Prunus c. ‘Krauter Vesuvius’ Black-leaf Plum

Prunus serrulata ‘Amanogawa’ Columnar Flowering Cherry

Pyrus calleryana ‘Aristocrat’ Aristocrat Pear

Pyrus calleryana ‘Bradford’ Bradford Pear

Pyrus calleryana ‘Chanticleer’ Chanticleer Pear

Pyrus kawakamii Evergreen Pear

Quercus agrifolia Coast Live Oak

Quecus ilex Holly Oak

Sapium sebiferum Chinese Tallow Tree

Sophora japonica Japanese Pagoda Tree

Tristania conferta Brisbane Box

Ulmus parvifolia Evergreen Elm

**Appendix J: Tree Planting Detail**

