CITY OF THOUSAND OAKS
FORESTRY MASTER PLAN

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Originally adopted 1989

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Organization of the Master Plan
The overall goal of the Forestry Master Plan is to provide the city with a sound basis for the creation and management of its community forest. The Master Plan applies to City-maintained plantings only; it is organized in three separate volumes:

• Volume 1: Background
• Volume 2: Design and Management Plan
• Volume 3: Community Participation and Education

Volume 1: Background
Volume 1 provides background information to set the stage for designing and managing the community forest. It serves as a reference for the concepts of community forestry and the existing cultural and physical conditions of the City of Thousand Oaks, which most impact the community forest.

1. Introduction
As living infrastructure, the community forest transforms Thousand Oaks into a resilient city that can withstand the impacts of climate change and continued development. Careful and comprehensive management of this natural resource will ensure its existence for present and future generations.

The term “community forest” generally describes all vegetation – trees, shrubs, grasses, and flowers, growing within an urban or suburban environment, on both public and private property. While this Plan focuses on the City-maintained portion of the community forest, a healthy community forest in its entirety provides the maximum benefits to the local community and ecology.

Urban trees are impacted by multiple stresses – including those from human actions, the built environment, and climate change. The basic means of overcoming these stresses and restoring the vigor of the community forest is to plant the right tree in the right place and provide it with proper care. Coupled with community education and participation, these are the essential recommendations of the Thousand Oaks Forestry Master Plan.

The History of Trees in Thousand Oaks
For the most part, the forest now seen in Thousand Oaks is an artifact of settlement, evolving since the City’s incorporation. Many of the tree species in this forest are originally from all over the world, having been brought here by people as they settled. There are also trees that are native to this region. The oaks, in particular, were significant to the Conejo Valley’s earliest human residents, the Chumash.

Between the time of the Chumash and today, the eras of the Spanish ranchero followed by the farmsteads added layers to the valley’s landscape, marked by characteristic species and patterns of trees, and by the prolonged grazing that left the land and surrounding hills covered in introduced grasses rather than native chaparral and abundant oaks.

With the effects of climate change becoming more profound each year, the community forest of Thousand Oaks will act as a living buffer that protects the city and its biodiversity. By caring for and maintaining Thousand Oaks’ forest, the City will not only improve the quality of life of its residents, but will also ensure a resilient landscape for future generations.

Background of the Forestry Master Plan
In 1989, the City of Thousand Oaks adopted its first Forestry Master Plan, with one of the major purposes being the consolidation of the City’s various laws and policies related to trees into one comprehensive statement regarding its community forest. A few years later, the policy framework that was set forth in the Forestry Master Plan was incorporated in the City’s General Plan, as part of the Forestry Element. Much of the content within the original 1989 Forestry Master Plan remains relevant and insightful despite the passage of time. However, much has also changed, and for that reason the Public Works Department has invested in updating its Forestry Master Plan.

How to Use this Document
The Forestry Master Plan is intended to set a vision, while also serving as a practical manual for City staff. The recommendations contained herein have been developed specifically for City-maintained plantings, which in most cases are located along the City’s public streets.

The Plan should be referenced by City decision-makers to guide policy, by the Public Works Department to guide planting and management of the community forest, and by consultants who may be tasked with the design and implementation of new City-maintained plantings. This document is designed to be of interest and use to the general public, as well, so that they may be involved in the creation and care of the community’s forest.
Additional documents and resources that support the Forestry Master Plan include: Thousand Oaks Planting and Maintenance Manual; Landscape Construction Standards; Thousand Oaks Tree Inventory; and Thousand Oaks Community Forest Implementation Recommendations.

2. Planning Context
Relevant Plans and Policies
As the Forestry Master Plan is supported by other plans and policies that will help the City achieve its forestry goals, this section provides a list of these documents to serve as a reference. It includes City ordinances, resolutions, and plans that most directly relate to City-maintained community forestry as of 2017.

Roles and Responsibilities
This section provides an overview of the roles of the City, developers, individuals, homeowners’ associations, and businesses in the creation and management of the community forest in Thousand Oaks.

3. Existing Conditions
Environmental and social conditions impact the growth of trees and other vegetation, as well as the planting and infrastructural strategies that can provide the greatest benefits. Understanding the context of the community forest helps in developing the most appropriate solutions for its sustainable management. This section highlights the following conditions within Thousand Oaks: climate and microclimate, topography, soils, groundwater, watersheds, native plant and wildlife communities, land use, urban development, wildland-urban interface, street network, city-maintained street trees, community forest geographic regions, and city gateways.

Goal 2. Enhance the character of the City and its neighborhoods through streetscape trees and plantings.
Recommendations:
• Continue to plant the City’s legacy oak trees in the appropriate spaces.
• Develop a citywide planting identity, as well as distinct identities for regions of the City.

Goal 3. Promote the creation and maintenance of off-street plantings that enhance the public forest resource.
Recommendations:
• Provide ample landscaping of new construction.
• Maximize tree shading of public facility parking areas.
• Encourage the integration of low impact development best management practices for stormwater management within public right-of-way plantings.
• Encourage new plantings at schools, parks, libraries, and similar sites.

Goal 4. Establish the highest standard of maintenance for public trees.
Recommendations:
• Keep maintenance and planting standards current.
• Provide expert training of City maintenance personnel.
• Require certified tree maintenance contractors.
• Maintain an inventory of the condition of all City street trees.

Volume 2: Design and Management Plan
Volume 2 is the “go-to” document for anyone involved in the design of community forest projects within the public right-of-way, or in the on-going management of the community forest. It provides design and management guidelines for successfully integrating plantings to a site, and recommends a palette of trees and understory plants for local use.

1. Guiding Goals and Recommendations
The Forestry Master Plan has been developed as a tool to assist the City in achieving its goals for sustaining the community forest. The following goals and recommendations are the foundation for the Plan.

Goal 1. Establish and maintain a full complement of street trees on every street in the City.
Recommendations:
• Achieve a 25% canopy coverage citywide.
• Replace every tree removed from a street with at least one new tree.
• Use species well adapted to local environmental conditions and design objectives.
• Achieve a diverse and resilient forest by following the 10-20-30 rule: no one introduced species comprising more than 10% of the whole; no one genus more than 20%; and no one family more than 30%.
• Allocate annual funds sufficient for appropriate and timely tree maintenance, exclusive of removals.

**Goal 5.** Promote public awareness of and involvement in community forestry care and benefits.

**Recommendations:**

• Encourage collaboration between City departments, local community organizations, and public schools.
• Encourage monetary and other contributions to the community forestry program.
• Promote the community forestry program’s progress and achievements.
• Participate in national programs that support and promote the benefits of the community forest.

2. Participation in National Initiatives
The City can promote public awareness of and involvement in community forestry care and benefits by participating in national initiatives that share similar goals. Participation in national initiatives can also provide the City with resources and support. Two national initiatives that have goals aligned with the City of Thousand Oaks’ are Tree City USA and Bee City USA. The **Forestry Master Plan** recommends continued involvement in these programs.

3. Planting Design Guidelines
This section provides design guidance to be consulted during development of planting designs within public rights-of-way. It begins with an overview of the different planting processes depending on the project type. The following sub-sections are focused on design – from general design principles and universal design guidelines that are widely applicable to planting design throughout the community, to sets of guidelines developed specifically for streetscape plantings. These planting design guidelines should be followed for every City-maintained planting project within public rights-of-way in Thousand Oaks.

**Planting Process by Project Type**
The process by which trees are selected and sited varies according to the planting situation: new developments, major streets plantings, neighborhood streets plantings, or replacement trees.

**Principles of Community Forest Design**
Landscape design is the process of altering the environment to meet human needs. A sensitive design enhances the environment and considers the needs of species other than humans. The selection and siting of trees and plants can contribute to the community’s character, and should take into consideration the environmental and human conditions that will impact the trees and plants. Designing with trees can solve a variety of problems – such as reducing cooling costs, reducing air pollution, and enhancing the aesthetics of a site.

**Planting Design Guidelines Framework**
The design guidelines are provided to assist with the development of planting designs. They are organized by the following categories: “**Universal Planting Design Guidelines**, “**Citywide Design Guidelines for Major Streets / Arterials**, “**Citywide Design Guidelines for Neighborhood Streets**, and “**Regional Character Design Guidelines for Street Plantings**. Guidelines are provided for both street tree and understory plantings.

**Universal Planting Design Guidelines**
The guidelines in this section have been formulated to direct the design of the community forest as a whole. They have been organized into the following three categories: Enhancing Character & Aesthetics, Increasing Forest Resiliency, and Supporting Maintenance & Safety.

**Citywide Design Guidelines for Street Plantings**
This section provides design guidelines to ensure street plantings fulfill their potential as major components of the community forest. It is divided into guidelines for major streets / arterials and guidelines for neighborhood streets, based on the differing scale and contexts of these street settings.

**Regional Character Design Guidelines for Street Plantings**
The guidelines in this section are intended to contribute to regional variation in the character of streetscape plantings throughout the City of Thousand Oaks, for both major streets / arterials and neighborhood streets. The Forestry Master Plan organizes the city into five regions – Dos Vientos, Newbury Park, Thousand Oaks West, Thousand Oaks East, and North Ranch / Westlake; and provides for each region a planting concept with design guidelines, suggested plant and tree species, reference photos, and concept imagery for a representative demonstration project site.

**Hidden Design Opportunities**
Although the **Forestry Master Plan** is focused on public right-of-way (primarily streetscape) planting
conditions, this section highlights some other opportunities for enhancing the community forest. These include: vacant lots, hillsides, stream corridors, schools, corporate and institutional holdings, and parking lots.

4. Species Selection Criteria
This section describes the considerations that impact the suitability of a particular species for the conditions of a planting site. When deciding what species of plant or tree is most appropriate for a site design, the Plan's tree and plant palettes are a primary resource. However, the Species Selection Criteria will assist in determining which species in the palette are the best options for the site conditions and the design concept that was developed with the Planting Design Guidelines.

5. Street Tree Palette
This section provides a palette, or range of choices, of trees for planting in the public rights-of-way in Thousand Oaks. The palette includes recommended tree species, with design and horticultural factors for each one. The palette is intended to serve as a tool to facilitate planting design, and should not be considered an all-inclusive listing of the only tree species and cultivars that are appropriate to plant in the public rights-of-way in Thousand Oaks. Other species and cultivars may be used with approval from the Public Works Director or designee.

6. Understory Planting Palette
The Understory Planting Palette includes small accent trees, shrubs, and groundcovers that are appropriate for use in the public right-of-way; they are primarily low-water-use species, and include numerous native species. It is important that shrubs and groundcovers be selected for the ultimate size, form, and shape that they will achieve without constant pruning. As with the Street Tree Palette, the Understory Planting Palette should not be considered an all-inclusive list; other species and cultivars that are not included may be used with approval from the Public Works Director or designee.

7. Community Forest Management Guidelines
This section outlines the major strategies for managing the community forest, providing city staff with guidelines to assist them in monitoring and managing the rates of planting and removal and the overall composition of the forest. From the perspective of long-term health and appearance of the community forest, maintaining a diversity of tree species and ages is vital.

Volume 3: Community Participation and Education
Volume 3 suggests ways of involving members of the community in forestry issues and practices. Primarily meant for use by city staff, it will also prove useful to citizens interested in promoting community forestry.

1. Introduction
The entire community benefits from a healthy, well-designed forest, as envisioned in the previous volumes of this plan. Without an informed, involved populace, such a forest is difficult to attain; therefore, community involvement is essential to the life of the forest. A number of stakeholders might be included in this involvement: residents, local businesses, institutions, and organizations.

2. Involving the Community
This section describes some of the ways to bring the community into the process of creating and maintaining the forest, such as: selecting trees, planting trees, maintaining trees, funding tree planting or maintenance, providing land for expansion of the forest, advising the City, and educating others. Suggestions for involvement are provided, organized by the type of stakeholder group.

3. Spreading the Word
The City can instigate a number of programs to increase community awareness of its forest resource. These actions fall into three broad categories: publicizing city policies (including this Master Plan), soliciting community support and enthusiasm, and educating people about trees and the forest as a whole.

4. Conclusion
The adoption and subsequent updates of the Forestry Master Plan is an important opportunity to build public awareness and appreciation of the community forest. The undertaking of a comprehensive community forestry program is an important initiative for Thousand Oaks, and as such should receive ample attention. The City should continue to involve residents in the review, implementation, and future updates of the Forestry Master Plan.
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Objectives & Organization of the Master Plan

The overall goal of the Forestry Master Plan is to provide the city with a sound basis for the creation and management of its community forest, and to set guidance that will allow the community forest to provide the greatest number of benefits for residents as well as the environment. To reach these goals, the plan encompasses eight objectives, organized in three separate volumes for ease of use by the various groups responsible for the forest.

The Forestry Master Plan applies to City-maintained plantings only.

Volume 1: Background

This volume is for use by city policy-makers and staff, business people, developers, residents and all others involved in community forestry decisions. It provides background information to set the stage for designing and managing the community forest. It will be most useful for those who are less acquainted with the concept of community forestry or the existing cultural and physical conditions of the City of Thousand Oaks, which impact the community forest, but serves as a helpful reference of this information for all.

Objectives:

• To provide a comprehensive rationale and description of the city’s forestry program and its context.

Volume 2: Design and Management Plan

This volume is primarily for use by city staff, business people, developers and their consultants, residents and others involved in selecting species and sites for new City-maintained plantings. It examines design issues for the major streets and neighborhoods, provides design and management guidelines for successfully integrating plantings into a site, and recommends a palette of trees and understory plants for local use.

Objectives:

• To establish community forest management guidelines addressing such issues as species diversification and resource-efficient maintenance.

• To describe the environmental issues that affect tree planting.

• To formulate design criteria to guide the choice of street tree species in the city’s various planning areas and along its major streets.

• To compile a palette of street tree and understory species for use in Thousand Oaks, based on the city’s environmental conditions and aesthetic character.

Volume 3: Community Participation and Education

This volume suggests ways of involving members of the community in forestry issues and practices. Primarily meant for use by city staff, it will also prove useful to citizens interested in promoting community forestry.

Objective:

• To provide the framework for public participation in creating and caring for the community forest.
VOLUME 1
BACKGROUND
1. Introduction

1.a The Community Forest

The community forest, with its native oak trees, is Thousand Oaks’ largest, most visible, and arguably most important natural resource. It unites the built environment of our communities with the natural world. Each tree contributes to making our neighborhoods sustainable, verdant, social, active, and beautiful. As living infrastructure, the forest transforms Thousand Oaks into a resilient city that can withstand the impacts of climate change and continued development. We must carefully and comprehensively manage this incredible natural resource for the enjoyment of present and future generations.

The Thousand Oaks Forestry Master Plan seeks to strengthen the connection between the natural world and people. By creating an ecological thread that binds neighborhood life to the rich ecology of the Thousand Oaks community forest, the Thousand Oaks Forestry Master Plan will inspire new generations of landscape stewardship.

The term “community forest” generally describes all vegetation – trees, shrubs, grasses, and flowers, growing within an urban or suburban environment, on both public and private property. While this Plan focuses on the City-maintained portion of the community forest, a healthy community forest in its entirety provides the maximum benefits to the local community and ecology.

Urban trees are impacted by biotic and abiotic stress. The built environment covers and compacts soil, vehicles collide with branches, and polluted air damages foliage with particulates, toxins, and acid rain. The acute impacts of climate change—extreme heat, lack of water, intensified wildfire—further challenge the longevity of urban nature. Beset by such stresses, street trees have an average life expectancy of 19 to 28 years, compared to the hundreds of years a tree might live under ideal conditions. As most species of trees take forty years to mature, city street trees are often adolescent and rarely reach a size where their full benefits can be enjoyed.

Today, many cities are working across sectors to create public-private partnerships that enhance and protect urban forests. Municipal programs such as Million Trees NYC, Friends of the Urban Forest, and...
City Plants Los Angeles aim to plant trees along streets, parks, and other public spaces. Although hundreds of urban street trees are removed annually due to death, declining structure, or storm damage: public-private partnerships between municipalities, local non-profit organizations, community groups, residents, and businesses are working together to promote, protect, and replenish our urban forests with tangible results. In the past, the City of Thousand Oaks was removing more trees than it was planting; however, with the adoption of the "Forestry Master Plan" in 1989, and the resulting selective tree removal and progressive planting program, the City has been replenishing and perpetuating its community forest. The potential benefits of urban street trees include: slowing of climate change, water quality protection, better air quality, lower air temperature, wildlife habitat, increased property value, and improved quality of life.

More than half of the world’s population live in urban areas. Subsequent demand for resources and land has left our forests, and community forests, in a state of crisis. Despite the acceleration of climate change, reforestation efforts can help mitigate the acute impacts of global warming and urbanization. The American Forest Association proclaims that while “forest restoration is a global issue, planting a tree is a very local action.” Creating and maintaining community forests can help ensure sustainable urbanization and successful development for present and future generations at the local, regional, and global scale.

The basic means of overcoming the stresses that beset city trees and restoring the vigor of the community forest is to correctly plant the right tree in the right place and provide it with proper care. Coupled with community education and participation, these are the essential recommendations of the "Thousand Oaks Forestry Master Plan." Community forestry combines three professional traditions: that of the arboriculturist, whose focus of concern is the health of the individual tree; that of the landscape architect, who helps find the fit between natural environments and human needs, including the need for beauty; and that of the forester, whose specialty is the management of the whole forest and its entire life cycle. It is this holistic perspective—treating the community forest as an integrated piece of infrastructure that transcends property lines and political jurisdictions—that makes the "Thousand Oaks Forestry Master Plan" an essential framework.

A Treeless City?

To fully understand the importance of trees to Thousand Oaks, it might be helpful to imagine a completely treeless city. It would be stark, hot, dry and monochromatic. The air would be devoid of fragrance, quiet of the sound of birds and the rustle of leaves. Sidewalks would be hostile places, barren of shade and greenery, and unadorned by the artful play of shadow patterns created by leaf and limb.

The city could be as much as ten degrees hotter than it is now if its forest cover were suddenly gone. Parks would seem empty without the canopy of trees, with few shady spaces to rest or picnic. Stairs would be the only things our children could climb. And without trees, we would have no living clocks marking the passage of time in our lifetimes - and no green monuments to the past.
Benefits of Trees

Community forests can be understood as dynamic systems of green infrastructure that provide cities with environmental, economic, and social benefits. Understanding the economic and cultural value of community forests and green infrastructure can enable municipalities to improve the quality of life and protect urban biodiversity for future generations.

Trees impart a distinctive character and identity to the city and to its neighborhoods. Thousand Oaks is noted for its environmental beauty, which trees help create. To come home to a green and shaded community establishes a powerful sense of place.

Trees establish visual harmony and continuity along the city’s streets. The experience of traveling through the community is immeasurably more pleasurable along tree-lined streets. If a single tree is a thing of beauty, a well-designed street of trees can be a striking kinetic experience. Distinctive plantings on major streets also help with orientation, making the city more “imageable” and therefore easier to navigate.

Trees enrich the aesthetic experience of the city, adding pleasing shapes, colors, fragrance, texture, scale, and seasonal change.

Trees help diffuse noise. Dense foliage helps diffuse sound waves from traffic and other noises, and renders them less intrusive by visually screening their source.

Trees enhance children’s play. They are natural playthings, full of life, and as capable of stimulating a child’s imagination and sense of wonder as the most expensive toy.

The emphasis of traditional forestry on trees as a harvestable resource is transformed in community forestry to the maintenance and enhancement of forest benefits. For instance in an urban context, sustained-yield translates into maintaining a high overall level of forest cover through selective removal and replanting of declining or hazardous trees.

1.b The History of Trees in Thousand Oaks

For the most part, the forest now seen in Thousand Oaks is an artifact of settlement, evolving since the City’s incorporation in 1964. It is truly a “community forest,” planted to serve uniquely human purposes for sustainable development in the City of Thousand Oaks.

Community forestry adapts such classical forestry concepts as multiple-use, sustained yield, and rotational management to fit the community environment. “Multiple use” means that trees are seen to coexist with and serve a variety of uses—a viewpoint essential to successfully balancing the requirements of trees with the demands of urban settings. “Sustained-yield” traditionally means selectively harvesting trees in a way that assures future harvests. This goal might be achieved through “uneven age management,” by which some trees from several age or diameter classes are cut, rather than all trees of a single class. “Rotational management,” which can be by uneven age or even age cutting, assures that a certain percentage of the forest will always be in the seedling, sapling, adolescent and mature classes.

The emphasis of traditional forestry on trees as a harvestable resource is transformed in community forestry to the maintenance and enhancement of forest benefits. For instance in an urban context, sustained-yield translates into maintaining a high overall level of forest cover through selective removal and replanting of declining or hazardous trees.

- from aesthetics to home sales - as the area was developed.

As might be expected, many of the trees in this forest, like most of the people in the community, have their historical roots not in the Conejo Valley but all over the world. Eucalyptus from Australia, elms from Asia, plane trees from Europe, pines and palms from the Canary Islands, ash trees from Arizona, and sweet gums from the eastern United States number among the species in the City. As people have settled here, they have brought with them a preference for trees like those they knew in their homelands - often places with environmental conditions very different from those of Thousand Oaks. The result is a somewhat eclectic
Trees increase property value and act as a stimulus to economic development, attracting new businesses and tourism. The beauty of a well-planted property and its surrounding street and neighborhood can raise residential property value by as much as 20 percent. Recent studies have revealed that people will travel farther, pay more for goods and services, and visit commercial districts more frequently—by an average of 12 percent—when trees and landscaping are present.

Trees enhance people’s sense of connection to nature and history. Emotionally and symbolically, trees represent people’s relation to that which is larger than themselves. They allow us to experience the natural world in a tangible form for which we feel responsible. Since trees, like people, grow and change through time, we identify with them. And since they often live longer than we do, they link us to times beyond our own, spanning past and future generations.

Trees enhance civic pride and involvement. Tree planting programs allow citizens to participate in creating a city they can be proud of.

Trees provide shade and evaporative cooling, helping to combat the effects of urban heat islands, and reducing energy costs and consumption. In urban areas, shaded surfaces may be 20-45 degrees cooler and evapotranspiration can reduce peak summer temperatures by 2-9 degrees.

Trees moderate wind. When trees are planted strategically, they not only reduce wind exposure but can reduce heating bills in the winter by 2 to 8 percent.

There were, of course, trees here when the Chumash lived on this land, and some of those species still remain today. For millennia, the tree community was of vital importance to the valley’s human community. The Chumash people congregated beneath the oaks each autumn to harvest the rich supply of “mast” or fallen acorns, which were ground by stone mortar and pestle into a flour that was a dietary staple. They also harvested the berries of a variety of chaparral plants, and the seeds of the native bunch grasses and perennials.

Today, oaks in the city serve as reminders of an earlier time and landscape. Along streambeds and in other protected spots, other native species remain from the Conejo Valley’s original landscape - California sycamores, willows, bay laurel, big leaf maples and black walnuts. The oaks are towering and spreading, sometimes reaching a hundred feet up and out. The presence of these species together gives a precise reading of the city’s geography - a hot interior valley just within the moderating influence of the ocean. The trees grew widely spaced in the flatlands, with a sparse understory of chaparral, forming a sweeping “oak savannah” community of park-like proportions. The grazing of ranch animals forest, and not always well-rooted in the conditions or traditions of the region.

There were, of course, trees here when the Chumash lived on this land, and some of those species still remain today. For millennia, the tree community was of vital importance to the valley’s human community. The Chumash people congregated beneath the oaks each autumn to harvest the rich supply of “mast” or fallen acorns, which were ground by stone mortar and pestle into a flour that was a dietary staple. They also harvested the berries of a variety of chaparral plants, and the seeds of the native bunch grasses and perennials.

Figure 1.3 Representation of a Conejo Valley Chumash village, at the Chumash Indian Museum
that began with the Spanish greatly affected the character of the oak savannah, as the compaction of soil and trampling and eating of oak seedlings by cattle reduced the ability of the trees to regenerate adequately. But on the ridges’ north-facing slopes, more favorable environmental conditions allowed oak woodland to cloak the hills.

Between the time of the Chumash and the advent of the freeway, the era of the ranchero and then the farmstead added layers to the valley’s landscape, marked by characteristic species and patterns of trees, and by the prolonged grazing that left the land and surrounding hills covered in introduced grasses rather than native chaparral and abundant oaks. Driving around town, one still encounters densely planted eucalyptus windbreaks, rows of elms shading former roadways, and billowing masses of California peppers (a misnomer - it’s from Peru) enclosing and protecting old houses from wind. As with the native species, these trees of an agricultural landscape now convey the texture of another time. If trees help us read the history of the city’s landscape, they are also the means to make history.

With the effects of climate change becoming more profound each year—drought, wildfires, higher temperatures—the community forest of Thousand Oaks curtails global warming by absorbing carbon dioxide through the processes of photosynthesis. During this process, carbon is “sequestered” in the biomass of the tree as long as the tree lives. A single large, healthy tree can remove greater than 300 pounds of carbon dioxide from the atmosphere every year.

Trees produce oxygen and filter airborne particulates, helping to reduce air pollution. A tree’s production of oxygen replenishes the atmosphere and dilutes pollutants. Airborne particulate pollution is trapped on the surface of leaves, which act as significant “scrubbers” or filters. Trees can reduce hourly ozone by up to 15 percent, sulfur dioxide by 14 percent, and particulate matter by 13 percent. In the United States alone, trees remove some 784,000 tons of pollution annually.

Trees can help reduce soil erosion and surface runoff, leading to a steadier and cleaner supply of water. Trees protect soil by breaking the fall of raindrops, absorbing water through their roots, covering the ground with protective humus, slowing runoff, and knitting the soil with roots. On the other hand, a square mile of land stripped for development may lose 25,000 to 50,000 tons of soil in a year. The resulting sediment can drastically reduce water quality. Moreover, the loss of vegetation leads to wasteful runoff and flooding, followed by parched drought conditions.

Trees provide habitat for birds and other wildlife. Trees are a city’s prime medium for attracting wildlife. A single oak, for example, can provide home and food for as many as 300 species of insects, which in turn provide food for numerous species of birds.

**Benefits of Trees**

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**Trees provide habitat for birds and other wildlife.** Trees are a city’s prime medium for attracting wildlife. A single oak, for example, can provide home and food for as many as 300 species of insects, which in turn provide food for numerous species of birds.
Oaks will act as a living buffer that protects the city and its existing biodiversity. By caring for and maintaining Thousand Oaks’ forest, the City will not only improve the quality of life of its residents, but will also ensure a resilient landscape for future generations. Consequently, selecting trees that perform well with higher temperatures, less water, and the threat of wildfires will help the City of Thousand Oaks continue to promote best practices for community forestry and sustainable development.

If we choose to keep the long-term health of the planet in mind as we set about expanding and modifying our forest, our connection with the trees of Thousand Oaks will become emblematic of the balanced connection between people and nature that is important for a healthy future. Our role in the continuum of the lifecycle will move us forward in a symbiotic relationship between people and the environment.

1.6 Background of the Forestry Master Plan

Since the early 1970s, the concern of Thousand Oaks for its natural environment has resulted in a number of ordinances and other measures relating to trees. Taken together, these documents have successfully guided the City’s tree programs over the years. However, since the measures were adopted at different times to address separate concerns, they lacked a sense of overall cohesion. In 1989, the City adopted its first Forestry Master Plan, with one of the major purposes being the consolidation of the City’s
Why Update the Forestry Master Plan?

1. Changing environmental conditions
   - Evolving tree pests and diseases
   - Increased drought conditions
   - Resulting need to revisit street tree palette

2. Changing political conditions
   - State mandate for water use reduction
   - Updates and additions to related policies and plans
   - Community priorities expressed in Visioning 2064

3. New technologies and best practices

4. Desire to address understory plantings in addition to street trees

5. Accessibility/usefulness of the document
   - Not suited to digital information age
   - Need to streamline content and organization

THOUSAND OAKS FORESTY MASTER PLAN

1. Changing environmental conditions
   - Various laws and policies related to trees into one comprehensive statement regarding its community forest. A few years later, the policy framework that was set forth in the Forestry Master Plan was incorporated in the City's General Plan, as part of the Forestry Element.

   The Forestry Master Plan has served the City well as a guide for maintaining and enhancing its community forest. Much of the content within the original 1989 Plan remains relevant and insightful despite the passing of decades since it was written. However, much has also changed during that time, and for that reason the Public Works Department has invested in updating its Forestry Master Plan.

   The primary changes resulting from the update process include:
   - Revised tree and plant palettes;
   - Increased information for understory plantings, including planting concepts and guidelines and an expanded palette;
   - Removal or revision of outdated information and provisions; and
   - Removal of sections/volumes that are provided in other City documents. This pertains to policy, which is now found in the Forestry Element of the General Plan; the Planting and Maintenance Manual, which has been separated as a stand-alone document; and description of the street tree inventory, which has been included separately in the Community Forest Implementation.

   Recommendations.

   Through the combined expertise of City Public Works and Community Development staff, and consultant landscape architects, planners, and arborists, and with input from Thousand Oaks residents, this Plan document is presented as an enhanced and updated version of the original 1989 Forestry Master Plan.

1.d How to Use this Document

Since the Thousand Oaks Forestry Master Plan was adopted in 1989, the City has been a model in community forest management. The Thousand Oaks Forestry Master Plan applies community forestry principles to the management of the City's forest resource, and provides the necessary framework to maintain the social, economic, and environmental benefits of trees. It is intended to establish a vision, while also serving as a practical manual for City staff. The recommendations contained herein have been developed specifically for City-maintained plantings, which in most cases are located along the City's public streets.

The Plan should be referenced by City decision-makers to guide policy, by the Public Works Department to guide planting and management of the community forest, and by consultants who may be tasked with the design and implementation of new City-maintained plantings.

As trees are important to the people of Thousand Oaks, the Forestry Master Plan also seeks to involve individual residents as fully as possible in the creation
and care of the community’s forest. Therefore, this document is designed to be of interest and use to the general public, as well.

The content is organized as follows:

*Volume 1: Background* provides the context for understanding Thousand Oaks’ community forest and the existing conditions which shape its design, growth, and management.

*Volume 2: Design & Management Plan* contains the guidelines, criteria, and palettes for designing and managing the City-maintained community forest. This is the “go-to” volume for planning new plantings and making management decisions regarding the community forest.

*Volume 3: Community Participation & Education* makes recommendations for involving the community in the responsibility of enhancing and maintaining the community forest.

Additional documents and resources that support the Forestry Master Plan include: *Thousand Oaks Planting & Maintenance Manual; Landscape Construction Standards; Thousand Oaks Tree Inventory; and Thousand Oaks Community Forest Implementation Recommendations.*
2. Planning Context

2.a Relevant Plans & Policies

Support for the Thousand Oaks community forest is a mutual effort of the City Council, business people, developers, residents, City staff and other public agencies. The Forestry Master Plan is the document that establishes the vision for the community forest, and it is supported by other plans and policies that will help the City achieve its goals. Following is a listing of the City’s ordinances, resolutions, and plans that most directly relate to City-maintained community forestry as of 2017. Refer to the full text documents to fully understand their requirements and recommendations.

Forestry Element of the General Plan

Scenic Highways Element of the General Plan

Municipal Code & Ordinances

- Title 7 Chapter 2 Article 9 Landscaping Provisions in the Public Rights-of-Way
- Title 9 Chapter 3 Article 10 Street Tree Planting
- Title 9 Chapter 4, Article 42 Oak Tree Preservation & Protection
- Title 9 Chapter 4, Article 43 Landmark Tree Preservation & Protection
- Ordinance No. 1610-NA Amendments to the Municipal Code regarding Oak and Landmark Tree Removals

Resolutions

- Res. No. 75-246 Precise Guidelines and Standards for the Landscaping of Highway Medians and Parkways
- Res. No. 91-172 Guidelines for Freeway Corridors (101 and 23)
- Res. No. 93-152 City Gateways
- Res. No. 2007-116 Revised Guidelines & Standards for Landscape Planting & Irrigation Plans
- Res. No. 2010-014 Revised Oak Tree Preservation & Protection

Specific Plans (Contact the Community Development Department for applicable specific plans.)

2. b Roles & Responsibilities

Currently, the City, through its departments of Public Works and Planning and Community Development, oversees the planning and installation of all street trees and other landscaping. Upon completion of development and acceptance of the established trees, the City has authority over maintenance of all trees within the public right-of-way and public service easement. Other public agencies, such as the Conejo Valley Park and Recreation District, Conejo Open Space Conservation Agency, CalTrans, and Southern California Edison have responsibility for trees in many areas of the city.

As with any city, developers have played a major role in the creation of the community forest. Developers should refer to the Forestry Element and Municipal Code, and contact the Community Development Department, for the current requirements that may pertain to their projects. The Forestry Master Plan only applies to City-maintained plantings, however it may also be a useful reference for developers and privately maintained plantings.

Individual residents, homeowners’ associations, and businesses should also be aware of provisions in the Forestry Element and Municipal Code in regards to developing and maintaining their own landscape improvements, as well as preserving oaks and other landmark trees on their properties.

These various responsibilities and the means by which they are carried out are specified in a series of ordinances, resolutions, standards, and planning documents adopted by the City Council. Additional information on responsibilities is also provided in the conditions of approval for individual projects. The list of relevant plans and policies provided in the preceding section may not be comprehensive; contact the Community Development Department to ensure you have the most current information.
3. Existing Conditions
Environmental and social conditions impact the growth of trees and other vegetation, as well as the planting and infrastructural strategies that can provide the greatest benefits. Understanding the context of the community forest helps in developing the most appropriate solutions for its sustainable management.

The City of Thousand Oaks is located within Ventura County. Neighboring cities include Camarillo, Moorpark, Simi Valley, Agoura Hills, and Westlake Village; and downtown Los Angeles is about 35 miles to the southeast. The Santa Monica Mountains separate Thousand Oaks from the coastal area at the Pacific Ocean, about five miles to the southwest. Thousand Oaks’ land area is approximately 55 square miles, and the 2015 Census population estimate is 129,339.

3.a Climate & Microclimate
California experiences yearly seasonal drought from mid-spring to mid-fall, as a continental high pressure system keeps moist oceanic weather systems well off-shore. When cooler winter temperatures dissipate the high pressure, a stream of winter storms flows down from Alaska and Asia, leaving an average annual precipitation in Thousand Oaks of 11 inches. During years in which the high pressure system lingers, winter storms can be reduced drastically, leading to periods of sustained drought such as occurred in 1975-77 and 1986-89. While drought is part of the typical climate cycle in California, conditions have been intensifying. At the time of this update, the
Thousand Oaks' semi-arid Mediterranean climate typically requires plants that are adapted not only to relatively low overall rainfall, but also to the stress of regular summer dryness and occasional long-term drought. In order to increase the resiliency of the community forest, ensure its long term benefits, and reduce maintenance costs, trees and plants that have low to very low water needs should be prioritized. However, even these species need periodic watering during the first two or three summers until their root systems are well developed.

Strong winds sometimes accompany winter storms. In addition, a steady summer wind from the ocean is occasionally drawn in through gaps in the western ridges. Also, dry, powerful Santa-Ana winds come in from desert regions to the east and south. Understanding wind patterns in relation to a particular site will indicate whether a particularly wind-tolerant tree species should be selected.

Winter temperature lows are the most critical factor in limiting the range of ornamental plants. Thousand Oaks is located within Sunset Climate Zone 21 and USDA Plant Hardiness Zones 9b-10b. Described by Sunset as “thermal belts in Southern California’s areas of occasional ocean influences,” the area is under the transitional influence of both maritime air

**Pavement.** The reflected heat from street, sidewalks, parking lots and other paved surfaces, as well as roofs, turns cities into heat islands several degrees warmer than surrounding, less intensely developed areas. During hot summers in Thousand Oaks, this effect is especially pronounced. For trees and plants, the result is hotter, drier conditions, shifting the microclimate of a parking lot, for instance, to near-desert intensities.

**Other Vegetation.** Stands of existing trees near a planting site can block wind or create shade in the same way that buildings do. Large areas of vegetation, including shrubs and groundcover, reverse the effect of heat islands by absorbing sunlight and by releasing moisture into the air by transpiration from the leaves, cooling the surroundings like a huge air conditioner. Airborne moisture from ocean fog or other sources also tends to condense on the surfaces of leaves and needles, causing a wetter, cooler microclimate.

### 3. b Topography

In addition to the impacts that terrain can have on micro-climate (as described above), slope can also impact the availability of water to vegetation. Quick run-off of water from steep slopes can contribute to excessively dry soil, while low spots collect run-off and may therefore be wetter than the surrounding soil. This phenomena is also impacted by the soil type.

**Figure 1.10 Thousand Oaks topography**
3.c Soils

Soil type impacts water retention. Sandy soil is very well aerated, but dries out quickly. Clayey or silty soil consists of minute particles which bind tightly together; water is trapped in the small spaces between these particles by capillary action, moving slowly and restricting oxygen to the roots. Absorbing root tips may be killed by this lack of oxygen. Either drought or saturated soil will therefore prevent distribution of moisture and minerals to foliage crowns, reducing vigor or even killing plants. Most trees prefer intermediate soils with good drainage but adequate water retention, such as those found in many valley areas in Thousand Oaks.

Soil properties are also an important consideration for the feasibility of stormwater management best management practices (BMPs). For example, soils with poor permeability may not be suitable for infiltration BMPs.

The soils map gives a general idea of soil conditions in Thousand Oaks, although it does not accurately reflect post-development levels of compaction or otherwise altered soils. Any type of development causes compaction and mixture of traditional alluvial soils with non-fertile bottom horizons, greatly affecting the tree’s ability to survive.
3.d Groundwater

Groundwater reservoirs within reach of a tree’s roots can allow some species to thrive in soils that would otherwise be too dry. However, a water table that is too close to the surface will drown the roots of most species.

The groundwater map shows the locations of groundwater basins within Thousand Oaks. Data on the distance to the water table should be requested as needed. Locations of groundwater basins combined with soil type information can help identify potential locations for integrating infiltration best management practices (BMPs), such as bioswales or detention basins, with planting projects.

Figure 1.12 Thousand Oaks groundwater basins
3.e Watersheds

Most of the City of Thousand Oaks lies within the Upper Conejo Arroyo watershed, but it also has portions within the Lower Conejo Arroyo, Portrero Valley Creek, Medea Creek, and a small area of the Big Sycamore Canyon watersheds. Streetscape planting areas provide an opportunity to implement stormwater BMPs that can help remove water pollutants, in order to meet the stormwater quality objectives of each watershed. It is important to note that the watersheds of engineered stormwater systems, which include street run-off collection and conveyance, do not always follow the boundaries of natural watersheds.

Figure 1.13 Thousand Oaks watersheds
3. f  Native Plant & Wildlife Communities
Located on the coastal side of the Transverse Ranges, Thousand Oaks is in a region that is dominated by chaparral, and more specifically coastal sage scrub (or soft chaparral), as the native plant community. This community is very well adapted to drought conditions, and shares many characteristics with desert communities. Many plant species are drought-deciduous or are succulents. Above-ground productivity is low, however many species produce large, showy flowers. There is variation in shrub characteristics and species between south- and north-facing slopes. Typical south-facing shrub species include: California sagebrush, California encelia, California buckwheat, monkeyflowers, true sages, prickly-pears, and live-forevers. Common north-facing shrub species are: toyon, laurel sumac, lemonadeberry, sugar bush, poison oak, fuchsia-flowered gooseberry, and coyote brush.

The plant community of hills that approach or exceed 1,000 feet in elevation transition to the lower chaparral. Like the coastal sage scrub plants, species tend to differ between north- and south-facing slopes; most are evergreen (rather than drought-deciduous), have waxy hard leaves, and have woody stems and large root systems which allow them to grow much larger than soft chaparral species. Chamise is the most common species of the lower chaparral; other plants include California lilacs (Ceanothus), deerweed, golden yarrow, California scrub oak, holly-leaved cherry, California coffeeberry, and woody vines, such as honeysuckles and wild peas.
Canyons and valleys in this region support the southern oak woodland community, which features three species of large oaks in Southern California: Coast Live Oak, Canyon Live Oak, and Engelmann Oak. Coast Live Oak is the most common, and it typically occurs in canyon bottoms, north-facing slopes, and as islands within coastal sage scrub. Canyon Live Oak typically occurs at higher elevations, and the Engelmann Oak prefers flat tablelands with deep, clay-rich soils. Shrubs that are commonly associated with southern oak woodlands include: toyon, lemonadeberry, fuchsia-flowered gooseberry, and poison oak.

Scrub communities are dominated by small, cold-blooded animals, such as arthropods (insects, spiders, mites) and reptiles. Several species of lizards are common; snakes are much less common. Birds are the most noticeable of the day-time animals; most mammals are small and nocturnal, and include a number of rodent species and rabbits. Mule deer are the largest mammals, and the mountain lion is the largest predator. Coyotes and bobcats are other common mammals of scrub communities.

Understanding the natural geography of the site and what natively grows in those conditions can serve as a good starting point when developing a planting design. Tree and plant species that are native to the Thousand Oaks region are clearly good options in terms of water efficiency, habitat value, and blending with surrounding open spaces. However, consideration should be given to maintenance and other needs of these native species when planted in a managed, urban setting. Species that thrive in wild settings do not always do as well in the city.
3.g Land Use
Until the 1930s, most of Thousand Oaks was ranchland, including some large holdings dating back to the days of Spanish rule. Even as late as the 1950s, there were two ranches totaling some 25,000 acres of land in the planning area of the city. Today, most neighborhoods consist of a variety of tract-housing styles, a school or two, a park or other type of open space, and occasionally some commercial uses. The age of the oldest trees in a neighborhood usually corresponds to the age of the housing. Planting design and the function it serves should consider the surrounding land use; for example, creating a buffer or screen between the street and residences, or providing shade along a commercial sidewalk without obstructing visibility of the businesses.

3.h Urban Development
The land cover map (Figure 1.22) illustrates the pattern of development and vegetated open space in Thousand Oaks and the immediate surroundings. The map highlights how Thousand Oaks' development exists between large patches of open space. This condition results in the need for caution – to protect open spaces from the impact of development, and to protect development from potential threats from open space (wildfires, in particular). It also offers the opportunity for the benefits of the community forest within development to enhance the benefits provided by the surrounding open space. Plantings at the periphery of development should be designed to extend habitat, resist the threat of wildfires, and complement the natural setting of nearby open space.
3.i Wildland-Urban Interface

The chaparral plant community, which dominates the natural landscape of Thousand Oaks, is one that has evolved in conjunction with drought and fires; many of the plants rely on periodic burning for growth and reproduction. In autumn, after the dry summer, vegetation is most susceptible to fire. As the land cover map illustrates (Figure 1.21), Thousand Oaks' development is surrounded and interspersed with open space, much of which contains chaparral scrub and oak woodland. Areas where development occurs near or within wildfire-prone lands are known as the wildland-urban interface. Figure 1.22 shows that nearly all of Thousand Oaks is considered wildland-urban interface. The map also illustrates the designation of fire hazard zones within and surrounding Thousand Oaks. Planting design in these areas should follow Cal-Fire and Ventura County Fire Department guidelines for fire hazard reduction.

Figure 1.23 illustrates the importance of considering the role of wildfires in the design and maintenance of the community forest. As roads and the public rights-of-way often serve as boundaries between development and natural open space, they hold the potential to function as either bridges that spread fire, or as firebreaks to stop its spread. If planted and maintained according to fire department recommendations, medians and parkways could become greenbelts that help protect the community from wildfires.
Figure 1.23 Defensible space zones across private and public properties

*Refer to Ventura County Fire Department for defensible space practices.*
3.j Street Network

The network of streets in Thousand Oaks serves a diversity of functions. The primary need for a system of roads is, of course, circulation. The layout of the streets, while designed mostly with circulation needs in mind, also becomes the overriding structure of the city that helps determine character, form, and land uses.

The streets of the city perform a social function as well, for it is on the streets that we come together as a community. Celebratory events - parades, block parties and the hanging of holiday decorations - take the street as their medium. We “hit the streets” to buy goods, disseminate information, run races, and meet our neighbors. Even in the face of the isolating effects of the automobile, the street will continue to be the most public of places in any community.

Streets are usually described in terms of traffic volume, width of roadbed, and connections: freeways provide for rapid movement of large volumes of through-traffic; arterial streets connect with freeways and also provide for through-traffic within the city; collector streets connect arterials with local streets and provide property access, and local streets are intended only for property access. (Figure 1.24)

Streets may also be thought of in terms of their general character. Thousand Oaks’ streets vary considerably, both from street to street, and along the length of individual roads. Some of the variables that determine a street’s character include width of the road, volume and speed of traffic, the primary land use fronting it, connections and intersections along the way, and the “streetscape” - the overall design of the street, including furniture, width of sidewalks, medians, commercial signage, and trees. To effectively design with street trees, all of these factors must be considered.

3.k City-Maintained Street Trees

Street trees comprise a large percentage of the public trees in the community forest. They are also its most visible members, since it is from the roads of Thousand Oaks that most people form their visual impressions of the city. This “view from the road” element of street plantings, so often overlooked in street design, is integral to the image a city conveys.

Figure 1.25 shows the locations of city-maintained street trees (as of 2003), layered with public sidewalks. Street trees not only provide a nice “view from the road” for drivers, but also contribute to a pleasant environment for pedestrians. The map illustrates that many of the city’s sidewalks benefit from street trees, however there are areas that lack this public amenity.

3.l Community Forest Geographic Regions

The five areas shown in Figure 1.26 are based on a combination of existing neighborhood areas and divisions created by freeways. These regions are identified in the Forestry Master Plan as focus areas that are more manageable for human-scale planning. Guidelines provided in Volume 2 of the Forestry Master Plan contribute to a planting identity for the city of Thousand Oaks as a whole, with subtle variation between each of these regions.

3.m City Gateways

The City Council adopted a resolution to establish planning policies and guidelines for city gateways (Resolution No. 93-152), with the intention of providing “focal points of community identity, and to remind residents and introduce visitors to the character of the community.” The Forestry Master Plan supports the guidelines set forth by the resolution, primarily by recommending appropriate species to be planted in the public right-of-way at the designated city gateways.

Figure 1.26 shows the locations of the gateways, as identified in the resolution. Gateway designs should follow the policies of the resolution, while also reflecting the character of the city region in which it is located, according to the Regional Character Guidelines provided in Volume 2 of the Forestry Master Plan. Gateways can serve as landmarks that identify the general character of Thousand Oaks as well as the particular part of the city in which they are located.
Figure 1.24 Thousand Oaks street network
Figure 1.25 Thousand Oaks streets, sidewalks, & city-maintained street trees
Figure 1.26 Forestry Master Plan geographic regions & city gateways

Map: SWA
VOLUME 2
DESIGN AND MANAGEMENT PLAN
This volume is divided into sections, based on the process of community forest design and management:

(1) Guiding Goals and Recommendations, and
(2) Participation in National Initiatives: to understand the goals of Thousand Oaks’ community forestry effort.

(3) Planting Design Guidelines: to be consulted when developing planting design concepts.

(4) Species Selection Criteria: to be consulted as a planting project transitions from concept to implementation, when determining the species to be planted to achieve the intended design.

(5) Street Tree Palette, and
(6) Understory Planting Palette: to be used in conjunction with the Species Selection Criteria; provides the lists of species that are recommended by the City of Thousand Oaks.

(7) Community Forest Management Guidelines: to be consulted for the on-going maintenance of implemented planting projects, for the sustainable maintenance of the community forest.

Figure 2.1 Plantings in the Moorpark Road median
1. Guiding Goals & Recommendations

The *Forestry Master Plan* has been developed as a tool to assist the City in achieving its goals for sustaining the community forest. The following goals and recommendations are the foundation for the Plan.

### GOALS

- **Establish and maintain a full complement of street trees on every street in the City.**
- **Enhance the character of the City and its neighborhoods through streetscape trees and plantings.**
- **Promote the creation and maintenance of off-street plantings that enhance the public forest resource.**
- **Establish the highest standard of maintenance for public trees.**
- **Promote public awareness of and involvement in community forestry care and benefits.**

### RECOMMENDATIONS

- **Achieve a 25% canopy coverage citywide.**
- **Replace every tree removed from a street with at least one new tree.**
- **Use species well-adapted to local environmental conditions and design objectives.**
- **Achieve a diverse and resilient forest by following the 10-20-30 rule of community forestry.**
- **Continue to plant the City's legacy oak trees in the appropriate spaces.**
- **Develop a citywide planting identity, as well as distinct identities for regions of the City.**
- **Provide ample landscaping of new construction.**
- **Maximize tree shading of public facility parking areas.**
- **Encourage new plantings at schools, parks, libraries, and similar sites.**
- **Encourage the integration of low impact development best management practices for stormwater management within public right-of-way plantings.**
- **Provide expert training of City maintenance personnel.**
- **Require certified tree maintenance contractors.**
- **Encourage collaboration between City departments, local community organizations, and public schools.**
- **Encourage monetary and other contributions to the community forestry program.**
- **Promote public awareness of and involvement in community forestry care and benefits.**
- **Participate in national programs that support and promote the benefits of the community forest.**
2. Participation in National Initiatives
One way for the City to promote public awareness of and involvement in community forestry care and benefits is to participate in national initiatives that share similar goals. These initiatives offer resources and support that can assist the City with its community forestry efforts. Formal participation in the programs communicates to the public the goals, values, and approaches that are shared by the initiative and the City community forestry program; and helps to increase broader understanding of community forestry issues and benefits. Two national initiatives that have goals aligned with the City of Thousand Oaks’ are Tree City USA and Bee City USA.

2.a Tree City USA
“Tree City USA” is an Arbor Day Foundation program that works to establish, promote, and celebrate urban tree canopies. In partnership with the USDA Forest Service, Urban and Community Forestry, and the National Association of State Foresters, the status of Tree City USA is awarded to cities who meet the foundation’s standards of urban forestry management. The City of Thousand Oaks has been awarded Tree City USA for eighteen years (as of 2016).

In order to achieve Tree City USA status, a community must meet four standards of sound urban forestry management:

- A tree board or department
- A tree ordinance
- A community forestry program with an annual budget of at least $2 per capita
- Celebrate Arbor Day

The Tree City USA program provides the City’s community forestry program direction, technical assistance, public attention, and national recognition; and places Thousand Oaks within a network of over 3,400 recognized communities.

2.b Bee City USA
Bee City USA is a program, launched in 2012, that invites cities to make commitments for providing sustainable habitats for pollinators. According to the program’s website, “85% of flowering plants and trees rely on pollinators for the survival of their species. … Entire species [of native bees and other pollinators] are disappearing at alarming rates as they battle most of the same enemies as honey bees – loss of habitat essential for food and shelter, inappropriate pesticide use, diseases, and parasites.”

The Bee City USA program is intended to raise awareness of these issues and encourage communities to take actions that will support populations of pollinators. Some of the guidelines for pollinator-friendly habitat include:

1. Provide diverse and abundant pollinator food sources (nectar and pollen from blooming plants) that bloom in succession.
2. Provide water for drinking, nest-building and cooling, diluting stored honey, and butterfly “puddling.”
3. Avoid the use of pesticides, or carry out the use of pesticide to impart the least ill effects on pollinators.

4. Comprise plantings of mostly, if not all, native species of grasses, perennials, shrubs, and trees. (Many native pollinators prefer or depend on the native plants with which they have co-evolved for millions of years.)

5. Source plants from nurseries that do not treat seeds with neonicotinoid pesticides, which permeate the entire plant and remain active for as much as years. (Some plants may be labeled “bee-friendly” even though they were grown from seeds treated with “neonics”)

6. Provide for safe and humane removal of bees when required.

7. Provide undisturbed spaces (leaf piles, unmowed fields, fallen trees) for nesting and overwintering for native pollinators.

Collectively, the City and private land owners can follow these guidelines to plant and manage landscapes in a manner that will support sustainable habitats for pollinators. The guidelines that are most applicable to publicly maintained landscapes are incorporated in the following Planting Design Guidelines, Species Selection Criteria, and Management Guidelines.

3. Planting Design Guidelines

This section provides design guidance to be consulted during development of planting designs within public rights-of-way. It begins with an overview of the different planting processes depending on the type of project. The following sub-sections are focused on design — from general design principles and universal design guidelines that are widely applicable to planting design throughout the community, to sets of guidelines developed specifically for streetscape plantings. These planting design guidelines should be followed for every City-maintained planting project within public rights-of-way in Thousand Oaks.

3.a Planting Process by Project Type

The process by which trees are selected and sited varies according to the planting situation: whether in new developments, in existing neighborhoods, or along major streets.

In all cases, the guidelines and information contained in this Design and Management Plan should be used to ensure the right trees are planted in the right places to achieve the greatest benefit for the longest time.

New Developments. After consulting regulatory documents and city staff, the developer’s landscape architect submits plans for City review. The City reviews the plans for conformance with current regulations, works with the developer to adjust the plans, and may present to the Planning Commission or City Council as part of the permit approval process.

Major Streets Plantings. Same process as above for major streets within new developments. For existing streets, the City initiates the plans, either developing them in-house or hiring a consulting landscape architect; in either case the Forestry Master Plan guides the process. The plans are presented to the public for comment and approved by City Council as a capital improvement budget item.

Neighborhood Streets Plantings. For city-initiated plantings, the Public Works Director or designee recommends appropriate alternative schemes and species based on the Plan guidelines at a neighborhood meeting, then finalizes plans, taking into account the residents’ preferences and concerns.

Replacement Trees. The Public Works Director or designee selects species and placement in conformance with Master Plan criteria and with prior notification of fronting property owners.
After all these needs and potential uses have been considered, the aesthetic character of the tree must be evaluated. Aesthetics is not an entirely subjective matter. Trees have a number of visual characteristics - such as scale, form, color and texture - that help determine appropriate species selection.

### 3. c  Planting Design Guidelines Framework

The design guidelines are provided to assist with the development of planting designs. When consulting the following planting guidelines, first review the “Universal Planting Design Guidelines”, which apply to plantings regardless of their location in the city. For street plantings, refer to the “Citywide Design Guidelines” for the appropriate type of street site, “Major Street / Arterial” or “Neighborhood”; then review the “Regional Character Design Guidelines” for the region in which the site is located (refer to Figure 2.22 for the regional character map). Guidelines are provided for both street tree and understory plantings.

After a general design concept is developed for a planting site, refer to the Species Selection Criteria and Tree and Understory Planting Palettes, provided later in this volume, to determine the most appropriate species to be planted to achieve the intended design.
Enhancing Character & Aesthetics

1. Extend and complement the native tree species of the Conejo Valley.
   • Use native species where appropriate.
   • Use such species in places where they might naturally occur.
   • Use native species, particularly oaks, to link the city to adjacent oak woodlands in open spaces.
   • Use non-natives of a similar form, texture and color as natives in areas adjacent to or with significant views of open space.

2. Respect and emphasize the city’s geographic setting.
   • Frame views from the public right-of-way to the surrounding hills and into the city. (Figure 2.6)
   • Consider accent species in the foreground of such views.
   • Screen objectionable views, including large parking lots, with appropriate plantings.
   • Consider vertical species as focal points in valley areas.

3. Complement the natural topography.
   • Use round-headed trees in hilly areas.
   • Avoid trees on open ridgelines.
   • Where ridgeline development occurs, use round-headed trees to help blend structures into the ridgeline.

3.d Universal Planting Design Guidelines

The following guidelines, written to reflect the goals and recommendations at the start of this volume, have been formulated to direct the design of the community forest as a whole. They have been organized into the following three categories: Enhancing Character & Aesthetics, Increasing Forest Resiliency, and Supporting Maintenance & Safety. Guidelines specific to the major streets and neighborhoods appear in the next sections.

It should be noted that the design guidelines can be applied to the renovation of existing areas as well as new construction. Where existing landscaping has been found to conflict with the use of an area or create high maintenance conditions, these guidelines can aid in planning the renovation of those areas, thereby creating a more effective relationship between use and design as well as a corresponding reduction in maintenance problems.
Universal Planting Design Guidelines

Enhancing Character & Aesthetics
1. Extend and complement the native tree species of the Conejo Valley.
2. Respect and emphasize the city’s geographic setting.
3. Complement the natural topography.
4. Complement existing trees and other vegetation.
5. Use trees to create a variety of spatial experiences.

Increasing Forest Resiliency
6. Plant to attract and support wildlife.
7. Select trees and plantings adapted to the environmental conditions of the site.
8. Satisfy any functional reasons for the planting.
9. Integrate low impact development best management practices for stormwater within public right-of-way plantings, where practical.
10. Diversify types and species where possible.

- Complement existing trees and other vegetation.
  - New tree forms, colors, and textures should be compatible.
  - Horticultural requirements should be consistent for healthy growth.
  - Use special care when modifying conditions near existing natives.
- Use trees to create a variety of spatial experiences.
  - Where appropriate, use trees to enclose space with allees, bosques, or groves. (Figure 2.7)
  - To emphasize openness, use a single large specimen tree as a focal point within a large open space.

Increasing Forest Resiliency
6. Plant to attract and support wildlife.
  - Select species that offer food, housing, and water, especially for indigenous fauna. Experts on local wildlife species can recommend appropriate species to meet these needs.
• Develop plantings that bloom in succession, providing pollinator food sources throughout the seasons.
• Plant wildlife-attracting species in sizable numbers and with some continuity throughout the community to mimic natural habitat; isolated patches are less effective.
• A diversity of habitat types throughout the city is best - shrubby edge, woodland, meadow, and chaparral.
• Incorporate native species of grasses, perennials, shrubs, and trees to the greatest extent practical.
• Enhance stream corridors’ natural wildlife value with dense plantings of native trees and understory plants; culverted streams have little wildlife value.

7. Select trees and plantings adapted to the environmental conditions of the site. Refer to the Species Selection Criteria in the following section for more information.

8. Satisfy any functional reasons for the planting.
• Water conservation and quality

Universal Planting Design Guidelines

Supporting Maintenance & Safety
11. Plant to provide the intended performance and aesthetic with the lowest water usage.
12. Ensure planting designs conform to current local and state regulations.
13. Consider the non-optimum conditions of street tree plantings when designing tree spacing.
14. Design tree, shrub, and groundcover plant spacing based on mature plant sizes.
15. Place trees away from conflicting uses.
16. Locate trees to minimize conflict with overhead utilities.
17. Locate trees to minimize conflict with underground utilities.
18. Provide planting spaces that accommodate healthy tree growth.
• Energy conservation
• Wind reduction
• Air pollution abatement
• Noise reduction
• Shading pavement to reduce heat island effect
• Screening objectionable views

9. Integrate low impact development best management practices for stormwater within public right-of-way plantings, where practical. Potential applications include tree wells, medians, parkway strips, and meandering sidewalks.

10. Diversify types and species where possible to avoid monotonous landscapes and overplanting of popular species.
• Alternate planting designs in the neighborhoods on a block-by-block basis.

• Intermix accent species in the dominant tree grid, as understory species, or to highlight key buildings or intersections.

Supporting Maintenance & Safety

11. Plant to provide the intended performance and aesthetic with the lowest water usage.
• Species with low to very low water use ratings are preferred.
• Group species by similar water needs in hydrozones.
• Minimize the number of hydrozones/irrigation valves per planting area.
• Trees and understory plantings should have compatible water needs.

12. Ensure planting designs conform to current local and state regulations.
• Do not obstruct sightlines at intersections or traffic signage.
• Comply with water allowance and irrigation requirements.
• Refer to Volume 1 of the Forestry Master Plan for a list of relevant local plans and policies. Contact the Community Development Department to determine if other regulations apply to your project.

13. Consider the non-optimum conditions of street tree plantings when designing tree spacing. The following rule of thumb applies to street trees which are to be planted in an even-spacing pattern:
Broad trees: 30 to 40 feet apart  
Average trees: 20 to 30 feet apart  
Narrow trees: 15 to 20 feet apart

14. Design tree, shrub, and groundcover plant spacing based on mature plant sizes. Avoid dense, pot-to-pot spacing, which increases maintenance and irrigation requirements.

15. Place trees away from conflicting uses. The following standards have been established in Resolution 2007-16:

- **Intersections.** Minimum 20 feet from curb return at intersections for sidewalk and median trees to keep traffic sightlines clear.

- **Traffic and monument signs.** Placed far enough away to allow easy visibility, given the speed of traffic on the street.

- **Parking.** For parallel parking, place trees at least 3 feet inside the curb and between stall markings to avoid damage from opening car doors. For diagonal or perpendicular parking, place trees at least 4 feet inside the curb to allow for car overhang.

- **Driveways.** No closer than 10 feet from any driveway.

- **Bus zones.** At least 6 feet inside the curb to allow loading and unloading.

- **Pedestrian and wheelchair clearances.** A minimum of 4 feet of clear sidewalk should be provided to allow comfortable passage.

- **Street lights.** Minimum 20 feet from light standards to prevent light obstruction.

- **Utility poles.** At least 10 feet so as not to obstruct access to the poles.

- **Fire hydrants.** At least 10 feet away to keep accessible.

- **Meter and valve boxes.** Far enough to keep clear of tree wells. At least 5 feet away.

- **Other street furniture** - benches, trash cans, etc. Space in a pleasing, logical and functional composition. Often aligned with trees in a sidewalk amenity zone along the curb. At least 5 feet away.

16. Locate trees to minimize conflict with overhead utilities.

- Where possible, utilities should be located underground; or, if overhead, aligned to
accommodate street tree planting.

- Where overhead utilities exist, select trees with thin upper canopies and open forms, so pruning will not destroy the form of the tree; or
- Plant small trees that will not reach the height of the wires.

17. Locate trees to minimize conflict with underground utilities.

- Plant trees as far away as possible from utilities, to avoid damage by roots, and to avoid trenching through the root zone when lines are serviced.
- Contact utility companies to locate lines before determining planting location. (Refer to the Planting and Maintenance Manual.)

18. Provide planting spaces that accommodate healthy tree growth. (See Figures 2.8 - 2.13)

- Refer to the planting palette to match planting design to the available planting space size.
- Where possible, enlarge the existing planting areas.
- Under new paving where available space confines planting areas, provide structural soils or cells to increase rooting space.
- To maximize growth and health of trees, provide a minimum of 1,000 cubic feet of loam soil per tree, or aim for the preferred 1.5 to 2 cubic feet of loam soil per square foot of mature tree canopy area.
- **Tree Wells.** At a minimum, should be 4 x 6 x 3 ft. deep, with 6 x 6 or larger recommended. Tree wells with an opening of less than 8.3-square-
feet (2.5 x 2.5) will support only small trees to maturity or medium-sized species for 10 to 15 years. Tree wells with an opening of 48-square-feet (6 x 8), on the other hand, will support large trees to maturity. Use of root barriers on two sides is advised for many species.

- **Parkway Strips.** The design of new streets or retrofitting existing streets with a 6-ft.-wide parkway is essential for healthy tree growth. A 2.5-feet-wide planting strip will not support a medium or large sized tree without pavement damage; the minimum recommended width is 4 feet. The benefit of planter strips over tree wells is increased tree vigor, due to the larger surface area of exposed soil.

- **Back of Sidewalk.** When planting behind the sidewalk, place the trunk no closer than 5 feet from the pavement. The larger surface area of exposed soil in this configuration allows greater air and water access to the roots. The increased water supply from property owner irrigation can also be a benefit, except in the case of trees that do not tolerate summer watering (coast live oaks, for example).

- **Meandering Sidewalk.** Meandering sidewalks create the opportunity for using groups of trees in a single large planting area rather than single trees in smaller spaces. Larger planting areas significantly increase tree health, reduce structural problems and prolong longevity. Design solutions that allow such large planting areas are preferred.
Ways to Enlarge Planting Areas

Figure 2.14 Enlarging existing planting areas

**Build wider parkway strips** (6 feet wide) in new developments to allow the trees to be close to the street. This will provide greater shade canopy over the street.

**Use meandering sidewalks, planting area islands in parking lanes, and medians.**

**Plant behind sidewalks** in planting beds or lawn areas. In lawn areas, keep the grass at least 4 feet from the trunk to reduce competition for nutrients.

**Use pervious paving materials** around tree wells. Interlocking pavers, bricks, and decomposed granite, all of which accommodate wheelchair access, allow greater amounts of air and water to reach the root zone.

**Cut larger planting holes** in paving for existing trees (minimum 4 x 6 feet).

**Use structural soils**, silva cells, or similar materials to provide rooting space beneath new paving.

Figure 2.15 Planting islands in parking lanes

Figure 2.16 Structural soils
3.e Citywide Design Guidelines for Street Plantings

The variety of street types within the community call for a diversity of design treatments, relating to the use of trees. A street of mostly rural character will certainly have different design needs than one primarily devoted to retail establishments. A freeway has completely different connotations than an arterial road in the center of town. Trees are the easiest, most flexible tool to employ in transforming the character of existing streets. This section provides design guidelines to ensure street plantings fulfill their potential as major components of the community forest. Each type of street brings up different design issues:

- Defining entry and welcome.
- Facilitating navigation by using “landmark species.”
- Easing the transition from rural or residential to the central business district.
- Creating enclosure and defining space.
- “Grounding” buildings to the landscape and bringing them down to human scale.

Figure 2.17 Street design issues
3.e.1 Citywide Design Guidelines for Major Streets / Arterials

The following design guidelines apply specifically to the conditions found along most major (arterial and collector) streets throughout the city. They combine information on urban tree survivability with basic design principles, to give a framework for the design of major streets. The general design information found in the Universal Planting Design Guidelines also applies to the major streets, and should be considered as well. Refer to the “Regional Character Design Guidelines” in the next section for additional guidance related to particular regions of the city.

**Enhancing Character & Aesthetics**

1. Consider the speed of the automobile when choosing species and determining spacing.
2. Use native oaks where appropriate as a major thematic tree.
3. Feature accent plantings in medians.
4. Create “gateways” to announce the city to those entering on major thoroughfares.
5. Mark major intersections with special plantings.
6. Where conditions are appropriate, include one oak tree behind median street monument signs.
7. Use accent trees to call out commercial areas or add visual interest.
8. Use informal, naturalistic tree groupings along freeway corridors.
9. Create a canopy of foliage overhead to bring wider roads down to human scale.
10. Shade sidewalks and bike lanes where possible.
11. Consider the positive aesthetic effect of massing particular species.
12. Use flowering tree species to provide seasonal accents.

5. Mark major intersections with special plantings. Do not obstruct sight lines or signage.

6. Where conditions, and in particular space, are appropriate, include one oak tree (Quercus agrifolia) ten feet (10’) behind each street monument sign in street medians. Refer to the Guidelines and Standards for Landscape Planting and Irrigation Plans for additional requirements.

7. Accent trees may be used to call out commercial areas, highlight building facades, or add visual interest. These are usually smaller than the dominant species. Accent trees can also be used as part of the dominant theme, found regularly along the street.

8. Use informal, naturalistic tree groupings along freeway corridors rather than straight-line plantings. (See Landscape Planting Guidelines for Freeway Corridors, in Resolution Number 91-172, for more detail.)

9. Create a canopy of foliage overhead to bring wider roads down to human scale.

10. Shade sidewalks and bike lanes where possible. Enhance pedestrian activity through the use of street trees that enclose and shade the pedestrian corridor but are not so aggressive or densely foliaged as to create a claustrophobic environment.

11. Consider the positive aesthetic effect of massing particular species, such as the profuse blooms of jacarandas. Fall color and attractive branching
patterns of deciduous trees are two special effects that are particularly appropriate for the higher speeds of these streets.

12. Use flowering tree species to provide seasonal accents.

**Increasing Forest Resiliency**

13. Revise the grading and drainage of medians and parkways to retain, infiltrate, harvest, or filter stormwater, where conditions are appropriate (do not regrade within existing tree driplines.)

**Supporting Maintenance & Safety**

14. Where conditions allow, within median planting areas provide a width of approximately 12-18" along the length of the curb that is free of planting. This space facilitates maintenance and helps prevent overgrowth of plant material into the street. The clear space may be paved or covered with an appropriate non-vegetative ground cover material; maintain permeability, or slope impermeable surfaces to drain into the planting area.
Enhancing Character & Aesthetics
1. Create a distinctive planting palette and design approach for each region.
2. Fit the planting palette to match the scale and image of the area.
3. Vary tree spacing and type by block to create a richer streetscape.
4. Consider alternatives to traditional tree-lined streets.
5. Involve the residents in the decision making as much as possible.
6. Consider the impact of existing trees and vegetation.
7. Emphasize special effects that might be lost on a larger-scale street.

3.e.2 Citywide Design Guidelines for Neighborhood Streets
Guidelines specific to neighborhood design comprise this section. It is in the neighborhoods where the finer points of a particular tree can be showcased: details that would be lost on the motorist traveling at 40 miles per hour become important at the pedestrian's pace. Fragrance, texture, shadow patterns, and unusual bark can be used to full effect on the local-street scale. And it is in the neighborhoods where the ecological diversity so important to the health of the forest can be realized.

The following guidelines will direct the planting of the neighborhoods throughout the city. Like the guidelines for major streets, these should be used in conjunction with the general design information found in the Universal Planting Design Guidelines, and the Regional Character Design Guidelines in the following section.

Enhancing Character & Aesthetics
1. Create a distinctive planting palette and design approach for each region. Refer to the Regional Character Design Guidelines in the next section.
2. Fit the planting palette to match the scale and image of the area.
3. Vary tree spacing and type by block to create a richer streetscape.
4. Consider alternatives to traditional tree-lined streets (e.g., woonerf-like plantings).
5. Involve the residents in the decision making as much as possible.
6. Consider the impact of existing trees and vegetation. Existing, privately planted trees can have a huge influence on the character of a neighborhood and should be considered when prioritizing the street-tree planting schedule.

Diverse Spatial Experiences
Trees can be used to create a diversity of spatial experiences in the quiet streets of the neighborhoods. In areas where some parking space can be sacrificed, small groves can be established. Plantings and thoughtful street design can also be used to make streets safer and multi-functional. In the Netherlands, for example, a move to create safer streets for children has resulted in the creation of neighborhood pedestrian streets, called “wooners”, or living street. The amount of road available to cars is significantly narrowed in the woonerf through the use of planting beds, benches, and mounds. The entire street becomes usable for people. Huge amounts of space are opened up for planting trees, and the social nature of the street is intensified. Drivers are inclined by the design of the street to maintain a safe speed and drive with caution.
7. Emphasize special effects that might be lost on a larger-scale street: fragrance, unusual bark, leaf patterns and textures, shadow patterns, and the expression of wind.

**Increasing Forest Resiliency**

8. Ensure the natural diversity of the community forest by planting the neighborhoods with species not found in abundance along the major streets or elsewhere in the area.

9. Make use of public land in neighborhoods for groves of trees to enhance habitat value and break up the linearity of street trees. (See Figures 2.20 and 2.21.)

**Supporting Maintenance & Safety**

10. California state law mandates that all new trees be carefully sited to avoid shading existing solar collectors. For this same reason, evergreen trees with dense winter foliage should be avoided on neighborhood streets with an east-west axis.
3.f Regional Character Design Guidelines for Street Plantings

The following guidelines are intended to contribute to regional variation in the character of streetscape plantings throughout the City of Thousand Oaks. Refer to the map at right for the organization of the city into five regions, then follow the guidelines that are listed for the region where the particular planting site under design is located. The section for each region includes an example demonstration project concept to illustrate how the Regional Character Design Guidelines can be implemented in median planting designs.

Note that if a planting site is on the boundary of two regions, follow the regional character guidelines for the region that is more closely associated with the site. For example, if there is open space on one side of the road and neighborhood on the other, follow the regional guidelines for the region where the neighborhood is located. Consult with the Public Works Director or designee to confirm the dominant regional planting concept for locations that border two regions.

Figure 2.22 Forestry Master Plan geographic regions
3.f.1 Dos Vientos Regional Character Design Guidelines
The Dos Vientos region planting concept is “California Native Garden.” The plantings should evoke a garden composed of predominately native plants that provide visual interest and seasonal variety.

1. Tree and understory plant species should complement the surrounding natural landscape (chaparral plant community) in color, form, and texture.

2. Avoid non-native species that may hybridize with native species or naturalize in the surrounding open space.

3. Maintain open views to adjacent open space / natural hillsides.

4. Within medians, plant large canopy trees as accent features, with wide spacing between them to provide views.

5. For curbside plantings, plant large canopy trees in clusters with wide spacing between clusters to provide views.

6. Intersperse inconspicuous understory planting species with special habitat/wildlife value amongst showier, dominant species.

7. Use deciduous or broadleaf evergreen trees, preferably native, within medians of adequate size.

8. Use broadleaf evergreen trees, preferably native oaks, in parkway strips or tree wells of adequate size.

9. Provide variation of species along the length of arterial or collector roads with clusters or groupings of the same species. For example, use one dominant species of canopy tree for a median planting area; use a second dominant species of canopy in the next median planting area.

10. Avoid planting turf grass; remove existing turf grass plantings and replace with more water- and maintenance-efficient plantings.

11. Prioritize the use of riverstones where non-vegetative groundcover material is needed.

12. For understory plantings, prioritize flowering shrubs, small accent trees, low shrubs, agave, and drought tolerant grasses.

13. For tree planting sites at residential properties, the Public Works Director or designee will present an assortment of tree species to the property owner for their selection.

14. The Public Works Director or designee should develop the list of species for selection by the property owner based on the most recent tree inventory (current ratio and distribution of species) and the regional recommendations in the street tree palette.

15. It is preferred to have a consistent type of tree per block, although the species of that type may vary.

16. Refer to the selection guidelines and suggested species chart for additional direction.
<table>
<thead>
<tr>
<th>PLANT CATEGORY</th>
<th>SELECTION GUIDELINES</th>
<th>SUGGESTED SPECIES</th>
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<tbody>
<tr>
<td><strong>Understory Plants</strong></td>
<td></td>
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</tr>
</tbody>
</table>
| Flowering Shrubs and Herbaceous Plants | • Select species with vivid, showy flowers.  
• Use three to five species per median planting.  
• Select small to medium species that will not block views to open space.  
• Select species that will provide seasonal variety and year-round blooms. | Cistus species / Rockrose  
Epilobium/Zauschneria species / California Fuchsia  
Eriogonum species / Buckwheat  
Eschscholzia californica / California Poppy  
Heuchera species / Coral Bells  
Mimulus/Diplacus species / Monkeyflower  
Penstemon species / Penstemon  
Salvia species / Sage  
Santolina species / Lavender Cotton  
Scabiosa species / Pincushion Flower  
Verbena lilacina / Lilac Verbena |
| Small Accent Trees | • Select a flowering accent tree with a light and airy structure.  
• Use only one species per median planting. | Aesculus californica / California Buckeye  
Cercis species / Redbud  
x Chitalpa tashkentensis / Chitalpa |
| Low Shrubs | • Plant low shrubs around signage; select species with mature height that will not be a visual obstruction.  
• Select shrubs that will provide a consistent dark green background.  
• Use one to two species per median planting. | Arctostaphylos groundcover species / Manzanita  
Baccharis pilularis ‘Pigeon Point’ or ‘Twin Peaks’ / Dwarf Coyote Brush  
Iva hayesiana / San Diego Marsh-elder  
Mahonia repens / Creeping Mahonia  
Myoporum parvifolium / Creeping Myoporum |
| Agave / Succulents | • Use one to two species per median planting.  
• Select medium-size species that will serve as accents. | Agave attenuata / Foxtail Agave  
Agave ocahui / Ocahui  
Agave parryi / Artichoke Agave  
Yucca whipplei / Our Lord’s Candle |
| Ornamental Grass | • Select grasses that will provide a neutral groundcover/foreground planting.  
• Use one to two species per median planting. | Aristida purpurea / Purple Three-awn  
Bouteloua gracilis / Blue Grama  
Carex species / Sedge  
Festuca californica / California Fescue  
Sesleria autumnalis / Autumn Moor Grass  
Stipa/Nassella species / Native Needlegrasses |
## Dos Vientos Regional Character: California Native Garden

### Design Guidelines

<table>
<thead>
<tr>
<th>PLANT CATEGORY</th>
<th>SELECTION GUIDELINES</th>
<th>SUGGESTED SPECIES</th>
</tr>
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<tbody>
<tr>
<td><strong>Trees</strong></td>
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<tr>
<td>Curbside Canopy Trees</td>
<td>- Plant broadleaf evergreen trees.</td>
<td><em>Acer paxii</em> / Evergreen Maple&lt;br&gt;<em>Laurus nobilis</em> / Sweet Bay&lt;br&gt;<em>Quercus agrifolia</em> / Coast Live Oak&lt;br&gt;<em>Quercus chrysolepis</em> / Canyon Live Oak&lt;br&gt;<em>Quercus engelmanii</em> / Engelmann Oak&lt;br&gt;<em>Quercus ilex</em> / Holly Oak&lt;br&gt;<em>Quercus suber</em> / Cork Oak&lt;br&gt;<em>Quercus tomentella</em> / Island Oak&lt;br&gt;<em>Tristania conferta</em> / Brisbane Box</td>
</tr>
<tr>
<td></td>
<td>- Prioritize native oaks that are appropriate for the available planting area.</td>
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<td></td>
<td>- Prioritize fire resistant species where the right-of-way is adjacent to open space.</td>
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<td></td>
<td>- Plant trees in clusters or groups of the same species.</td>
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<tr>
<td>Median Canopy Trees</td>
<td>- Plant deciduous or broadleaf evergreen trees.</td>
<td><em>Acer macrophylla</em> / Big Leaf Maple&lt;br&gt;<em>Quercus kelloggii</em> / California Black Oak&lt;br&gt;<em>Quercus lobata</em> / Valley Oak&lt;br&gt;<em>Sophora japonica</em> / Pagoda Tree&lt;br&gt;See also above listed species for Curbside Canopy Trees</td>
</tr>
<tr>
<td></td>
<td>- Prioritize fire resistant species where the right-of-way is adjacent to open space.</td>
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<td>- Use one species per median planting.</td>
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<td></td>
<td>- Alternate between medians with evergreen and deciduous species.</td>
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<tr>
<td>Groundcover Material</td>
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<tr>
<td>Riverstones</td>
<td>- Use riverstones as an inorganic groundcover material.</td>
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<tr>
<td></td>
<td>- Select stones that are consistent in color and texture with the surrounding natural context.</td>
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<tr>
<td></td>
<td>- Color and texture should be consistent throughout the Dos Vientos region.</td>
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</tr>
<tr>
<td><strong>Dos Vientos Regional Character:</strong> California Native Garden</td>
<td><strong>Suggested Species - Understory Plants</strong></td>
<td></td>
</tr>
<tr>
<td>California Poppy</td>
<td>Buckwheat</td>
<td>Sage</td>
</tr>
<tr>
<td>Penstemon</td>
<td>Lavender Cotton</td>
<td>Pincushion Flower</td>
</tr>
<tr>
<td>Ocahui</td>
<td>Artichoke Agave</td>
<td>San Diego Marsh-elder</td>
</tr>
</tbody>
</table>
**Dos Vientos Regional Character:** California Native Garden

**Suggested Species - Trees**

- Coast Live Oak
- Brisbane Box
- Sweet Bay
- Big Leaf Maple
- Pagoda Tree
- Chitalpa (Small Accent)

*Image Credit: Oregon State*
Dos Vientos Demonstration Project Concept

The Dos Vientos demonstration project site is the Lynn Road median between Via Las Brisas and Via Goleta (figure 2.24). The site offers views to the surrounding open space.

Transition median canopy trees to native and/or fire resistant broadleaf evergreen or deciduous species, per the Dos Vientos Regional Character Design Guidelines.

Emphasize the surroundings with California native trees and plants, and maintain the open views to the surrounding hills.

Figure 2.24 Dos Vientos demonstration project
Above: Existing conditions
Right: “California Native Garden” median concept rendering
3.f.2 Newbury Park Regional Character Design Guidelines

1. The Newbury Park region planting concept is “Colorful Garden.” California-friendly plantings should feature a complementary variety of colors, forms, and textures that offer visual interest.

2. For street segments that have medians, design curbside plantings to serve as a simple backdrop for colorful accent plantings in the median.

3. Provide a variety of tree types (flowering, non-flowering, evergreen, deciduous) within medians of adequate size. Use only one to two species of each type within a median planting or along a stretch of road.

4. Simplify curbside tree plantings (in parkway strips or tree wells.) Mirror plantings on each side of the road, and use only one to two species per stretch or block of road. Provide variety of tree types throughout the region.

5. For streets that do not have medians, design curbside plantings as colorful accent features.

6. Avoid planting turf grass; remove existing turf grass plantings and replace with more water- and maintenance-efficient plantings.

7. Prioritize the use of decorative paving (permeable preferred) and riverstones where non-vegetative groundcover material is needed.

8. For understory plantings, prioritize flowering shrubs, small accent trees, ornamental grasses, low shrubs, and small succulents.

9. For flowering trees and shrubs, select species that will collectively provide blooms throughout the year.

10. Use boulders as accents within median plantings.

11. For tree planting sites at residential properties, the Public Works Director or designee will present an assortment of tree species to the property owner for their selection.

12. The Public Works Director or designee should develop the list of species for selection by the property owner based on the most recent tree inventory (current ratio and distribution of species) and the regional recommendations in the street tree palette.

13. It is preferred to have a consistent type of tree per block, although the species of that type may vary.

14. Refer to the selection guidelines and suggested species chart for additional direction.
### Newbury Park Regional Character: Colorful Garden

#### Design Guidelines

<table>
<thead>
<tr>
<th>PLANT CATEGORY</th>
<th>SELECTION GUIDELINES</th>
<th>SUGGESTED SPECIES</th>
</tr>
</thead>
</table>
| **Understory Plants**               | • Select two to three species for planting beneath non-flowering deciduous trees.    | *Cistus* species / Rockrose  
*Heuchera* species / Coral Bells  
*Mahonia ‘Golden Abundance’* / Oregon Grape  
*Monardella villosa* / Coyote Mint  
*Rosa californica* / California Wildrose  
*Rosa ‘Flower Carpet’* / Flower Carpet Rose  
*Salvia chamaedryoides* / Germander Sage  
*Salvia ‘Dara’s Choice’* / Dara’s Choice Creeping Sage |
| **Flowering Shrubs and Herbaceous Plants** |                                                                                  |                                                                                  |
| **Small Accent Trees**              | • Select one species per median planting.                                           | *Arbutus unedo* / Strawberry Tree  
*Ceanothus ‘Ray Hartman’* / Ray Hartman Ceanothus  
*Cercis occidentalis* / Western Redbud  
*x Chitalpa tashkentensis* / Chitalpa |
| **Ornamental Grasses**              | • Select one to two species for planting beneath broadleaf evergreen trees.          | *Aristida purpurea* / Purple Three-awn  
*Muhlenbergia capillaris* / Pink Muhlygrass  
*Pennisetum rubrum* / Purple Fountain Grass |
| **Low Shrubs**                      | • Select one to two species for planting beneath flowering canopy trees.             | *Abelia grandiflora prostrata* / Prostrate White Abelia  
*Achillea* species / Yarrow  
*Arctostaphylos groundcover species* / Manzanita  
*Correa ‘Carmine Bells’* / Australian Fuchsia  
*Mahonia repens* / Creeping Mahonia  
*Rosmarinus groundcover species* / Rosemary  
*Trachelospermum jasminoides* / Star Jasmine  
*Vinca minor* / Periwinkle |
| **Succulents**                      | • Select low-growing species that provide visual interest & variety with color and form. | *Aeonium* species / Aeonium  
*Dudleya* species / Dudleya  
*Echeveria* species / Echeveria  
*Sedum* species / Stonecrop |
| **Boulders**                        | • Select stones that are consistent in color and texture with the natural context of Thousand Oaks. |                                                                                  |
Newbury Park Regional Character: Colorful Garden
Design Guidelines

<table>
<thead>
<tr>
<th>Plant Category</th>
<th>Selection Guidelines</th>
<th>Suggested Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trees</td>
<td></td>
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</tr>
</tbody>
</table>
| Curbside Canopy Trees (for streets with medians) | • Select one species or two alternating species per stretch or block of road.  
• Select evergreen and/or deciduous species, without conspicuous flowers. | Evergreen  
*Cupaniopsis anacardoides* / Carrotwood  
*Laurus nobilis* / Sweet Bay  
*Melaleuca quinquenervia* / Paperbark  
*Quercus species* / Oak  
Deciduous  
*Ginkgo biloba* / Ginkgo  
*Platanus species* / Sycamore, Plane Tree  
*Pistacia chinensis* / Chinese Pistache  
*Quercus species* / Oak  
*Zelkova serrata* / Japanese Zelkova |
| Median Canopy Trees or Curbside Canopy Trees for Streets without Medians | • Use flowering trees of the same species at intersections or the ends of plantings.  
• Plant a variety of non-flowering evergreen and/or deciduous trees per stretch or block of road (use two species for curbside plantings, and two to four species for median plantings). | Flowering  
*Albizia julibrissin* / Silk Tree  
*Chorisia speciosa* / Floss Silk Tree  
*Jacaranda mimosifolia* / Jacaranda  
*Koelreuteria bipinnata* / Chinese Flame Tree  
Deciduous  
*Liquidambar styraciflua* / American Sweetgum  
Conifer  
*Pinus eldarica* / Afghan Pine  
*Pinus torreyana* / Torrey Pine  
See also above listed species for Curbside Canopy Trees |
| Groundcover Material |                      |                   |
| Decorative Paving | • Use a consistent color, pattern, and material throughout the region. |                   |
| Riverstones | • Use riverstones as an inorganic groundcover material where decorative paving is not appropriate.  
• Select stones that coordinate with decorative paving material and decorative boulders in the region.  
• Color and texture should be consistent throughout the region. |                   |
Newbury Park Regional Character: Colorful Garden
Suggested Species - Understory Plants

Rockrose
Coral Bells
Coyote Mint
Sedum

Carpet Rose
Coral Bells
Coyote Mint
Sedum

Dara's Choice Sage
Image Credit: Theodore Payne Foundation

Germander Sage
Pink Muhlygrass
Purple Three-Awn Grass

Carpet Rose
Coral Bells
Coyote Mint
Sedum

Dara's Choice Sage
Image Credit: Theodore Payne Foundation

Germander Sage
Pink Muhlygrass
Purple Three-Awn Grass

Carpet Rose
Coral Bells
Coyote Mint
Sedum

Dara's Choice Sage
Image Credit: Theodore Payne Foundation

Germander Sage
Pink Muhlygrass
Purple Three-Awn Grass

Carpet Rose
Coral Bells
Coyote Mint
Sedum

Dara's Choice Sage
Image Credit: Theodore Payne Foundation

Germander Sage
Pink Muhlygrass
Purple Three-Awn Grass

Carpet Rose
Coral Bells
Coyote Mint
Sedum

Dara's Choice Sage
Image Credit: Theodore Payne Foundation

Germander Sage
Pink Muhlygrass
Purple Three-Awn Grass

Newbury Park Regional Character: Colorful Garden
Suggested Species - Understory Plants

Rockrose
Coral Bells
Coyote Mint
Sedum

Carpet Rose
Coral Bells
Coyote Mint
Sedum

Dara's Choice Sage
Image Credit: Theodore Payne Foundation

Germander Sage
Pink Muhlygrass
Purple Three-Awn Grass

Carpet Rose
Coral Bells
Coyote Mint
Sedum

Dara's Choice Sage
Image Credit: Theodore Payne Foundation

Germander Sage
Pink Muhlygrass
Purple Three-Awn Grass

Carpet Rose
Coral Bells
Coyote Mint
Sedum

Dara's Choice Sage
Image Credit: Theodore Payne Foundation

Germander Sage
Pink Muhlygrass
Purple Three-Awn Grass

Carpet Rose
Coral Bells
Coyote Mint
Sedum

Dara's Choice Sage
Image Credit: Theodore Payne Foundation

Germander Sage
Pink Muhlygrass
Purple Three-Awn Grass
Newbury Park Regional Character: Colorful Garden

Suggested Species - Trees

Holly Oak

Plane Tree

Torrey Pine
Image Credit: Theodore Payne Foundation

Chinese Flame Tree

Jacaranda

Redbud (Small Accent)
Newbury Park Demonstration Project Concept

The Newbury Park demonstration project site is the median at South Reino Road, between Borchard Road and Teardrop Court (figure 2.26).

The current median tree species are appropriate and should remain as long as they are in a healthy and safe condition. The painted concrete area should be removed, to extend the planting area of the median without impeding safe sight distances. The expanded planting area should support new flowering trees, to match the existing flowering trees at the opposite end, as well as colorful small succulents, a flowering accent tree, accent boulders, and low flowering shrubs. If conditions are appropriate, the decorative paving can extend in strips along the side of the planting area. Throughout the rest of the median, plant flowering shrubs and ornamental grasses, which are compatible as understory for the existing trees.
3.f.3 Thousand Oaks West Regional Character Design Guidelines


2. Simplify curbside tree plantings (in parkway strips or tree wells.) Mirror plantings on each side of the road, and use only one to two species per stretch or block of road. Provide a variety of tree types throughout the region.

3. Space median trees to provide a consistent canopy, with natural breaks where appropriate for visual interest and safety.

4. Avoid planting turf grass; remove existing turf grass plantings and replace with more water- and maintenance-efficient plantings.

5. Prioritize the use of riverstones and/or mulch where non-vegetative groundcover material is needed.

6. For understory plantings, prioritize flowering shrubs, small accent trees, ornamental grasses, low shrubs, and strap-leafed plants.

7. Use boulders as accents within median plantings.

8. For tree planting sites at residential properties, the Public Works Director or designee will present an assortment of tree species to the property owner for their selection.

9. The Public Works Director or designee should develop the list of species for selection by the property owner based on the most recent tree inventory (current ratio and distribution of species) and the regional recommendations in the street tree palette.

10. It is preferred to have a consistent type of tree per block, although the species of that type may vary.

11. Refer to the selection guidelines and suggested species chart for additional direction.
## Thousand Oaks West Regional Character: Adaptive Arroyo

### Design Guidelines

<table>
<thead>
<tr>
<th>PLANT CATEGORY</th>
<th>SELECTION GUIDELINES</th>
<th>SUGGESTED SPECIES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Understory Plants</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Flowering Shrubs and Herbaceous Plants | • Select large species to serve as accents.  
• Select species with showy, vivid flowers.  
• Select one species per median planting. | Abutilon palmeri / Indian Mallow  
Carpenteria californica / Bush Anemone  
Dendromecon species / Bush Poppy  
Grevillea ‘Canberra’ / Spider Flower  
Lavatera species / Tree Mallow  
Ribes speciosum / Fuchsia-flowered Gooseberry |
| Small Accent Trees | • To serve as accents at median ends.  
• Select a second species of large flowering shrub (listed above), or one species of flowering accent tree.  
• Select a species that provides visual interest and complements the other median plantings. | Arbutus unedo / Strawberry Tree  
Arctostaphylos glauca / Big Berry Manzanita  
Arctostaphylos ‘Dr. Hurd’ / Dr. Hurd Manzanita  
Lagerstroemia indica / Crape Myrtle |
| Ornamental Grasses | • Select one to two species per median planting.  
• Plant beneath evergreen trees. | Muhlenbergia rigens / Deer Grass  
Muhlenbergia ‘White Cloud’ / White Awn Muhly  
Pennisetum rubrum / Purple Fountain Grass |
| Low Shrubs | • Select one to two species per median planting.  
• Plant beneath deciduous trees.  
• Plant around signage within median; select a species with a mature height that will not be a visual obstruction. | Arctostaphylos groundcovers / Manzanita  
Cotoneaster groundcovers / Cotoneaster  
Juniperus groundcovers / Juniper  
Mahonia repens / Creeping Mahonia |
| Strap-leafed Plants | • Select species with vivid, showy flowers.  
• Use two to three species per median planting.  
• Select species that will provide seasonal variety.  
• Plant in groupings to accent median ends. | Anigozanthus flavidus varieties / Kangaroo Paw  
Dietes species / Fortnight Lily  
Hemerocallis species / Daylily  
Iris douglasiana / Douglas Iris |
| Boulders | • Select boulder material and color that complement the natural environment of Thousand Oaks.  
• Use as accents throughout median plantings, placed to reflect a natural arroyo setting. | |
## Thousand Oaks West Regional Character: Adaptive Arroyo

**Design Guidelines**

<table>
<thead>
<tr>
<th>PLANT CATEGORY</th>
<th>SELECTION GUIDELINES</th>
<th>SUGGESTED SPECIES</th>
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<tbody>
<tr>
<td><strong>Trees</strong></td>
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</tbody>
</table>
| Curbside Canopy Trees| • Select one to two species per stretch or block of road.  
• Select evergreen and/or deciduous species, without conspicuous flowers.                                                                                                                                       | Evergreen  
  *Eucalyptus* species / Eucalyptus  
  *G. parviflora* / Australian Willow  
  *Melaleuca* species / Paperbark  
  *Podocarpus gracilior* / Fern Pine  
  *Quercus* species / Oak  
  *T. conferta* / Brisbane Box  
Deciduous  
  *P. acerifolia* cultivars / London Plane Tree  
  *P. chinensis* / Chinese Pistache  
  *Quercus* species / Oak |
| Median Canopy Trees  | • Plant non-flowering canopy trees in groupings within the median, alternating with groupings of flowering trees.  
• Select one species of non-flowering evergreen, one species of non-flowering deciduous, and one species of flowering tree for median plantings.                                         | Flowering  
  *Hymenosporum flavum* / Sweet Shade  
  *Koelreuteria bipinnata* / Chinese Flame Tree  
  *Liriodendron tulipifera* / Tulip Tree  
  *P. calleryana* / Callery Pear  
  *P. kawakamii* / Evergreen Pear  
Deciduous  
  *Liquidambar styraciflua* / American Sweetgum  
See also above listed species for Curbside Canopy Trees |
| **Groundcover Material** |                                                                                                                                                                                                                      |                                                        |
| Mulch                | • Use as a groundcover outside of the arroyo bed.  
• Blend edges with riverstones at arroyo edge.                                                                                                                                                                      |                                                        |
| Riverstones          | • Use riverstones as a groundcover within the arroyo bed.  
• Blend edges with surrounding areas of mulch.  
• Select stones that are consistent in color and texture with the natural context of Thousand Oaks.  
• Color and texture should be consistent throughout the region.                                                                                                                                            |                                                        |
Thousand Oaks West Regional Character: Adaptive Arroyo

Suggested Species - Understory Plants

- Bush Poppy
- Bush Anemone
- Spider Flower
- Fuchsia-Flowered
- Kangaroo Paw
- Daylily
- Deer Grass
- Purple Fountain Grass
- Fortnight Lily
- Douglas Iris
- Manzanita Groundcover
- Cotoneaster Groundcover
Thousand Oaks West Regional Character: Adaptive Arroyo
Suggested Species - Trees

Fern Pine
Eucalyptus
Pin Oak
Chinese Flame Tree
Callery Pear
Manzanita (Small Accent)
**Thousand Oaks West Demonstration Project Concept**

The Thousand Oaks West demonstration project site is the Lynn Road median between Hillcrest Drive and Calle Laredo (figure 2.28).

Where site conditions are appropriate, integrate stormwater treatment (biofiltration and/or infiltration) with the median plantings. While grading should not be modified under existing trees, the benefits of improving water quality may justify the removal of immature or inappropriate trees in order to implement swales and/or detention basins in the median. Where appropriate, maintain existing trees and continue the planting design of broadleaf evergreen and deciduous canopy trees. Provide accents with smaller flowering accent trees and large, boldly flowering shrubs. Integrate flowering strap-leaf plants with boulders and riverstones in a naturalistic arroyo arrangement at the ends of the median. Provide ornamental grasses and low shrubs throughout the median. The faded painted concrete at the median end should be removed and replaced with either planting or decorative paving per site conditions.
3.4 Thousand Oaks East Regional Character Design Guidelines

1. The Thousand Oaks East planting concept is “Flowering Highlights.” The plantings should be composed of neutral shrubs and grasses accented by shrubs and small trees that have boldly colored blooms.

2. Simplify curbside tree plantings (in parkway strips or tree wells.) Mirror tree plantings on each side of the road, and use the same one or two tree species as in the median, where medians exist.

3. Per length or segment of road, provide one species of broadleaf, non-flowering evergreen tree and one species of flowering deciduous trees. Provide variety of tree species throughout the region.

4. Space median trees to provide a consistent canopy, with natural breaks where appropriate for visual interest and safety.

5. Avoid planting turf grass; remove existing turf grass plantings and replace with more water- and maintenance-efficient plantings.

6. Prioritize the use of mulch where non-vegetative groundcover material is needed.

7. For understory plantings, prioritize flowering shrubs, small accent trees, non-flowering shrubs (or with inconspicuous flowers), and ornamental grasses.

8. For flowering tree and shrubs within a planting area, select species that bloom concurrently, or have overlapping blooming periods. Maximum seasonal impact will be achieved by having periods with no blooms in contrast to periods with multiple species in bloom.

9. Use boulders as accents within median plantings.

10. For tree planting sites at residential properties, the Public Works Director or designee will present an assortment of tree species to the property owner for their selection.

11. The Public Works Director or designee should develop the list of species for selection by the property owner based on the most recent tree inventory (current ratio and distribution of species) and the regional recommendations in the street tree palette.

12. It is preferred to have a consistent type of tree per block, although the species of that type may vary.

13. Refer to the selection guidelines and suggested species chart for additional direction.
### Thousand Oaks East Regional Character: Flowering Highlights

#### Design Guidelines

<table>
<thead>
<tr>
<th>PLANT CATEGORY</th>
<th>SELECTION GUIDELINES</th>
<th>SUGGESTED SPECIES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Understory Plants</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Flowering Shrubs and Herbaceous Plants | • Select medium size flowering shrubs with profuse and boldly colored blooms to serve as accents.  
• Use one to two species per median planting. Vary species throughout the region. | **Caesalpinia pulcherrima** & cultivars / Pride of Barbados  
**Calliandra species** / Fairy Duster  
**Chaenomeles cultivars** / Flowering Quince  
**Russelia equisetiformis** / Coral Fountain, Firecracker Plant |
| Small Accent Trees | • Select a small, flowering accent tree that complements the flowering canopy trees and flowering shrubs within the median.  
• Use only one species per median planting. Vary species throughout the region. | **Arbutus unedo** / Strawberry Tree  
**Caesalpinia mexicana** / Mexican Bird of Paradise  
**Cordia boissieri** / Texas Wild Olive  
**Fremontodendron species** / Flannelbush  
**Tecoma stans** and cultivars / Yellow Bells |
| Ornamental Grasses | • Select one species per median planting.  
• Select a species that provides visual interest with neutral tones, such as soft green to golden beige.  
• Plant beneath flowering canopy trees. | **Leymus condensatus** ‘Canyon Prince’ / Canyon Prince Wild Rye  
**Muhlenbergia capillaris** ‘White Cloud’ / White Awn Muhly  
**Muhlenbergia rigens** / Deer Grass |
| Non-flowering Shrubs (or inconspicuous flowering) | • Select one to two species per median planting. Vary species throughout the region.  
• Plant beneath evergreen trees.  
• Plant around signage within median; select a species with a mature height that will not be a visual obstruction.  
• Select a species with medium to bright green foliage. | **Baccharis pilularis** ‘Twin Peaks’ or ‘Pigeon Point’ / Dwarf Coyote Brush  
**Iva hayesiana** / San Diego Marsh-elder  
**Ribes viburnifolium** / Evergreen Currant  
**Symphoricarpos albus var. laevigatus** / Common Snowberry (deciduous) |
<table>
<thead>
<tr>
<th>PLANT CATEGORY</th>
<th>SELECTION GUIDELINES</th>
<th>SUGGESTED SPECIES</th>
</tr>
</thead>
</table>
| Boulders             | • Select material and color that complement the natural environment of Thousand Oaks.  
• Use as accents at median ends.                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                           |
| Trees                |                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                           |
| Curbside Canopy Trees| • Where palm trees need to be removed, replace with one species of deciduous flowering canopy tree per median or stretch/block of street.  
• Select flowering species with white or bright, bold bloom color.  
• Select non-flowering (or inconspicuous flowers), broadleaf evergreen species, per the existing tree planting scheme, where appropriate.                                                                                                                                                     | Flowering  
  *Brachychiton acerifolius* / Australian Flame Tree  
  *Chionanthus retusus* / Chinese Fringe Tree  
  *Koelreuteria paniculata* / Goldenrain Tree  
  *Parkinsonia floridum* / Palo Verde  
  *Pyrus calleryana* / Callery Pear  
Evergreen  
  *Geijera parviflora* / Australian Willow  
  *Quercus* species / Oak  
  *Tristania conferta* / Brisbane Box  
  *Tristania laurina* / Watergum                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                           |
| Median Canopy Trees  | • See above listed guidelines for Curbside Canopy Trees.                                                                                                                                                                                                                                                                                              | See also above listed species for Curbside Canopy Trees                                                                                                                                                                                                             |
| Groundcover Material |                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                           |
| Mulch                | • Use as groundcover material throughout the median planting.                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                           |
Thousand Oaks East Regional Character: Flowering Highlights
Suggested Species - Understory Plants

Coral Fountain / Firecracker Plant
Bush Poppy
Canyon Prince Wild Rye
Pride of Barbados
California Fuchsia
Deer Grass
Fairy Duster
Sage
Evergreen Currant
Monkeyflower
Flowering Quince
Dwarf Coyote Brush
Thousand Oaks East Regional Character: Flowering Highlights
Suggested Species - Trees

- Coast Live Oak
- Australian Willow
- Watergum
- Goldenrain Tree
- Palo Verde
- Texas Wild Olive (Small Accent)
Thousand Oaks East Demonstration Project Concept

The Thousand Oaks East demonstration project site is the median in Sunset Hills Boulevard, between California State Route 23 and Erbes Road (figure 2.30).

Introducing bold and bright flowering trees and shrubs will provide colorful contrast within the “canyon” setting of this site. As palm trees need to be removed, replace them with flowering canopy trees. Live oaks should replace existing oak trees that need to be removed, unless site conditions that cannot be corrected are leading to the poor health of this species at this location. Plant brightly flowering small accent trees at each end of the median, and provide large boldly flowering shrubs as accents throughout the median. Plant low shrubs and ornamental grasses, which are compatible with the canopy trees, as background planting.
3.f.5 North Ranch / Westlake Regional Character Design Guidelines

1. The North Ranch / Westlake region planting concept is “California Meadow”. The plantings should evoke a native grassland accented by California native flowering shrubs and perennials.

2. Tree and understory plant species should complement the surrounding natural landscape (chaparral plant community) in color, form, and texture.

3. Avoid non-native species that may hybridize with native species or naturalize in the surrounding open space.

4. Maintain open views to adjacent open space / natural hillsides.

5. Within medians, plant large canopy trees in groups, with wide spacing between groups.

6. Where views exist along parkways, plant large canopy trees in clusters with wide spacing between clusters to provide views.

7. Use a mix of deciduous and broadleaf evergreen trees, preferably native, for curbside and median plantings.

8. Use flowering canopy trees as focal highlights in the medians.

9. Avoid planting turf grass; remove existing turf grass plantings and replace with more water- and maintenance-efficient plantings.

10. Plant drought-tolerant grass or low bunchgrasses for groundcover.

11. Prioritize the use of riverstones where non-vegetative groundcover material is needed.

12. For understory plantings, prioritize low-growing bunchgrasses and native wildflowers throughout the planting area, with groupings of ornamental grasses, flowering shrubs, and/or strap-leafed plantings as accents. Plant predominately native species.

13. Intersperse inconspicuous understory planting species with special habitat/wildlife value amongst showier, dominant species.

14. For tree planting sites at residential properties, the Public Works Director or designee will present an assortment of tree species to the property owner for their selection.

15. The Public Works Director or designee should develop the list of species for selection by the property owner based on the most recent tree inventory (current ratio and distribution of species) and the regional recommendations in the street tree palette.

16. It is preferred to have a consistent type of tree per block, although the species of that type may vary.

17. Refer to the selection guidelines and suggested species chart for additional direction.
## North Ranch / Westlake Regional Character: California Meadow

### Design Guidelines

<table>
<thead>
<tr>
<th>PLANT CATEGORY</th>
<th>SELECTION GUIDELINES</th>
<th>SUGGESTED SPECIES</th>
</tr>
</thead>
</table>
| Understory Plants         | • Create groupings of flowering shrubs and perennials as accents at median ends.  
   Flowering Shrubs and  
   Herbaceous Plants       | • Repeat groupings where breaks in canopy trees occur, or use groupings of ornamental  
                            grasses as an alternative.  
                            • Select species that have low to medium mature height.  
                            • Use a consistent design for each grouping (or type of grouping) in a  
                              median planting.  
                            Asclepias species / Milkweed  
                            Cistus species / Rockrose  
                            Eriogonum species / Buckwheat  
                            Gaillardia grandiflora / Blanket Flower  
                            Penstemon species / Beardtongue  
                            Mimulus species / Monkeyflower  
                            Salvia species / Sage |
| Ornamental Grasses        | • As an alternative to flowering shrubs and perennials, create groupings of ornamental  
                            grasses where breaks in canopy trees occur.  
                            Muhlenbergia species / Deer Grass, Muhly Grass |
| Strap-leafed Plants       | • Integrate strap-leafed plants as desired in the accent plantings.  
                            • Select species that complement native plant communities.  
                            Iris douglasiana / Douglas Iris  
                            Yucca whipplei / Our Lord's Candle |
## North Ranch / Westlake Regional Character: California Meadow

### Design Guidelines

#### Plant Category

<table>
<thead>
<tr>
<th>PLANT CATEGORY</th>
<th>SELECTION GUIDELINES</th>
<th>SUGGESTED SPECIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trees</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Curbside Canopy Trees| • Plant broadleaf evergreen or deciduous trees.  
• Prioritize native oaks that are appropriate for the available planting area.  
• Prioritize fire resistant species where right-of-way is adjacent to open space.  
• Plant trees in clusters or groups of the same species.                                                                 | Evergreen  
  Quercus species / Oak  
Deciduous  
  Pistacia chinensis / Chinese Pistache  
  Quercus species / Oak  
  Zelkova serrata / Japanese Zelkova                                                                                               |
| Median Canopy Trees  | • Select up to four species per median planting.  
• Select broadleaf evergreen and deciduous species as the dominant canopy trees.  
• Select flowering tree species for accents.                                                                                      | Deciduous  
  Fraxinus oxycarpa ‘Raywood’ / Raywood Ash  
Flowering  
  Chitalpa x tashkentensis / Chitalpa  
  Jacaranda mimosifolia / Jacaranda  
See also above listed species for Curbside Canopy Trees                                                                                 |
| Groundcover Material |                                                                                                                                                                                                                        |                                                                                                             |
| Ornamental Grass     | • Use drought-tolerant bunchgrasses as the primary planting material throughout the median planting.  
• Provide uniform spacing/coverage.                                                                                                         | Bouteloua gracilis / Blue Grama  
  Carex pansa / Dune Sedge  
  Festuca californica / California Fescue  
  Melica californica / California Melic                                                                                              |
| Mulch                | • Use organic mulch as appropriate with bunchgrass planting and maintenance.                                                                                                                                            |                                                                                                             |
| Riverstones          | • Use riverstones as an inorganic groundcover material where the groundcover will be most visible.  
• Select stones that are consistent in color and texture with the surrounding natural context.  
• Color and texture should be consistent throughout the North Ranch / Westlake region.                                             |                                                                                                             |
North Ranch / Westlake Regional Character: California Meadow
Suggested Species - Understory Plants

- California Poppy
- Buckwheat
- Mexican Sage
- Monkeyflower
- Penstemon
- Milkweed
- Blanket Flower
- Pink Muhly
- Our Lord's Candle
- Douglas Iris
- California Fescue
- California Melic

Image Credit: Intermountain Nursery
North Ranch / Westlake Regional Character: California Meadow
Suggested Species - Trees

Coast Live Oak
Black Oak
Japanese Zelkova
Raywood Ash
Jacaranda
Chitalpa (Small Accent)

Image Credit: UFEI Selectree
North Ranch / Westlake Demonstration Project Concept

The North Ranch / Westlake demonstration project site is the Lindero Canyon Road median between Bowfield and Rockfield (figure 2.32).

Over time, as trees require replacement, the tree species selection should be simplified with a focus on trees that are native to and complementary with the oak woodland and chaparral plant communities. Turf should be removed and replaced with native or California friendly bunchgrasses. Groupings of flowering shrubs and perennials, as well as ornamental grasses, should be placed to provide accents in wide openings between trees. If conditions allow, regrade the median to provide stormwater detention.
3.9 Hidden Design Opportunities
Street-tree planting is only one way to help reforest a city. Besides other predictable places to plant trees, such as parks and schools, there are many other innovative ways to extend the community forest.

Vacant lots or other types of undeveloped and unused land can be turned from community eyesores into pocket parks, mini-forests, or food-producing fruit and nut groves.

Hillsides, often “leap-frogged” over by development, can be restored to their natural landscape pattern of oak woodland on the north and east facing slopes.

Stream corridors are another neglected resource for extending the forest, restoring habitat for riparian species (flora and fauna), and creating a network of walking paths throughout the community. Where they haven’t been culverted, they can become linear parks linking neighborhoods; native riparian species, such as willow, bay, and big leaf maple, attract wildlife to these mostly undervalued wild places.

Schools in particular present an ideal place to expand the community forest. The educational and play value of groves of oaks and other species should be considered in the design of school yards, which traditionally are barren places. Imagine a high school that boasts of having a productive grove of fruit trees that acts as a hands-on science lab as well as providing money for other school activities from the sale of its produce. Teaching tomorrow’s citizens about the community forest makes the job of expanding and maintaining this resource much easier in the long run.

Figure 2.33 Stream corridors
Corporate and institutional holdings are another situation where screening and a good public image can be accomplished with groves of trees, sometimes at substantially reduced costs in maintenance compared to traditional lawn. Portions of some large corporate campuses could consider incorporating habitat areas, in which trees figure prominently, for wildlife uses. (See Volume 3 for more information.)

Parking lots are generally unsightly, cover acres of land and contribute substantially to the heat island effect. This phenomenon, universal to urban areas throughout the world, is caused by the ability of paving materials to absorb more heat more quickly than natural surfaces. The result is an increase in temperature compared to the surrounding countryside, usually higher by 10 degrees or more. Increased ambient air temperature consequently leads to higher energy costs for cooling in the surrounding buildings.

Planting trees to provide coverage of parking lots reverses the heat island effect and reduces heat damage to cars and their contents (cars exposed to summer sun can reach temperatures in excess of 200 degrees.)

The integration of planting areas in parking lots presents the additional opportunity to include low impact development stormwater best management practices (LID BMPs), such as filtration planters and infiltration basins. Directing run-off from the large surface area of parking lots into LID BMPs can reduce stormwater pollutants and the volume of run-off.
4. Species Selection Criteria

This section describes the considerations that impact the suitability of a particular species for the conditions of the planting site. The adaptability of various tree species to environmental conditions is indicated in the Planting Palette section of the Plan. By using these two sections together, city staff, local business people, developers and individual residents can select the trees best adapted to their particular surroundings.

The tree and plant palettes included later in this volume are composed of species and cultivars that are generally acceptable to plant in the public right-of-way within Thousand Oaks. When deciding what species of plant or tree is most appropriate for a particular site design, the palettes are a primary resource. However, the following Species Selection Criteria, combined with the Planting Design Guidelines in the previous section, will assist in determining which species in the palette are the best options for the site conditions and design concept.

In the event that a suitable plant or tree species from the palettes cannot be acquired, these criteria should also be followed to determine the most appropriate substitute species of tree or plant.

The Species Selection Criteria are organized into three categories: Enhancing Character & Aesthetics, Increasing Forest Resiliency, and Supporting Maintenance & Safety.

Enhancing Character & Aesthetics

1. Maintain Thousand Oaks’ identity with native oak trees. Where space and conditions allow, major streets should feature native oaks as a major thematic tree. Refer to the Revised Guidelines and Standards for Landscape Planting and Irrigation Plans (Res. 2007-116).

2. Select species with form and color that are compatible with the existing or intended design concept. Compatible forms and colors help to maintain a sense of order within diversity.

Increasing Forest Resiliency

3. Follow the 10-20-30 rule to maintain a diverse and healthy community forest. Consult the most recent street tree inventory to determine the prevalence of the species within the region and citywide. Do not plant a tree species if it is nearing or at 10% or more of the community forest population. Also ensure that the genus is not 20% or more of the total population, and that the family is not 30% or more of the total population. Exceptions apply to species that are native to the area, which may be planted up to 20% citywide.

4. Introduce new species or cultivars at a small scale for their initial planting. If successful, they may be used in wider applications.

5. Use species which are hardy in the temperature extremes of local climate zones. All of the species listed in the tree and plant palettes are suitable for Thousand Oaks’ climate in general, however, consideration of a site’s microclimate should be made on a case-by-case basis (see next criterion), as should long-term impacts of climate change.

6. Fine-tune plant selection to the microclimate of the planting site.

7. Consider planting the sidewalks and medians of major streets with different species.

8. Match species to the site’s soil type and composition.

9. Select trees and plants adapted to the soil’s drainage characteristics.

10. Select species adapted to the soil’s chemistry.

11. Where soil penetration is limited, select trees that can survive in shallow soils.

Enhancing Character & Aesthetics

1. Maintain Thousand Oaks’ identity with native oak trees, where space and conditions allow.

2. Select species with form and color that are compatible with the existing or intended design concept.

Increasing Forest Resiliency

3. Follow the 10-20-30 rule to maintain a diverse and healthy community forest.

4. Introduce new species or cultivars at a small scale for their initial planting.

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9. Select trees and plants adapted to the soil’s drainage characteristics.

10. Select species adapted to the soil’s chemistry.

11. Where soil penetration is limited, select trees that can survive in shallow soils.
Species Selection Criteria

Supporting Maintenance & Safety
12. Consider the vertical clearance to the lowest limbs that will be required.
13. Consider the planting site’s relationship to wildfire-prone areas.
14. Select species that will provide the intended performance and aesthetic with the lowest water usage.
15. Use strong-branched and wind-tolerant trees.
16. Size trees to the space they will grow into.
17. If there are overhead utilities at the planting site, select tree species that will minimize conflict.
18. Match the tree’s root behavior to the planting space.

6. Fine-tune plant selection to the microclimate of the planting site. The main influences on microclimate are topography (aspect and slope), structures, pavement and existing vegetation. Refer to Volume 1 for more information.
7. Consider planting the sidewalks and medians of major streets with different species. The different planting conditions in these two situations often suggest different species, either of which would provide a planted presence on the street should the other fail. (See Figure 2.35.)
8. Match species to the site’s soil type and composition. The soils map and legend in Volume 1 gives a general idea of soil conditions in Thousand Oaks, although they do not accurately reflect post-development levels of compaction or otherwise altered soils. The map can be used as a general reference, but the planting site’s soil conditions should also be assessed.
9. Select trees and plants adapted to the soil’s drainage characteristics. Too little soil moisture can desiccate trees and plants, but too much water can suffocate roots for lack of air or increase susceptibility to pests or diseases. Consider water retention, water table, and slope.

Figure 2.35 Species diversification
10. Select species adapted to the soil’s chemistry. While the planting palette generally consists of trees adapted to poor soil conditions, the following conditions may require special attention: nutrient levels, soil pH, salinity, and iron.

11. Where soil penetration is limited, select trees that can survive in shallow soils. Consider soil modifications if necessary.

Supporting Maintenance & Safety

12. Consider the vertical clearance to the lowest limbs that will be required. Use species which can be pruned as they mature above the height of trucks and service vehicles and commercial signs. A vertical clearance of 14 feet above street level and 9 feet above sidewalks will generally not interrupt deliveries or visibility of storefronts.

13. Consider the planting site’s relationship to wildfire-prone areas. Fire resistant species are preferable in wildland-urban interface areas. Refer to Ventura County Fire Department’s Fire Hazard Reduction Program for the latest information on plant species and fire safety.

14. Select species that will provide the intended performance and aesthetic with the lowest water usage. Irrigation water budgets must meet current regulations. If plants or trees with higher water needs must be planted, offset their needs with other species that require much less water. Consider that the water allowances of today could be restricted in the future; and the typical rainfall averages of today may be lower in the future.

To ensure long term health and survival, it is recommended to plant species that require less water than the current water allowances.

15. Use strong-branched and wind-tolerant trees, in particular near structures, streets, and activity areas. Trees with strong branching habits are the best insurance against breakage from wind. Species which are genetically predisposed to breakage usually cannot be pruned frequently enough to prevent all breakage.

16. Size trees to the space they will grow into. Species should be chosen that will comfortably fit the space available to them, both above and below ground, when full grown. This growing space is usually defined by surrounding buildings, streets, sidewalks, and other trees.

Most standards for the height and spread of trees are for optimum growing conditions. Since most street-tree planting conditions are not optimum, most street trees will not grow to their full range. A tree planted in a standard sidewalk tree well will not grow as large as the same species planted in a 15-foot-wide median. Therefore, when selecting tree species, evaluate the species’ expected growth in relation to the constraints of the site.

17. If there are overhead utilities at the planting site, select tree species that will minimize conflict. Select a species with a thin upper canopy so that pruning it will not destroy the form of the tree. Another alternative is to plant small, closely spaced trees that will not reach the height of the wires.

18. Match the tree’s root behavior to the planting space. The planting palette lists the minimum size of space that each species should be planted in to reduce the threat of roots uplifting adjacent pavement.

Soil Chemistry & Species Selection

**Nutrients.** Unless corrected, serious deficiencies of the elements necessary for plant life will limit species to those able to withstand the particular deficiency.

**Soil pH.** The soils in Thousand Oaks tend to be alkaline, a condition typical of low-rainfall areas. The visible presence of calcium carbonate indicates especially high alkalinity in many areas. In such soils, roots will not be able to absorb the broad range of balanced minerals needed for normal growth and will develop chlorosis, which limits growth and produces unhealthy foliage. Low pH conditions (acidic soils) are unlikely in the city, so species preferring these conditions, such as rhododendrons, azaleas and redwoods, should be avoided.

**Salinity.** High salt content is another soil problem characteristic of dry areas, or areas using recycled water for irrigation. Concentrate of salts near the ground’s surface, stunts plant growth by desiccating the root system. Brown or withered leaves sometimes indicate salt burn.

**Iron.** Chlorosis caused by iron deficiency, indicated by a yellowing of leaves between the veins, is commonly observed in Thousand Oaks. Species especially subject to chlorosis should be avoided where iron is low.
5. Street Tree Palette
This section provides a palette, or range of choices, of trees for planting in the public rights-of-way in Thousand Oaks. The palette includes recommended tree species, with design and horticultural factors for each one.

The recommended trees in the street tree palette are either proven performers in the city or new species and cultivars of trees which are suited to the conditions found in the area. These new species replace some old recommendations which have proven to have serious problems and therefore cannot be recommended. There may also be other tree types which are growing in the city but are not on the recommended list. These trees were not included in the palette because they are not good choices for the street’s restrictive growing environment, or have insect or pest problems. Also, all the trees in the palette will do well if their environmental requirements are met, but they will not necessarily do well in every location.

The palette is intended to serve as a tool to facilitate planting design, and should not be considered an all-inclusive listing of the only tree species and cultivars that are appropriate to plant in the public rights-of-way in Thousand Oaks. Other species and cultivars may be used if they meet the intent of the Planting Design Guidelines and Species Selection Criteria, and are approved by the Public Works Director or designee.

Using the Street Tree Palette
The tree palette is used to narrow down choices. It should be used in conjunction with the inventory database and recommendations in previous sections of this Plan to make individual site-specific tree selections. Photographs, sketches and additional horticultural, functional, or aesthetic descriptions found in supplementary materials (such as Sunset Western Garden Book or nursery websites), as well as current availability from nurseries, can also help in this decision making.

The trees are listed alphabetically by botanic name, and the most widely used common name is also included. Following is a description of the information provided in the tree palette.

Planting Area Width: Since a primary factor which limits the growth of a tree is the size of the available planting area, the palette identifies for each species the following categories based upon the minimum distance from paving required for healthy growth without breaking up sidewalks and paving. Note that smaller areas may be acceptable if the planting site utilizes structural soils or cells. Consult with the Public Works Director or designee in these instances.

Restrictive Planting Sites: Existing spaces less than 4 feet wide which cannot be enlarged. Root barriers required.

Small Planting Sites: 4 to 6 feet wide tree wells and parkways. Root barriers recommended at the edge of the planting area.

Medium Planting Sites: Parkways, tree wells, medians, and other openings between 6 and 10 feet wide. Root barriers recommended at the edge of the planting area.

Large Planting Sites: Planting spaces that are greater than 10 feet wide. Root barriers are recommended where the pavement edge is 5 feet or nearer to trees.

Type: Evergreen trees hold their leaves all year while deciduous trees lose their leaves each year, usually in the fall or winter. For the purposes of the Master Plan, evergreen trees are divided into broadleaf evergreens, a tree with leaves, or a conifer, a tree with seed cones and evergreen needles. Deciduous trees are identified as trees which drop leaves all at once.

Height: Three heights are used, based on expected growth for trees in restrictive street tree environments. Sizes are smaller than in references where sizes reflect optimum growing conditions.

Small: Under 20 feet tall

Medium: 20 to 40 feet tall

Tall: More than 40 feet tall

Spread: Horizontal width of the tree canopy is identified as:

Narrow: Less than 20 feet wide

Average: 20 to 40 feet wide

Broad: More than 40 feet wide

Spacing: The typical distance trees should be planted
Design Guidelines for Street Plantings, provided earlier in this volume.

Notes: On the pages following the palette chart, additional details for the species, which may be helpful during the species selection process, are provided.

CA Native: Indicates whether a species is a California native.

Habitat Value: Notes if the species offers special habitat value. Refer to the tree species’ “notes” section for details.

Special Use Notes: This category identifies particular conditions in which the species may be particularly well-suited to be planted. These include: bioswale plantings, planting under utilities, and planting in fire-prone areas.

Cautions: Characteristics that may make the tree a poor choice under particular circumstances, such as produces debris (abundant seeds or fruit fall from the tree periodically) or susceptibility to a particular pest or disease; refer to the species “notes” section for details. If a species should not be used in parkway strips or tree wells, it is indicated here.

Tolerances: Horticultural conditions which a tree tolerate, such as drought, alkaline soil, wind, frost, and pests/diseases.

ISA Species Classification: Refers to a tree’s relative rating compared to other species in the area, based on a variety of factors, including longevity, structural integrity, pest and disease resistance, and pruning needs as determined by the International Society of Arboriculturists. Ratings are from “1” to “4”; “1” is the most favorable rating.

Recommended Region: Identifies the region(s) of the city where the species satisfies the design guidelines as described in the Regional Character

from each other to achieve canopy coverage without overcrowding.

Narrow trees: 15 to 20 feet apart
Average trees: 20 to 30 feet apart
Broad trees: 30 to 40 feet apart

Growth rate:

Slow: Will take many years to develop its mature form.
Moderate: Will begin to acquire mature characteristics within 20 years.
Fast: Will begin to develop a tree canopy after the first five years, if planted from a 15 gallon can or larger size.

Life span: Useful life expectancy under the stressful conditions of the street.

Form: The shape of the crown of the tree.

Bloom: Indicates if the tree provides a showy display of blooms, and if so, the color and season of flowering.

Ecology:

Water: Provides the WUCOLS water use rating, or “plant factor” (PF), specific to Thousand Oaks, for each species; categories are “VL” very low, “L” low, “M” moderate, and “H” high.
<table>
<thead>
<tr>
<th>FAMILY</th>
<th>TYPE</th>
<th>PLANTING AREA WIDTH</th>
<th>ECOLOGY</th>
<th>HEIGHT</th>
<th>SPREAD</th>
<th>GROWTH RATE</th>
<th>LIFE SPAN</th>
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**THOUSAND OAKS FORESTRY MASTER PLAN**

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| Geijera parviflora       | Australian Willow    | Rutaceae            | x       | x      | x      | l           | x         | 25          | x        | x           | x                  | x                    | x                    |

| Ginkgo biloba and cultivars | Maidenhair Tree      | Ginkgoaceae         | x       | x      | x      | x           | x         | 25          | x        | x           | x                  | x                    | x                    |

| Gleditsia triacanthos and cultivars | Honey Locust        | Fabaceae            | x       | x      | x      | x           | x         | 25          | x        | x           | x                  | x                    | x                    |

| Hymenocporus flavum      | Sweetshade Tree      | Pittosporaceae      | x       | x      | x      | x           | x         | 20          | x        | x           | x                  | x                    | x                    |

| Jacaranda mimosifolias and cultivars | Jacaranda        | Bignoniaceae        | x       | x      | x      | x           | x         | 25          | x        | x           | x                  | x                    | x                    |

| Koelreuteria bipinata    | Chinese Flame Tree   | Sapindaceae         | x       | x      | x      | x           | x         | 25          | x        | x           | x                  | x                    | x                    |

| Koelreuteria elegans    | Taiwanese Rain tree  | Sapindaceae         | x       | x      | x      | x           | x         | 25          | x        | x           | x                  | x                    | x                    |

| Koelreuteria paniculata | Goldentain Tree       | Sapindaceae         | x       | x      | l      | x           | x         | 25          | x        | x           | x                  | x                    | x                    |

| Lagerstroemia indica and cultivars | Grape Myrtle        | Lythraceae          | x       | x      | x      | x           | x         | 20          | x        | x           | x                  | x                    | x                    |

| Laurus nobilis          | Sweet Bay            | Lauraceae           | x       | x      | x      | x           | x         | 20          | x        | x           | x                  | x                    | x                    |

| Ligustrum confusum      | Privet                | Oleaceae            | x       | x      | x      | x           | x         | 20          | x        | x           | x                  | x                    | x                    |

| Liquidambar styraciflua and cultivars | American Sweet Gum   | Hamamelidaceae      | x       | x      | x      | x           | x         | 25          | x        | x           | x                  | x                    | x                    |

| Lithodendron tulipifera | Tulip Tree            | Magnoliaceae        | x       | x      | m      | x           | x         | 35          | x        | x           | x                  | x                    | x                    |

| Lophostemon confertus   | Tristania confertia  | Myrtaceae           | x       | x      | x      | m           | x         | 25          | x        | x           | x                  | x                    | x                    |

| Magnolia grandiflora and cultivars | Southern Magnolia    | Magnoliaceae        | x       | x      | m      | x           | x         | 35          | x        | x           | x                  | x                    | x                    |

| Melaleuca aranitifolia  | Flaxleaf Paperbark   | Myrtaceae           | x       | x      | x      | l           | x         | 25          | x        | x           | x                  | x                    | x                    |

| Thousan Oaks Forestry Master Plan |

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</tr>
<tr>
<td>Zelkova serrata</td>
<td>Japanese Zelkova</td>
<td>Ulmaceae</td>
<td>X</td>
<td>X</td>
<td>L</td>
<td>X</td>
<td>35</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td>N/A</td>
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</tr>
</tbody>
</table>

**STREET TREE PALETTE**

**VOLUME 2: DESIGN & MANAGEMENT PLAN** 2-63
<table>
<thead>
<tr>
<th>STREET TREE PALETTE</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acer macrophyllum Bigleaf Maple</td>
<td>prefers monthly watering; adapts to many soil types, but prefers good drainage; attracts birds, bees and butterflies; resistant to oak root fungus; susceptible to beetle borers, california flathead borer, caterpillars, sudden oak death, root rot, oak root rot, annousus root disease, white mottled root, leaf spot and Verticillium; high root damage potential</td>
</tr>
<tr>
<td>Acer paxii Evergreen Maple</td>
<td>susceptible to aphids, root rot, verticillium; low root damage potential</td>
</tr>
<tr>
<td>Acer campestre</td>
<td>weak branches; moderate root damage potential</td>
</tr>
<tr>
<td>Agathis robusta Queensland Kauri Pine</td>
<td>drought sensitive, water loving; high root damage potential</td>
</tr>
<tr>
<td>Agonis flexuosa and cultivars Peppermint Tree</td>
<td>attracts birds; needs frequent pruning to relieve weight; susceptible to phytophthora and root rot; weeps to the ground; moderate root damage potential</td>
</tr>
<tr>
<td>Albizia julibrissin and cultivars Silk Tree</td>
<td>prefers occasional deep watering; attracts birds; susceptible to caterpillars, fusarium and root rot, moderate root damage potential</td>
</tr>
<tr>
<td>Arbutus unedo and cultivars Strawberry Tree</td>
<td>attracts birds; wildlife use fruit; resistant to oak root fungus; susceptible to scale and thrip, anthracnose, phytophthora, root rot and rust; low maintenance needs; low root damage potential; strong branch strength</td>
</tr>
<tr>
<td>Bauhinia variegata (purpurea) and cultivars Purple Orchid Tree</td>
<td>requires good drainage; attracts birds; susceptible aphids; low root damage potential</td>
</tr>
<tr>
<td>Bauhinia x blakeana Hong Kong Orchid Tree</td>
<td>attracts birds; does not produce fruit; susceptible to aphids; low root damage potential</td>
</tr>
<tr>
<td>Bauhinia forficata Brazilian Orchid Tree</td>
<td>attracts birds; has thorns; susceptible to aphids; low root damage potential</td>
</tr>
<tr>
<td>Bischofia javanica Javanese Bishopwood</td>
<td>high potential root damage; susceptible to scale, root rot and sooty mold; high root damage potential</td>
</tr>
<tr>
<td>Brachychiton acerifolius Australian Flame Tree</td>
<td>produces large seedpods / fruits; susceptible to root rot; moderate root damage potential</td>
</tr>
<tr>
<td>Brachychiton populneus Kurrajong Bottle Tree</td>
<td>produces large seedpods / fruits; resistant to oak root fungus; susceptible to root rot; moderate root damage potential</td>
</tr>
<tr>
<td>Callistemon citrinus Lemon Bottlebrush</td>
<td>low care - regular pruning needed less frequently with age; attracts birds and bees; susceptible to chlorosis; low root damage potential</td>
</tr>
<tr>
<td>Callistemon viminalis and cultivars Weeping Bottlebrush</td>
<td>best with moderate watering; does not tolerate strong winds; attracts birds and bees; susceptible to oak root rot &amp; root rot; low root damage potential</td>
</tr>
<tr>
<td>Calodendrum capense Cape Chestnut</td>
<td>water in summer until established; self-seeding; low root damage potential</td>
</tr>
<tr>
<td>Cassia excelsa / fistula Crown of Gold Tree, Cassia Carnival</td>
<td>drops dried fruit pods; wildlife use fruit; susceptible to caterpillars, root rot, mildew and leaf spot; low root damage potential</td>
</tr>
<tr>
<td>Cassia leptophylla Gold Medallion Tree</td>
<td>prune to shape; tendency to weep; drops large seedpods; low root damage potential</td>
</tr>
<tr>
<td>STREET TREE PALETTE</td>
<td>NOTES</td>
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<tr>
<td>-----------------------------------------</td>
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</tr>
<tr>
<td>Casuarina cunninghamiana</td>
<td>little pruning required; attracts birds; susceptible to phytophthora and root rot; low root damage potential</td>
</tr>
<tr>
<td>River She-Oak</td>
<td></td>
</tr>
<tr>
<td>Cedrela fissilis</td>
<td>moderate root damage potential</td>
</tr>
<tr>
<td>Argentine Cedar</td>
<td></td>
</tr>
<tr>
<td>Cedrus deodara and cultivars</td>
<td>attracts squirrels; needs space for roots; needles can kill undergrowth; resistant to verticillium, susceptible to beetle borers, phytophthora, root rot and sooty mold; moderate root damage potential</td>
</tr>
<tr>
<td>Deodar Cedar</td>
<td></td>
</tr>
<tr>
<td>Cercidium floridum</td>
<td>intolerant of regular watering; has thorns; attracts birds, bees and butterflies; low root damage potential</td>
</tr>
<tr>
<td>Palo Verde</td>
<td></td>
</tr>
<tr>
<td>Cercis canadensis and cultivars</td>
<td>best w/some summer irrigation; attracts birds; susceptible to caterpillars and scale, anthracnose, crown rot, oak root rot, phytophthora, root rot and verticillium; low root damage potential</td>
</tr>
<tr>
<td>Eastern Redbud</td>
<td></td>
</tr>
<tr>
<td>Cercia occidentalis</td>
<td>best to deep water while establishing; attracts birds and butterflies; resistant to oak root fungus; susceptible to caterpillars and scale, crown rot, phytophthora and root rot; low root damage potential</td>
</tr>
<tr>
<td>Western Redbud</td>
<td></td>
</tr>
<tr>
<td>Chionanthus retusus</td>
<td>best with consistent summer watering; attracts birds; needs to be trained as tree; low root damage potential</td>
</tr>
<tr>
<td>Chinese Fringe Tree</td>
<td></td>
</tr>
<tr>
<td>Chitalpa x tashkentensis and cultivars</td>
<td>best with regular, deep watering; wildlife use fruit; regular pruning/staking while establishing; susceptible to aphids, root rot and verticillium; low root damage potential</td>
</tr>
<tr>
<td>Chitalpa</td>
<td></td>
</tr>
<tr>
<td>Chorisia speciosa</td>
<td>plant in fast-draining soil; use in center median only; moderate root damage potential</td>
</tr>
<tr>
<td>Floss Silk Tree</td>
<td></td>
</tr>
<tr>
<td>Chorisia retusus</td>
<td></td>
</tr>
<tr>
<td>Cryptocarya rubra</td>
<td>moderate root damage potential</td>
</tr>
<tr>
<td>Cryptocarya</td>
<td></td>
</tr>
<tr>
<td>Cupaniopsis anacardioides</td>
<td>drops fruit but does not stain; resistant to oak root rot fungus; susceptible to root rot and verticillium; low root damage potential</td>
</tr>
<tr>
<td>Carrol Wood</td>
<td></td>
</tr>
<tr>
<td>Eriobotrya deflexa</td>
<td>attracts birds and bees; susceptible to fire blight; low root damage potential</td>
</tr>
<tr>
<td>Bronze Loquat</td>
<td></td>
</tr>
<tr>
<td>Eucalyptus citriodora</td>
<td>attracts birds and bees; resistant to Texas root rot, verticillium; susceptible to beetle borers and thrip; oak root rot, phytophthora and root rot; moderate root damage potential</td>
</tr>
<tr>
<td>Lemon Gum</td>
<td></td>
</tr>
<tr>
<td>Eucalyptus delgupta</td>
<td>resistant to Texas root rot and verticillium; susceptible to beetle borers, oak root rot and root rot; moderate root damage potential</td>
</tr>
<tr>
<td>Rainbow Eucalyptus</td>
<td></td>
</tr>
<tr>
<td>Eucalyptus flocculosa</td>
<td>attracts birds and bees; resistant to Texas root rot and verticillium; susceptible to beetle borers and thrip, oak root rot, phytophthora and root rot; moderate root damage potential</td>
</tr>
<tr>
<td>Red-Flowering Gum</td>
<td></td>
</tr>
<tr>
<td>Eucalyptus leucoxylon</td>
<td>attracts birds and bees; resistant to Texas root rot and verticillium; susceptible to beetle borers, oak root rot, phytophthora and root rot; moderate root damage potential</td>
</tr>
<tr>
<td>White Ironbark</td>
<td></td>
</tr>
<tr>
<td>Eucalyptus sideroxylon 'Rosea'</td>
<td>attracts birds and bees; resistant to Texas root rot and verticillium; susceptible to beetle borers and thrip, chlorosis, oak root rot, phytophthora and root rot; high root damage potential</td>
</tr>
<tr>
<td>Pink Ironbark</td>
<td></td>
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<tr>
<td>STREET TREE PALETTE</td>
<td>NOTES</td>
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<td>-------------------------------------</td>
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</tr>
<tr>
<td>Eucalyptus torquata</td>
<td>attracts birds; resistant to Texas root rot and verticillium; susceptible to beetle borers, oak root rot, rhizoctonia and root rot; low root damage potential</td>
</tr>
<tr>
<td>Firmiana simplex</td>
<td></td>
</tr>
<tr>
<td>Chinese Parasol Tree</td>
<td>susceptible to scale; moderate root damage potential</td>
</tr>
<tr>
<td>Fraxinus oxycarpa 'Raywood'</td>
<td></td>
</tr>
<tr>
<td>Raywood Ash</td>
<td>resistant to oak root fungus; susceptible to beetle borers, scale, white fly, root rot, sooty mold and verticillium; moderate root damage potential</td>
</tr>
<tr>
<td>Geijera parviflora</td>
<td></td>
</tr>
<tr>
<td>Australian Willow</td>
<td>attracts bees; resistant to oak root fungus; wildlife use fruit; low root damage potential</td>
</tr>
<tr>
<td>Ginkgo biloba and cultivars</td>
<td></td>
</tr>
<tr>
<td>Maidenhair Tree</td>
<td>male grafted or male cutting stock only; attracts squirrels; resistant to oak root fungus; susceptible to anthracnose; moderate root damage potential</td>
</tr>
<tr>
<td>Gleditsia triacanthos and cultivars</td>
<td></td>
</tr>
<tr>
<td>Honey Locust</td>
<td>attracts birds and bees; leaf litter can be an issue on pavement, use thornless cultivars only; resistant to verticillium; susceptible to caterpillars, insect galls, pod gall, midge, spider mites, mistletoe, phytophthora and root rot; moderate root damage potential</td>
</tr>
<tr>
<td>Hymenosporum flavum</td>
<td></td>
</tr>
<tr>
<td>Sweetshade Tree</td>
<td>attracts birds and bees; requires good drainage; low root damage potential</td>
</tr>
<tr>
<td>Jacaranda micnifolia and cultivars</td>
<td></td>
</tr>
<tr>
<td>Jacaranda</td>
<td>needs little pruning once established; wildlife use fruit; resistant to oak root fungus, susceptible to aphids, phytophthora and root rot; thrives in heat; low root damage potential</td>
</tr>
<tr>
<td>Koelreuteria bipinnata</td>
<td>best with moderate watering; prune to develop high branching; susceptible to beetle borers and scale; low root damage potential</td>
</tr>
<tr>
<td>Koelreuteria elegans</td>
<td></td>
</tr>
<tr>
<td>Taiwanese Rain tree</td>
<td>benefits from regular deep watering; susceptible to scale, root rot, canker and verticillium; branches droop and are susceptible to breakage; low root damage potential</td>
</tr>
<tr>
<td>Koelreuteria paniculata</td>
<td></td>
</tr>
<tr>
<td>Goldenrain Tree</td>
<td>benefits from regular deep watering; susceptible to beetle borers, plant bug, scale, root rot and verticillium; low root damage potential</td>
</tr>
<tr>
<td>Lagerstroemia indica and cultivars</td>
<td></td>
</tr>
<tr>
<td>Crape Myrtle</td>
<td>attracts birds and bees; resistant to Texas rot; susceptible to aphids, powdery mildew and sooty mold; low root damage potential</td>
</tr>
<tr>
<td>Laurus nobilis</td>
<td></td>
</tr>
<tr>
<td>Sweet Bay</td>
<td>attracts birds; susceptible to psyllid, scale, phytophthora and root rot; moderate root damage potential</td>
</tr>
<tr>
<td>Ligustrum confusum</td>
<td></td>
</tr>
<tr>
<td>Privet</td>
<td>attracts birds; susceptible to oak root rot, root rot, sooty mold and verticillium; low root damage potential</td>
</tr>
<tr>
<td>Liquidambar styraciflua and cultivars</td>
<td></td>
</tr>
<tr>
<td>American Sweet Gum</td>
<td>needs little-no pruning when mature; wildlife use fruit; resists oak root fungus and verticillium; susceptible to aphids, caterpillars, scale, spider Mites, anthracnose, chlorosis and sooty mold; high root damage potential</td>
</tr>
<tr>
<td>Liriodendron tulipifera</td>
<td></td>
</tr>
<tr>
<td>Tulip Tree</td>
<td>attracts birds; resistant to oak root fungus; susceptible to aphids, scale, anthracnose, chlorosis, fusarium, oak root rot, root rot, sooty mold and verticillium; does not bloom until 12-15 years old; moderate root damage potential</td>
</tr>
<tr>
<td>Lophostemon confertus (Tristania conferta)</td>
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</tr>
<tr>
<td>Brisbane Box</td>
<td>susceptible to scale, phytophthora and root rot; moderate root damage potential</td>
</tr>
<tr>
<td>Magnolia grandiflora and cultivars</td>
<td></td>
</tr>
<tr>
<td>Southern Magnolia</td>
<td>attracts birds; resistant to oak root fungus; susceptible to aphids, scale, spider mites, root rot and verticillium; high root damage potential</td>
</tr>
<tr>
<td>STREET TREE PALETTE</td>
<td>NOTES</td>
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</tr>
<tr>
<td>Magnolia grandiflora 'Little gem' Little Gem Dwarf Southern Magnolia</td>
<td>attracts birds; resistant to oak fungus; susceptible to aphids, scale, spider mites, root rot and verticillium; low root damage potential</td>
</tr>
<tr>
<td>Markhamia tilba Markhamia hildebrandtii Nile Tulip Tree</td>
<td>low root damage potential</td>
</tr>
<tr>
<td>Melaleuca linariifolia Flaxleaf Paperbark</td>
<td>attracts birds; susceptible to chlorosis, phytophthora and root rot; low root damage potential</td>
</tr>
<tr>
<td>Melaleuca quinquenervia Cajeput Tree</td>
<td>attracts birds; susceptible to phytophthora and root rot; low root damage potential</td>
</tr>
<tr>
<td>Melaleuca styphelioides Prickly Paperbark</td>
<td>attracts birds; resistant to oak fungus; susceptible to phytophthora and root rot; low root damage potential</td>
</tr>
<tr>
<td>Metrosideros excelsa NZ Christmas Tree</td>
<td>attracts birds; susceptible to phytophthora and root rot; moderate root damage potential</td>
</tr>
<tr>
<td>Morus alba 'Fruitless' Fruitless Mulberry</td>
<td>heavy surface roots; resistant to Texas root rot and verticillium; susceptible to beetle borers, spider mites, white fly, chlorosis, fusarium, mistletoe, oak root rot, phytophthora and root rot; high root damage potential</td>
</tr>
<tr>
<td>Olea europea and cultivars Olive</td>
<td>plant where fruit will not stain pavement, or specify fruitless variety; attracts birds; resistant to Texas root rot; susceptible to scale, anthracnose oak root rot; phytophthora; root rot, sooty mold and verticillium; low root damage potential</td>
</tr>
<tr>
<td>Parkinsonia floridum (see Cercidium floridum) Palo Verde</td>
<td>intolerant of regular watering; has thorns; value for birds, bees, hummingbirds, and butterflies; low root damage potential</td>
</tr>
<tr>
<td>Parkinsonia/Cercidium 'Desert Museum' Desert Museum Palo Verde</td>
<td>intolerant of regular watering; thornless variety; value for birds, bees, hummingbirds, and butterflies; low root damage potential</td>
</tr>
<tr>
<td>Parkinsonia/Cercidium species and cultivars Palo Verde</td>
<td>intolerant of regular watering; has thorns; value for birds, bees, hummingbirds, and butterflies; low root damage potential</td>
</tr>
<tr>
<td>Pinus eldarica Mondell Pine</td>
<td>attracts birds and squirrels; resistant to Texas root rot and verticillium; susceptible to aphids; moderate root damage potential</td>
</tr>
<tr>
<td>Pinus torreyana Torrey Pine</td>
<td>do not prune large branches; prefers well-draining soils; attracts birds and squirrels; resistant to oak root fungus, Texas root rot and verticillium; susceptible to aphids, beetle borers, spider mites, and pitch canker; moderate root damage potential</td>
</tr>
<tr>
<td>Pistacia chinensis Chinese Pistache</td>
<td>attracts birds; resistant to oak root fungus; susceptible to root rot and verticillium; low root damage potential</td>
</tr>
<tr>
<td>Pittosporum angustifolium Willow Pittosporum</td>
<td>attracts birds; susceptible to aphids, scale and sooty mold; low root damage potential</td>
</tr>
<tr>
<td>Pittosporum undulatum Victorian Box</td>
<td>attracts birds; susceptible to aphids, scale and sooty mold; low root damage potential</td>
</tr>
<tr>
<td>Platanus acerifolia 'Columbia' London Plane Tree</td>
<td>attracts birds; resistant to verticillium; susceptible to scale, spider mites, anthracnose and powdery mildew; high root damage potential</td>
</tr>
<tr>
<td>Platanus acerifolia 'Yarwood' London Plane Tree</td>
<td>attracts birds; resistant to powdery mildew and verticillium; susceptible to scale, spider mites and anthracnose; high root damage potential</td>
</tr>
<tr>
<td>STREET TREE PALLETE</td>
<td>NOTES</td>
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</tr>
<tr>
<td>Platanus mexicana</td>
<td>Mexican Sycamore</td>
</tr>
<tr>
<td>attract birds; resistant to Texas root and verticillium; susceptible to beetle borers, scale, spider mites, anthracnose and powdery mildew; moderate root damage potential</td>
<td></td>
</tr>
<tr>
<td>Platanus racemosa</td>
<td>Western Sycamore</td>
</tr>
<tr>
<td>attract birds; resistant to verticillium; susceptible to leaf miner, scale, spider mites, anthracnose, oak root rot, phytophthora, mistletoe, apignomonia venata and root rot; moderate root damage potential</td>
<td></td>
</tr>
<tr>
<td>Platanus x acerifolia and cultivars</td>
<td>London Plane Tree</td>
</tr>
<tr>
<td>attract birds; resistant to verticillium; susceptible to scale, spider mites, anthracnose and powdery mildew; high root damage potential</td>
<td></td>
</tr>
<tr>
<td>Podocarpus gracilior (Araucaria gracilior)</td>
<td>African Fern Pine</td>
</tr>
<tr>
<td>needs good drainage; low root damage potential</td>
<td></td>
</tr>
<tr>
<td>Podocarpus hankeli</td>
<td>Long Leaf Yellowwood</td>
</tr>
<tr>
<td>needs regular watering; low root damage potential</td>
<td></td>
</tr>
<tr>
<td>Podocarpus macrophyllus and cultivars</td>
<td>Yew Pine</td>
</tr>
<tr>
<td>susceptible to mites, scale and sooty mold; low root damage potential</td>
<td></td>
</tr>
<tr>
<td>Pyrus calleryana and cultivars</td>
<td>Callery Pear</td>
</tr>
<tr>
<td>attract birds; resistant to fire blight, oak root fungus and verticillium; susceptible to thrip, white fly, phytophthora, root rot and sooty mold; moderate root damage potential</td>
<td></td>
</tr>
<tr>
<td>Pyrus kawakamii</td>
<td>Evergreen Pear</td>
</tr>
<tr>
<td>attract birds; resistant to verticillium; susceptible to aphids, whitefly, fire blight and sooty mold; low root damage potential</td>
<td></td>
</tr>
<tr>
<td>Quercus agrifolia</td>
<td>Coast Live Oak</td>
</tr>
<tr>
<td>drops leaves in spring; attract birds and squirrels; resistant to verticillium; susceptible to goldspotted oak borer, beetle borers, aphids; beetle grubs; caterpillars, coddling moths, insect galls, scale, whitefly, sudden oak death, crown rot, mistletoe, oak root rot, phytophthora, powdery mildew, root rot and sooty mold; high root damage potential</td>
<td></td>
</tr>
<tr>
<td>Quercus chrysolepis</td>
<td>Canyon Live Oak</td>
</tr>
<tr>
<td>most adaptable of CA oaks to varying conditions; prefers well drained soil; attracts birds and squirrels; resistant to verticillium; susceptible to goldspotted oak borer, aphids, caterpillars, coddling moths, insect galls, california oak moth, pacific oak teig girdler, white fly, sudden oak death, crown rot, mistletoe, oak root rot and root rot; moderate root damage potential</td>
<td></td>
</tr>
<tr>
<td>Quercus coccinea</td>
<td>Scarlet Oak</td>
</tr>
<tr>
<td>attract birds and squirrels; resistant to verticillium; susceptible to caterpillars and scale</td>
<td></td>
</tr>
<tr>
<td>Quercus douglasii</td>
<td>Blue Oak</td>
</tr>
<tr>
<td>good in dry, hot situations; attract birds and squirrels; resistant to verticillium; susceptible to caterpillars, insect galls, california oak moth, gall wasp, scale, crown rot, mistletoe, oak root rot, brown rot, powdery mildew, and root rot; moderate root damage potential</td>
<td></td>
</tr>
<tr>
<td>Quercus engelmanii</td>
<td>Mesa Oak</td>
</tr>
<tr>
<td>best with occasional deep watering; attract birds and squirrels; resistant to verticillium; susceptible to coddling moths, insect galls, scale, crown rot, mistletoe and root rot; let soil dry between waterings; low root damage potential</td>
<td></td>
</tr>
<tr>
<td>Quercus ilex</td>
<td>Holly Oak</td>
</tr>
<tr>
<td>best with regular watering; attract birds and squirrels; resistant to oak root fungus and verticillium; susceptible to scale, spider mites, anthracnose and root rot; low root damage potential</td>
<td></td>
</tr>
<tr>
<td>Quercus kelloggii</td>
<td>California Black Oak</td>
</tr>
<tr>
<td>prefers acidic soil; attract birds, squirrels and butterflies; resistant to verticillium; susceptible to goldspotted oak borer, insect galls, carpenterworm, california oak moth, pacific oak teig girdler, oak pit scales, gall wasp, scale, sudden oak death, anthracnose, oak root rot, brown rot, annosus root disease, mistletoe, powdery mildew and root rot; moderate root damage potential</td>
<td></td>
</tr>
<tr>
<td>Quercus lobata</td>
<td>Valley Oak</td>
</tr>
<tr>
<td>possibly the largest North American oak; debris may be a nuisance; susceptible to beetle borers, caterpillars, insect galls, scale, crown rot, mistletoe and root rot; attract birds and squirrels; moderate root damage potential</td>
<td></td>
</tr>
<tr>
<td>Quercus palustris 'Village Green'</td>
<td>Pin Oak</td>
</tr>
<tr>
<td>less tolerant of dry conditions than most oaks; resistant to verticillium; susceptible to scale; attract birds and squirrels; low root damage potential</td>
<td></td>
</tr>
<tr>
<td>Quercus rubra</td>
<td>Red Oak</td>
</tr>
<tr>
<td>needs regular moisture; attract birds and squirrels; resistant to verticillium; susceptible to aphids, caterpillars; insect galls; anthracnose; phytophthora, root rot and rust; moderate root damage potential</td>
<td></td>
</tr>
<tr>
<td>STREET TREE PALETTE</td>
<td>NOTES</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Quercus suber Cork Oak</td>
<td>best with deep, infrequent irrigation; resistant to verticillium; susceptible to beetle borers, phytophthora and root rot; attracts birds and squirrels; moderate root damage potential</td>
</tr>
<tr>
<td>Quercus tomentella Island Oak</td>
<td>needs deep soaking every 2-3 weeks; attracts birds and butterflies; moderate root damage potential</td>
</tr>
<tr>
<td>Quercus virginiana Southern Live Oak</td>
<td>Best w/regular watering; attracts birds and squirrels; resistant to verticillium; susceptible to insect galls, oak root rot, phytophthora and root rot; moderate root damage potential</td>
</tr>
<tr>
<td>Quercus wilsonii Interior Live Oak</td>
<td>prefers monthly watering, well drained soil; susceptible to caterpillers, codding moths; insect galls; white fly, crown rot, mistletoe; powdery mildew and root rot; attracts birds, squirrels and butterflies; moderate root damage potential</td>
</tr>
<tr>
<td>Radermachera sinica Serpent Tree</td>
<td>susceptible to aphids and spider mites; low root damage potential</td>
</tr>
<tr>
<td>Rhus lancea African Sumac</td>
<td>best with regular watering; susceptible to root rot and verticillium; fruit can be messy; attracts birds; low root damage potential</td>
</tr>
<tr>
<td>Sapium sebiferum</td>
<td>Chinese Tallow Tree</td>
</tr>
<tr>
<td>Sophora japonica Japanese Pagoda Tree</td>
<td>tendency to sucker, easily trained to single trunk; resistant to oak root fungus; self-seeding; attracts birds; moderate root damage potential</td>
</tr>
<tr>
<td>Sophora japonica</td>
<td>Japanese Pagoda Tree</td>
</tr>
<tr>
<td>Sophora japonica</td>
<td>Sophora japonica Japanese Pagoda Tree</td>
</tr>
<tr>
<td>Spathodea campanulata</td>
<td>African Tuliptree</td>
</tr>
<tr>
<td>Stenocarpus sinuatus Firewheel Tree</td>
<td>best with regular watering; prune to shape in early years; wildlife use fruit; dislikes being planted in close proximity to street lamps; low root damage potential</td>
</tr>
<tr>
<td>Tabebuia chrysotricha Golden Trumpet Tree</td>
<td>best with regular watering; benefits from training in early years; moderate root damage potential</td>
</tr>
<tr>
<td>Tabebuia impetiginosa Pink Trumpet Tree</td>
<td>does not bloom as young tree; best with regular watering; benefits from training in early years; low root damage potential</td>
</tr>
<tr>
<td>Tipuana tipu Tipu Tree</td>
<td>susceptible to premature leaf drop; psyllid and sooty mold; moderate root damage potential</td>
</tr>
<tr>
<td>Tristaniopsis laurina Watergum</td>
<td>susceptible to scale; low root damage potential</td>
</tr>
<tr>
<td>Ulmus parvifolia 'Drake' or 'Brea' Chinese Elm</td>
<td>careful pruning; resistant to oak root fungus; susceptible to aphids, beetle borers, beetle leaves, caterpillars, scale, dutch elm disease, oak root rot, phytophthora, root rot, sooty mold and verticillium; relatively few pests and diseases compared to other elms; moderate root damage potential</td>
</tr>
<tr>
<td>Zelkova serrata Japanese Zelkova</td>
<td>young trees may need to be trained/pruned; tolerates wind; susceptible to beetle leaves, spider mites; somewhat resistant to dutch elm disease; moderate root damage potential</td>
</tr>
</tbody>
</table>
6. Understory Planting Palette

The palette of shrubs and groundcovers included here was specifically chosen as appropriate for use in the public right-of-way with the trees recommended in the Street Tree Palette. Like the tree palette, they are primarily low-water-use species, and weighted toward the native end of the spectrum. The list is long to cover a wide variety of situations, from large open-space areas to more restrictive urban situations.

The plants are grouped by recommended planting area, just as with trees. Here, however, the categories are more general: parkways and small medians are restricted to the smallest shrubs and groundcovers, while large medians and slopes can handle the larger sized plants. It is important that shrubs and groundcovers be selected for the ultimate size, form, and shape that they will achieve without consistent pruning. For example, if a 3-foot-tall shrub is desired in a certain location, don’t use Abelia grandiflora, which will reach 5 to 6 feet in height. You could, however, use Abelia grandiflora ‘Sherwoodi’, which grows to a height of 3 feet.

The palette is intended to serve as a tool to facilitate planting design, and should not be considered an all-inclusive listing of the only plant species and cultivars that are appropriate to plant in the public rights-of-way in Thousand Oaks. Other species and cultivars may be used if they meet the intent of the Planting Design Guidelines and Species Selection Criteria, and are approved by the Public Works Director or designee.

Using the Understory Planting Palette

The Understory Planting Palette should be used in conjunction with the Planting Design Guidelines and Species Selection Criteria to make selections for shrub, groundcover, and accent tree species. Photographs, sketches and additional horticultural, functional, or aesthetic descriptions found in supplementary materials (such as Sunset Western Garden Book or nursery websites), as well as current availability from nurseries, can also help in this decision making.

Following is a description of the information provided in the planting palette. The species are listed alphabetically by botanic name, and the most widely used common name is also included.

**Type:** The plants are categorized based on the general growth and appearance characteristics of the species. Refer to the plant type, size, and bloom information to select species according to the planting design guidelines and intended design concept.

- Accent Tree (Small)
- Shrubs
- Herbaceous
- Strap-leafed Plants
- Succulents
- Ornamental Grasses
- Vines

**Planting Area Width:** Plants should be selected for the ultimate size, form and shape that they will achieve without consistent pruning. The palette identifies for each species the categories for the most appropriate planting area width.

- **Small Planting Areas:** Spaces less than 4 feet wide.
- **Medium Planting Areas:** Spaces that are 4 to 9 feet wide.
- **Large Planting Areas:** Spaces that are 10 to 15 feet wide.
- **Very Large Planting Areas:** Planting spaces that are greater than 10 feet wide.

**Height:** Typical industry standards for mature plant height. The actual height a plant will mature to could vary based on the conditions of the site.

- **Low:** Under 2 feet tall
- **Medium:** 2 to 4 feet tall
- **Tall:** More than 4 feet tall

**Spread:** Horizontal width of the mature plant growth, based on industry standards. The actual width a plant will reach in maturity could vary based on the site conditions.

- **Narrow:** Less than 4 feet wide
- **Average:** 4 to 8 feet wide
- **Broad:** More than 8 feet wide
**Spacing:** Spacing refers to the typical on-center distance plants should be placed from each other to achieve full coverage without overcrowding and increased maintenance, based on the plant’s spread at maturity. A recommended distance is generally 25% greater than the individual plant’s mature spread. For example, if a shrub’s mature width is 24 inches, when planting, provide 30 inches between the centers of each plant.

- Narrow plants: up to 5 feet apart
- Average plants: 5 to 10 feet apart
- Broad plants: at least 10 feet apart

**Bloom:** Indicates if the plant provides a showy display of blooms, and if so, the color and season of flowering.

**Ecology:**

*Water:* Provides the WUCOLS water use rating, or “plant factor” (PF), specific to Thousand Oaks, for each species; categories are “VL” very low, “L” low, “M” moderate, and “H” high.

*Exposure:* Indicates the species’ sun and shade requirements for optimal growth.

*CA Native:* Indicates whether a species is a California native.

*Habitat Value:* Notes if the species offers special habitat value. Refer to the tree species’ “notes” section for details.

**Special Use Notes:** This category identifies particular conditions in which the species may be particularly well-suited to be planted, or may offer particular benefits. These include: stormwater BMP plantings, slopes, and fire-prone areas.

**Tolerances (ToI-ance):** Indicates whether a plant is known to be drought or frost tolerant.

**Notes:** On the pages following the palette chart, additional details for the species, which may be helpful during the species selection process, are provided.
<table>
<thead>
<tr>
<th>TYPE</th>
<th>PLANTING AREA WIDTH</th>
<th>ECOLOGY</th>
<th>HEIGHT</th>
<th>SPREAD</th>
<th>SPECIAL USE</th>
<th>TOLERANCE</th>
<th>BLOOM</th>
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</thead>
<tbody>
<tr>
<td>Accent Tree (Small)</td>
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<td>Shrubs</td>
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<td>Ornamental Grasses</td>
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<td>Vines</td>
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<td>Over 10-15’ Wide</td>
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<td>Partial Sun/Shade</td>
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<td>CA NATIVE</td>
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<td>Low (&lt;2’)</td>
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<td>Tall (5’)</td>
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<td>Narrow (&lt;9’)</td>
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<td>Average (9-15’)</td>
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<tr>
<td>Spread (&gt;15’)</td>
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<td>Stages</td>
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<td>Fire Rating - Resistant</td>
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<td></td>
</tr>
<tr>
<td>Drought / Little or No Water</td>
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<tr>
<td>Frost (below 25 degrees)</td>
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<tr>
<td>Conspicuous Flowering</td>
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</tr>
</tbody>
</table>

**Abelia grandiflora** | Glossy Abelia | X | X | X | M | X | X | X | X | White, pink | X | X |

**Abelia grandiflora ‘Prostrata’** | Prostrate White Abelia | X | X | X | M | X | X | X | X | X | 5’ | X | X | White | X | X |

**Abutilon palmeri** | Indian Mallow | X | X | X | L | X | X | X | X | X | X | 5’ | X | X | Gold | X | X |

**Acacia acuminata** | Knife Acacia | X | X | X | L | X | X | X | X | 12’ | X | X | Yellow | X | X |

**Acacia dealbata** | Prostrate Acacia | X | X | X | V | L | X | X | X | 7’ | X | X | Yellow | X | X |

**Achillea millefolium (CA Native cultivars)** | Yarrow | X | X | X | X | M | X | X | X | X | 1.5’ | X | X | X | White, pink | X | X |

**Achillea millefolium (non-native hybrids)** | Yarrow | X | X | X | X | M | X | X | X | X | 1.5’ | X | X | X | White, pink | X | X |

**Achillea ‘Moonshine’** | Yellow Yarrow | X | X | X | X | - | X | X | X | X | 2’ | X | X | Yellow | X | X |

**Achnatherum (Stipa) hymenoides** | Indian Ricegrass | X | X | X | X | V | L | X | X | X | 1’ | X | X | Blue | X | X |

**Aeonium arboreum ‘Zwartkop’** | Black Rose Aeonium | X | X | X | X | X | X | X | X | 1.5’ | X | X | Yellow | X | X |

**Aeonium ‘Sunburst’** | Copper Pinwheel | X | X | X | X | M | L | X | X | X | 1.5’ | X | X | X | White | X | X |

**Aesculus californica** | California Buckeye | X | X | X | X | L | X | X | X | 1.5’ | X | X | X | Cream | X | X |

**Agapanthus africanus / A. orientalis** | Lily of the Nile | X | X | X | X | M | X | X | X | 2’ | X | X | X | Blue | X | X |

**Agave americana** | Century Plant | X | X | X | X | V | L | X | X | 5’ | X | X | X | Yellow | X | X |

**Agave attenuata** | Foxtail Agave | X | X | X | X | L | X | X | X | 7’ | X | X | X | Yellow-green | X | X |

**Agave deserti** | Desert Century Plant | X | X | X | X | V | L | X | X | 2.5’ | X | X | X | Yellow | X | X |

**Agave desmetiana** | Smooth Agave | X | X | X | X | V | L | X | X | 3.5’ | X | X | X | Yellow | X | X |

**Agave filifera** | Thread-Leaf Agave | X | X | X | X | V | L | X | X | X | 2.5’ | X | X | X | White | X | X |

**Agave geminiflora** | Twin-flowered Agave | X | X | X | X | L | X | X | X | 2.5’ | X | X | X | Yellow | X | X |

**Agave ocahui** | Ocahui | X | X | X | X | V | L | X | X | X | 2.5’ | X | X | X | Yellow | X | X |

**Agave parryi var.** | Artichoke Agave | X | X | X | X | L | X | X | X | 1.5’ | X | X | X | Pale Yellow | X | X |

**Agave salmiana ferox** | Pulque Agave | X | X | X | X | - | L | X | X | X | 12’ | X | X | X | Red, Yellow | X | X |

**Aloe brevifolia** | Short-leaved Aloe | X | X | X | X | L/V | L | X | X | X | 1.5’ | X | X | X | Orange-red | X | X |

**Aloe marlothii** | Mountain Aloe | X | X | X | X | L/V | L | X | X | X | 5’ | X | X | X | Orange-red | X | X |

**Ambrosia psilostachya** | Western Ragweed | X | X | X | - | X | X | X | X | 2.5’ | X | X | Grey-green | X | X |
<table>
<thead>
<tr>
<th>UNDERSTORY PLANTING PALETTE</th>
<th>TYPE</th>
<th>PLANTING AREA WIDTH</th>
<th>ECOLOGY</th>
<th>HEIGHT</th>
<th>SPREAD</th>
<th>SPECIAL USE</th>
<th>TOLERANCE</th>
<th>BLOOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accent Tree (Small)</td>
<td>Shrubs</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Andropogon glomeratus</td>
<td>Bushy Bluestem</td>
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<tr>
<td>Anigozanthos ‘Harmony’</td>
<td>Red-Yellow Kangaroo Paw</td>
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<td>X</td>
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<td>M</td>
<td>X</td>
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<td>X</td>
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<tr>
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<td>Strawberry Tree</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>L</td>
<td>X</td>
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<td>Compact Strawberry Tree</td>
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<td>L</td>
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<td>Howard McMinn Manzanita</td>
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<td>X</td>
<td>L</td>
<td>X</td>
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<tr>
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<td>Edmunds Manzanita, Little Sur Manzanita</td>
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<td>X</td>
<td>X</td>
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<td>Arctostaphylos edmundsii ‘Carmel Sur’</td>
<td>Carmel Sur Manzanita</td>
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<td>X</td>
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<td>Hooker Manzanita, Monterey Manzanita</td>
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<td>Monterey Carpet Manzanita</td>
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<td>John Dourley Manzanita</td>
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<td>HEIGHT</td>
<td>SPREAD</td>
<td>SPECIAL USE</td>
<td>TOLERANCE</td>
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<td>Carpenteria californica and cultivars</td>
<td>Bush Anemone</td>
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Note: The table includes various plant species with their respective characteristics such as type, planting area width, ecology, height, spread, special use, tolerance, and bloom characteristics.
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<tr>
<th>UNDERSTORY PLANTING PALETTE</th>
<th>TYPE</th>
<th>PLANTING AREA WIDTH</th>
<th>ECOLOGY</th>
<th>HEIGHT</th>
<th>SPREAD</th>
<th>SPECIAL USE</th>
<th>TOLERANCE</th>
<th>BLOOM</th>
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<tbody>
<tr>
<td>Ceanothus 'Dark Star'</td>
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<td>10'</td>
<td>X X X</td>
<td>X X X</td>
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<td>Ceanothus 'Frosty Blue'</td>
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<td>X X X</td>
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<tr>
<td>Ceanothus gloriosus 'Anchor Bay'</td>
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<td>X X X</td>
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<td>Ceanothus 'Joyce Coulter'</td>
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<td>12'</td>
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<td>X X X</td>
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<td>White</td>
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<td>Ceanothus 'Wheeler Canyon'</td>
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<td>7.5'</td>
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<td>X X X</td>
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<td>Purple</td>
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<td>Pink</td>
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<td>X X X</td>
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<td>Magenta</td>
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<td>X X X</td>
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<td>X X</td>
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<td>X X X</td>
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<td>White</td>
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<td>White, X X</td>
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<td>5'</td>
<td>X X X</td>
<td>X X X</td>
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<td>HEIGHT</td>
<td>SPREAD</td>
<td>SPECIAL USE</td>
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<td>Ancient Tree (Small)</td>
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<td>X X violet</td>
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<td>X</td>
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<td>Texas Olive</td>
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<td>X X White</td>
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<td>X X X X L X</td>
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<td>X X Yellow</td>
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<td>4'</td>
<td>X Yellow</td>
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<td>Cornus sericea (stolonifera)</td>
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<td>X X H X X</td>
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<td>X X White</td>
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<tr>
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<td>X X X Pink, Red</td>
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<td>X X Yellow</td>
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<td>X X Pink</td>
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<td>Lowfast Bearberry Cotoneaster</td>
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<td>X X White</td>
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<td>Rockspray Cotoneaster</td>
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<td>X X 6'</td>
<td>X X Pink, tan</td>
<td>X</td>
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THOUSAND OAKS FORESTRY MASTER PLAN

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<th>HEIGHT</th>
<th>SPREAD</th>
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<th>TOLRANCE</th>
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**Notes:**
- **Accent Tree (Small)**
- **Shrubs**
- **Herbs**
- **Shrub-Like Plants**
- **Succulents**
- **Ornamental Grasses**
- **Vines**
- **Small Planting Areas**
- **Less than 4' Wide**
- **Medium Planting Areas**
- **4-9' Wide**
- **Large Planting Areas**
- **10-15' Wide**
- Water Needs (PF)
- **Sun**
- **Partial Sun/Shade**
- **Shade**
- **CA NATIVE Habitat Value**
- **Low (<2')**
- **Medium (2'-4')**
- **Tall (5'+)**
- **MINIMUM SPACING (FT)**
- **Stormwater BMP**
- **Slopes**
- **Fire Rating - Resistant**
- **Drought / Little or No Water**
- **Frost (below 25 degrees)**
- **Conspicuous Flowering**
- **Color**
- **Spring**
- **Summer**
- **Fall**
- **Winter**

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THOUSAND OAKS FORESTY MASTER PLAN
### UNDERSTORY PLANTING PALETTE

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**Heuchera species**
- Alum Root, Coral Bells
  - X
  - X
  - X
  - X
  - X
  - L-M
  - X
  - X
  - X
  - X
  - X
  - 1.5'
  - X
  - X
  - X
  - various
  - X

**Hypericum calycinum**
- St. John’s Wort
  - X
  - X
  - X
  - X
  - M
  - X
  - X
  - X
  - 1.5'
  - X
  - X
  - X
  - Yellow
  - X

**Iris douglasiana and cultivars**
- Douglas Iris
  - X
  - X
  - X
  - X
  - L
  - X
  - X
  - X
  - X
  - X
  - 1.5'
  - X
  - X
  - Purple
  - X

**Isomeris (Peritoma) arborea**
- Bladderpod
  - X
  - X
  - X
  - VL
  - X
  - X
  - X
  - X
  - X
  - 4'
  - X
  - X
  - Yellow
  - X

**Iva hayesiana**
- Haye’s Iva, Poverty Weed
  - X
  - X
  - X
  - VL
  - X
  - X
  - X
  - X
  - X
  - 7.5'
  - X
  - X
  - X

**Jasminum polyanthum**
- Pink Jasmine
  - X
  - X
  - X
  - M
  - X
  - X
  - spreading
  - 10'
  - X
  - White, pink
  - X

**Juniperus effusus and cultivars**
- Soft Rush
  - X
  - X
  - X
  - M
  - X
  - X
  - X
  - X
  - spreading
  - 2.5'
  - X
  - X
  - (seed heads)
  - X

**Juniperus chinensis 'Mint Julep'**
- Mint Julep Juniper
  - X
  - X
  - X
  - L
  - X
  - X
  - X
  - 7.5'
  - X
  - X

**Juniperus chinensis 'Parsonii'**
- Prostrate Juniper
  - X
  - X
  - X
  - L
  - X
  - X
  - X
  - 7.5'
  - X
  - X

**Juniperus virginiana 'Silver Spreader'**
- Silver Spreader Juniper
  - X
  - X
  - X
  - L
  - X
  - X
  - X
  - 5'
  - X
  - X
  - X

**Justicia californica**
- Chuparosa
  - X
  - X
  - X
  - VL
  - X
  - X
  - X
  - X
  - 7.5'
  - X
  - X
  - Red
  - X
  - X

**Keckiella antirrhinoides**
- Yellow Bush Snapdragon
  - X
  - X
  - X
  - X
  - L
  - X
  - X
  - X
  - X
  - X
  - X
  - 3.5'
  - X
  - X
  - Yellow
  - X

**Keckiella cordifolia**
- Heartleaf Penstemon
  - X
  - X
  - X
  - VL
  - X
  - X
  - X
  - X
  - X
  - X
  - 4'
  - X
  - X
  - Orange
  - X
  - X

**Kniphofia uvaria**
- Red Hot Poker
  - X
  - X
  - X
  - X
  - L
  - X
  - X
  - X
  - 2.5'
  - X
  - X
  - Yellow
  - X

**Lantana montevidensis**
- Trailing Lantana
  - X
  - X
  - X
  - L
  - X
  - X
  - X
  - X
  - 8'
  - X
  - X
  - X
  - purple
  - X
  - X
  - X

**Lavandula angustifolia**
- English Lavender
  - X
  - X
  - X
  - L
  - X
  - X
  - X
  - X
  - 7.5'
  - X
  - X
  - X
  - Purple
  - X
  - X

**Lavandula dentata**
- French Lavender
  - X
  - X
  - X
  - L
  - X
  - X
  - X
  - X
  - 5'
  - X
  - X
  - X
  - Lavender
  - X
  - X
  - X

**Lavandula ‘Goodwin Creek Grey’**
- X
  - X
  - X
  - L
  - X
  - X
  - X
  - 4'
  - X
  - X
  - Purple
  - X
  - X
  - X

**Lavandula stoechas and cultivars**
- Spanish Lavender
  - X
  - X
  - X
  - X
  - L
  - X
  - X
  - X
  - 2.5'
  - X
  - X
  - Purple
  - X
  - X

**Lavatera (Malva) assurgentiflora**
- Malva Rosa, Tree Mallow
  - X
  - X
  - X
  - L
  - X
  - X
  - X
  - X
  - 7.5'
  - X
  - X
  - Pink
  - X
  - X

**Lavatera ‘Purissima’**
- Purissima Mallow
  - X
  - X
  - X
  - L
  - X
  - X
  - X
  - X
  - 10'
  - X
  - X
  - magenta-purple
  - X
  - X
  - X

### VOLUME 2: DESIGN & MANAGEMENT PLAN

Page 2-79
### UNDERSTORY PLANTING PALETTE

<table>
<thead>
<tr>
<th>TYPE</th>
<th>PLANTING AREA WIDTH</th>
<th>ECOLOGY</th>
<th>HEIGHT</th>
<th>SPREAD</th>
<th>SPECIAL USE</th>
<th>TOLRANCE</th>
<th>BLOOM</th>
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</tbody>
</table>

| BLOOM                      |                     |         |        |        |             |          |       |

- **Leonotis leonurus** - Lion's Tail
  - X
  - X
  - X
  - X
  - L
  - X
  - X
  - X
  - 5'
  - X
  - X
  - X
  - Orange

- **Leptospermum laevigatum** - Australian Tea Tree
  - X
  - X
  - L
  - X
  - X
  - 20'
  - X
  - X
  - X
  - White

- **Leptospermum scoparium cultivars** - New Zealand Tea Tree
  - X
  - X
  - X
  - M
  - X
  - X
  - X
  - X
  - 4'
  - X
  - X
  - White, pink, red

- **Leucophyllum candidum and cultivars** - Texas Silverleaf, Silverleaf Ranger, Cenizo 'Thunder
  - X
  - X
  - X
  - L
  - X
  - X
  - X
  - 4'
  - X
  - X
  - Violet, Lavender

- **Leucophyllum frutescens and cultivars** - Texas Sage
  - X
  - X
  - X
  - L
  - X
  - X
  - 7.5'
  - X
  - X
  - X
  - Pink

- **Leymus (Elymus) cinereus** - Basin Wild Rye
  - X
  - X
  - X
  - L
  - X
  - X
  - X
  - 5'
  - X
  - X
  - X
  - (seed heads)

- **Leymus (Elymus) condensatus** - Giant Wild Rye
  - X
  - X
  - X
  - L
  - X
  - X
  - X
  - 5'
  - X
  - X
  - X
  - (seed heads)

- **Leymus condensatus 'Canyon Prince'** - Canyon Prince Wild Ryegrass
  - X
  - X
  - X
  - L
  - X
  - X
  - X
  - 5'
  - X
  - X
  - X
  - (seed heads)

- **Ligustrum japonicum 'Texanum'** - Waxleaf Privet
  - X
  - X
  - X
  - M
  - X
  - X
  - 5'
  - X
  - X
  - White

- **Linum grandiflorum** - Flowering Flax, Scarlet Flax
  - X
  - X
  - X
  - L
  - X
  - X
  - X
  - 1'
  - X
  - X
  - Red

- **Lobularia maritima** - Sweet Alyssum
  - X
  - X
  - X
  - X
  - X
  - X
  - X
  - 1'
  - X
  - X
  - X
  - White, Purple

- **Lonicerapericlymenum** - Woodbine, Honeysuckle
  - X
  - X
  - X
  - UNK
  - X
  - X
  - X
  - climbing
  - X
  - 10'
  - X
  - X
  - various

- **Lotus scoparius** - Deerweed
  - X
  - X
  - X
  - VL
  - X
  - X
  - X
  - 5'
  - X
  - X
  - Yellow

- **Lupinus bicolor** - Pigmy Lupine
  - X
  - X
  - X
  - X
  - X
  - -
  - X
  - 1'
  - X
  - X
  - X
  - White

- **Lupinus excubitus** - Grape Soda Lupine
  - X
  - X
  - X
  - L
  - X
  - X
  - X
  - X
  - X
  - 4'
  - X
  - X
  - X
  - Purple

- **Lupinus nanus** - Sky Lupine
  - X
  - X
  - X
  - X
  - -
  - X
  - X
  - X
  - 1'
  - X
  - X
  - Blue, White

- **Lupinus succulentus** - Arroyo Lupine
  - X
  - X
  - X
  - X
  - X
  - X
  - X
  - 3'
  - X
  - X
  - White, Blue, Purple/Violet

- **Macfadyena unguis-cati** - Yellow Trumpet Vine, Cat's Claw
  - X
  - X
  - X
  - L
  - X
  - X
  - X
  - climbing
  - X
  - 15'
  - X
  - X
  - X
  - Yellow

- **Mahonia (Berberis) aquifolium 'Compacta'** - Compact Oregon Grape
  - X
  - X
  - X
  - M
  - X
  - X
  - X
  - X
  - X
  - 4'
  - X
  - X
  - X
  - Yellow

- **Mahonia (Berberis) aquifolium 'Golden Abundance'** - Golden Abundance Barberry
  - X
  - X
  - X
  - L
  - X
  - X
  - X
  - X
  - X
  - 7.5'
  - X
  - X
  - Yellow

- **Mahonia (Berberis) fremontii** - Desert Barberry
  - X
  - X
  - X
  - -
  - X
  - X
  - X
  - 7.5'
  - X
  - X
  - Yellow

- **Mahonia (Berberis) nevini** - Nevin's Barberry
  - X
  - X
  - X
  - VL
  - X
  - X
  - X
  - X
  - X
  - 7.5'
  - X
  - X
  - Yellow

- **Mahonia (Berberis) repens** - Creeping Barberry
  - X
  - X
  - X
  - L
  - X
  - X
  - X
  - spreading
  - 4'
  - X
  - X
  - X
  - Yellow

- **Mahonia (Berberis) pinnata** - California Holly Grape
  - X
  - X
  - X
  - L
  - X
  - X
  - X
  - X
  - 5'
  - X
  - X
  - X
  - Yellow

- **Malacothamnus fasciculatus** - Chaparral Mallow, Bush Mallow
  - X
  - X
  - X
  - VL
  - X
  - X
  - X
  - X
  - X
  - 7.5'
  - X
  - X
  - X
  - Pink

---

**THOUSAND OAKS FORESTRY MASTER PLAN**

2-80
### UNDERSTORY PLANTING PALETTE

<table>
<thead>
<tr>
<th>TYPE</th>
<th>PLANTING AREA WIDTH</th>
<th>ECOLOGY</th>
<th>HEIGHT</th>
<th>SPREAD</th>
<th>SPECIAL USE</th>
<th>TOLERANCE</th>
<th>BLOOM</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Accent Tree (Small)</td>
<td>Shrubs</td>
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#### Understory Planting Palette

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<th>Plant Name</th>
<th>Scientific Name</th>
<th>Type</th>
<th>Planting Area Width</th>
<th>ECOLOGY</th>
<th>Height</th>
<th>Spread</th>
<th>Special Use</th>
<th>Tolerance</th>
<th>Bloom</th>
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<td>Malosma laurina</td>
<td>Laurel Sumac</td>
<td>X X</td>
<td>X</td>
<td>X VL X</td>
<td>X X X</td>
<td>X 20' X X</td>
<td>(seed heads) X X</td>
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<tr>
<td>Melica californica</td>
<td>Melica californica</td>
<td>California Melic</td>
<td>X X X X X L X X X X X X X 2.5'</td>
<td>X X X</td>
<td>Orange</td>
<td>X X</td>
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<td>Mimulus (Diplacous) aurantiacus</td>
<td>Mimulus (Diplacous) aurantiacus</td>
<td>Sticky Monkeyflower</td>
<td>X X X X X</td>
<td>X V X X X 3.5'</td>
<td>X X X</td>
<td>Various</td>
<td>X X</td>
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<td>Mimulus (Diplacous) longiflorus</td>
<td>Mimulus (Diplacous) longiflorus</td>
<td>Conejo Monkeyflower</td>
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<td>Yellow</td>
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<td>Mimulus (Diplacous) hybrids</td>
<td>Sticky Monkeyflower</td>
<td>X X X X L X X X X X X X X 2'</td>
<td>X X X X X</td>
<td>Various</td>
<td>X X</td>
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<td>Mirabilis multiflora</td>
<td>Mirabilis multiflora</td>
<td>Four O’Clock</td>
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<td>X X X</td>
<td>Various</td>
<td>X X</td>
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<td>Miscanthus sinensis and cultivars</td>
<td>Miscanthus sinensis and cultivars</td>
<td>Silvergrass, Eulalia Grass</td>
<td>X X X X M X X X X X X X 4' X X X</td>
<td>(seed heads) X X X</td>
<td>Light purple</td>
<td>X X</td>
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<td>Monardella villosa</td>
<td>Monardella villosa</td>
<td>Coyote Mint</td>
<td>X X X X V L X X X X X X X 1'</td>
<td>X X X</td>
<td>Light purple</td>
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<td>Muhlenbergia capillaris</td>
<td>Muhlenbergia capillaris</td>
<td>Pink Muhly</td>
<td>X X X X X M X X X X X X 2.5'</td>
<td>X X X</td>
<td>Pink</td>
<td>X X</td>
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<td>Muhlenbergia dubia</td>
<td>Muhlenbergia dubia</td>
<td>Mexican Muhly</td>
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<td>X X X</td>
<td>Pale purple</td>
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<td>Muhlenbergia rigens</td>
<td>Muhlenbergia rigens</td>
<td>Deer Grass</td>
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<td>(seed heads) X X</td>
<td>X X</td>
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<td>Muhlenbergia 'White Cloud'</td>
<td>Muhlenbergia 'White Cloud'</td>
<td>White Awn Muhly</td>
<td>X X X X - X X X X X X X 3.5'</td>
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<td>White</td>
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<td>Myrtus communis (not 'Compacta')</td>
<td>Myrtus communis (not 'Compacta')</td>
<td>True Myrtle</td>
<td>X X X X L X X X X X X X 6'</td>
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<td>White</td>
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<td>Nandina domestica 'Nana'</td>
<td>Dwarf Heavenly Bamboo</td>
<td>X X X X L X X X X X X X 2.5'</td>
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<td>Pink</td>
<td>X X</td>
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<td>Nassella / Stipa cernua</td>
<td>Nassella / Stipa cernua</td>
<td>Nodding Needlegrass</td>
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<td>Nassella / Stipa lepida</td>
<td>Foothill Needlegrass</td>
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<td>Nassella / Stipa pulchra</td>
<td>Nassella / Stipa pulchra</td>
<td>Purple Needle Grass</td>
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<td>(seed heads) X X</td>
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<td>Nerium dwarf forms</td>
<td>Dwarf Oleander</td>
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<td>X X X</td>
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<td>Beavertail Cactus</td>
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<td>Indian Fig</td>
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<td>Narrow (&lt;4')</td>
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<td>Average (4'-8')</td>
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<td>Conspicuous Flowering</td>
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</table>

**Opuntia robusta** Giant Prickly Pear X X V L X X X 15' X X X Pale to bright yellow X

**Pachycereus marginatus** Mexican Fence Post Cactus X X X X V L X V L X X X 7.5' X X X Pink, red X

**Parthenocissus tricolor** Boston Ivy X X X X M X X X spreading 10' X X X

**Passiflora caerulea** Passion Vine, Blue Passion Flower X X X X M X X X X 7.5' X X X Blue-violet to white X

**Pedilanthus macrocarpus** Lady's Slipper, Slipper Plant X X X X X V L X X X X 3.5' X X Orange-red X X

**Penisetum x advena 'rubrum'** Red Fountain Grass X X X X L X X X 3.5' X X X Burgundy X

**Penstemon eatoni var. entonii** Firecracker Penstemon X X X X L X X X X 2' X X X red X X

**Penstemon heterophyllus** Foothill Penstemon X X X X L X X X X 2' X X X blue-purple X X

**Penstemon spectabilis** Showy Penstemon X X X X L X X X X 3.5' X X X Blue / Violet X

**Persica atriplicifolia** Russian Sage X X X L X X X 2.5' X X X Purple X X

**Phelantus leiwsii and cultivars** Wild Mock Orange, Lewis Mockorange X X M X X X X X X X 10' X X X X X White X

**Phormium tenax and cultivars** New Zealand Flax X X X L X X X 2' X X X Red X X

**Photinia serrulata (serratifolia)** Chinese Photinia, Chinese Hawthorn X X X M X X X X X 20' X X X X X White X X

**Pittosporum eugenioides** Tarata, Lemonwood X X M X X X X X X X X 12' X X X X Yellow X

**Pittosporum tenuifolium** Kohuhu X X M X X X X X 12' X X X Purple X

**Pittosporum tobera 'Wheeleni'** Dwarf Mock Orange X X M X X X X X 5' X X X X White X

**Plumbago scandens** Plumbago X X X X UNK X X X X 5' X X X white X X X X

**Plumbago auriculata (P. capensis)** Cape Plumbago X X X X M X X X 10' X X X X Blue X X X X

**Prunus caroliniana** Carolina Laurel Cherry X X X M X X X X X X 12' X X X X White X

**Prunus ilicifolia (ssp. ilicifolia)** Holly Leaf Cherry X X X M X X X X X 12' X X X X White X

**Prunus ilicifolia** Catalina Cherry X X M X X X X X 12' X X X White X X

**Prunus laevis** Portugal Laurel X X M X X X X X 12' X X X X White X

**Punica granatum 'Wonderful'** Pomegranate X X X X L X X X X X X 10' X X X X Red, orange X

**Ranunculus californicus** California Buttercup X X X X V L X X X X X 1' X X X yellow X X

**Rhamnus (Prunus) californica cultivars** Coffeeberry X X X X V L X X X X X 5' X X X Yellow X X

---

**2-82**

THOUSAND OAKS FORESTRY MASTER PLAN
<table>
<thead>
<tr>
<th>UNDERSTORY PLANTING PALETTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
</tr>
<tr>
<td>Level</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>------</td>
</tr>
</tbody>
</table>

**Rhagamnus (Frangula) californica**
- **‘Eve Case’**
  - California Coffeeberry
  - Type: Shrub
  - Ecological Value: Low (<2')
  - Spacing: 4' x 4'
  - Bloom: White, Green

**Rhagamnus alaternus**
- Italian Buckthorn
  - Type: Shrub
  - Ecological Value: Low (<2')
  - Spacing: 4' x 4'
  - Bloom: White, Pink

**Rhagamnus crocea**
- Red Berry
  - Type: Shrub
  - Ecological Value: Low (<2')
  - Spacing: 4' x 4'
  - Bloom: White, Pink

**Rhaphiolepis dwarf forms**
- Dwarf Indian Hawthorn
  - Type: Shrub
  - Ecological Value: Low (<2')
  - Spacing: 4' x 4'
  - Bloom: White

**Rhaphiolepis indica**
- India Hawthorn
  - Type: Shrub
  - Ecological Value: Low (<2')
  - Spacing: 4' x 4'
  - Bloom: White, Pink

**Rhaphiolepis umbellata**
- Yeddo Hawthorn
  - Type: Shrub
  - Ecological Value: Low (<2')
  - Spacing: 4' x 4'
  - Bloom: White

**Rhus integrifolia**
- Lemonadeberry
  - Type: Shrub
  - Ecological Value: Low (<2')
  - Spacing: 4' x 4'
  - Bloom: Pink

**Rhus ovata**
- Sugarbush
  - Type: Shrub
  - Ecological Value: Low (<2')
  - Spacing: 4' x 4'
  - Bloom: Pink

**Ribes malvaceum**
- Chaparral Currant
  - Type: Shrub
  - Ecological Value: Low (<2')
  - Spacing: 4' x 4'
  - Bloom: Pink

**Ribes sanguineum**
- Red Flowering Currant
  - Type: Shrub
  - Ecological Value: Low (<2')
  - Spacing: 4' x 4'
  - Bloom: Pink, Red

**Ribes speciosum**
- Gooseberry
  - Type: Shrub
  - Ecological Value: Low (<2')
  - Spacing: 4' x 4'
  - Bloom: Pink

**Ribes viburnifolium**
- Evergreen Currant
  - Type: Shrub
  - Ecological Value: Low (<2')
  - Spacing: 4' x 4'
  - Bloom: Pink

**Romneya coulteri**
- Matilija Poppy
  - Type: Shrub
  - Ecological Value: Low (<2')
  - Spacing: 4' x 4'
  - Bloom: White

**Rosa banksiae**
- Lady Banks’ Rose
  - Type: Shrub
  - Ecological Value: Low (<2')
  - Spacing: 4' x 4'
  - Bloom: White

**Rosa ‘Blaze’**
- Climbing Rose
  - Type: Shrub
  - Ecological Value: Low (<2')
  - Spacing: 4' x 4'
  - Bloom: Medium Red

**Rosa 'Cecile Brunner’**
- Cecile Brunner Rose
  - Type: Shrub
  - Ecological Value: Low (<2')
  - Spacing: 4' x 4'
  - Bloom: Pink

**Rosa ‘Flower Carpet’**
- Carpet Rose
  - Type: Shrub
  - Ecological Value: Low (<2')
  - Spacing: 4' x 4'
  - Bloom: Various

**Rosa nutkana var. nutkana**
- Nootka Rose
  - Type: Shrub
  - Ecological Value: Low (<2')
  - Spacing: 4' x 4'
  - Bloom: Rose-pink

**Rosa woodsii var. ultramontana**
- Interior Rose
  - Type: Shrub
  - Ecological Value: Low (<2')
  - Spacing: 4' x 4'
  - Bloom: Pink

**Rosmarinus officinalis**
- Rosemary
  - Type: Shrub
  - Ecological Value: Low (<2')
  - Spacing: 4' x 4'
  - Bloom: Blue-white

**Rosmarinus officinalis cultivars**
- Trailing Rosemary
  - Type: Shrub
  - Ecological Value: Low (<2')
  - Spacing: 4' x 4'
  - Bloom: Violet

**Rosmarinus officinalis ‘Lockwood de Forest’**
- Prostrate Rosemary
  - Type: Shrub
  - Ecological Value: Low (<2')
  - Spacing: 4' x 4'
  - Bloom: Blue

**Rosmarinus officinalis ‘Prostratus’**
- Creeping Rosemary
  - Type: Shrub
  - Ecological Value: Low (<2')
  - Spacing: 4' x 4'
  - Bloom: Blue

**Rudbeckia hirta**
- Black-eyed Susan, Gloriosa Daisy
  - Type: Shrub
  - Ecological Value: Low (<2')
  - Spacing: 4' x 4'
  - Bloom: Yellow to Orange

**VOLUME 2: DESIGN & MANAGEMENT PLAN**

2-83
## UNDERSTORY PLANTING PALETTE

<table>
<thead>
<tr>
<th>TYPE</th>
<th>PLANTING AREA WIDTH</th>
<th>ECOLOGY</th>
<th>HEIGHT</th>
<th>SPREAD</th>
<th>SPECIAL USE</th>
<th>TOLERANCE</th>
<th>BLOOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accent Tree (Small)</td>
<td>Shade, Herbaceous, Shrub-Like Plants, Ground Cover, Grasses, Vines</td>
<td>Medium Planting Areas</td>
<td>10'-15' Wide</td>
<td>Water Needs (P/F)</td>
<td>Low (&lt;2')</td>
<td>Medium (2'-4')</td>
<td>Narrow (&lt;1')</td>
</tr>
</tbody>
</table>

### Rueelia brittoniana and cultivars
- **Mexican Petunia**
  - X
  - X
  - X
  - X
  - L
  - X
  - X
  - X
  - 1.5'
  - X
  - X
  - X
  - Blue
  - X

### Ruellia peninsularis
- **Desert Ruellia**
  - X
  - X
  - X
  - X
  - L
  - X
  - X
  - X
  - X
  - 2.5'
  - X
  - X
  - X
  - white, green
  - X

### Ruscus aculeatus
- **Butcher’s Broom**
  - X
  - X
  - X
  - X
  - L
  - X
  - X
  - X
  - X
  - X
  - 5'
  - X
  - X
  - X
  - Illici
  - X

### Russelia equisetiformis
- **Firecracker Plant**
  - X
  - X
  - X
  - X
  - M
  - X
  - X
  - X
  - X
  - 5'
  - X
  - Red
  - X

### Salvia ‘Allen Chickering’
- **Allen Chickering Sage**
  - X
  - X
  - X
  - X
  - VL
  - X
  - X
  - X
  - X
  - X
  - 5'
  - X
  - X
  - X
  - X
  - lavender
  - X

### Salvia apiana
- **White Sage**
  - X
  - X
  - X
  - X
  - VL
  - X
  - X
  - X
  - X
  - X
  - 5'
  - X
  - X
  - X
  - lavender
  - X

### Salvia ‘Bee’s Bliss’
- **Bee’s Bliss Sage**
  - X
  - X
  - X
  - L
  - X
  - X
  - X
  - 2.5'
  - X
  - X
  - X
  - blue
  - X

### Salvia brandegei
- **Santa Rosa Island Sage**
  - X
  - X
  - X
  - VL
  - X
  - X
  - X
  - X
  - 7.5'
  - X
  - X
  - X
  - blue
  - X

### Salvia chamaedryoides
- **Gerander Sage, Blue Sage**
  - X
  - X
  - X
  - X
  - X
  - L
  - X
  - X
  - X
  - X
  - 2.5'
  - X
  - X
  - X
  - blue
  - X

### Salvia clevelandii
- **Cleveland Sage**
  - X
  - X
  - X
  - X
  - VL
  - X
  - X
  - X
  - X
  - X
  - 4'
  - X
  - X
  - X
  - lavender
  - X

### Salvia ‘Dara’s Choice’
- **Dara’s Choice Sage**
  - X
  - X
  - X
  - L
  - X
  - X
  - X
  - X
  - 3.5'
  - X
  - X
  - X
  - lavender
  - X

### Salvia leucantha
- **Mexican Sage**
  - X
  - X
  - X
  - L
  - X
  - X
  - X
  - X
  - 4'
  - X
  - X
  - X
  - purple
  - X

### Salvia leucophyilla
- **Purple Sage**
  - X
  - X
  - X
  - VL
  - X
  - X
  - X
  - X
  - 6'
  - X
  - X
  - X
  - lavender
  - X

### Salvia leucophyilla ‘Figueroa’
- **Figueroa Sage**
  - X
  - X
  - X
  - VL
  - X
  - X
  - X
  - X
  - 7.5'
  - X
  - X
  - X
  - purple
  - X

### Salvia leucophyilla ‘Point Sal Spreader’
- **Point Sal Spreader Sage**
  - X
  - X
  - VL
  - X
  - X
  - X
  - X
  - 10'
  - X
  - X
  - X
  - lavender
  - X

### Salvia mellifera
- **Black Sage**
  - X
  - X
  - X
  - VL
  - X
  - X
  - X
  - X
  - 6'
  - X
  - X
  - X
  - lavender
  - X

### Salvia mellifera ‘Terra Seca’
- **Prostrate Black Sage**
  - X
  - X
  - X
  - VL
  - X
  - X
  - X
  - X
  - 7.5'
  - X
  - X
  - X
  - white
  - X

### Salvia sonomensis
- **Creeping Sage**
  - X
  - X
  - X
  - L
  - X
  - X
  - X
  - X
  - 5'
  - X
  - X
  - X
  - purple
  - X

### Salvia sonomensis ‘Mrs. Beard’
- **Mrs. Beard Sage**
  - X
  - X
  - X
  - L
  - X
  - X
  - X
  - X
  - 7.5'
  - X
  - X
  - X
  - blue
  - X

### Salvia spathacea
- **Hummingbird Sage**
  - X
  - X
  - X
  - L
  - X
  - X
  - X
  - X
  - 5'
  - X
  - X
  - X
  - purple
  - X

### Sambucus mexicana
- **Elderberry**
  - X
  - X
  - L
  - X
  - X
  - X
  - X
  - 20'
  - X
  - X
  - X
  - creamy white
  - X

### Santolina chamaecyparissus
- **Lavender Cotton**
  - X
  - X
  - X
  - X
  - L
  - X
  - X
  - X
  - 5'
  - X
  - X
  - X
  - yellow
  - X

### Scabiosa species
- **Pincushion Flower**
  - X
  - X
  - X
  - X
  - M
  - X
  - X
  - X
  - 2.5'
  - X
  - X
  - X
  - lavender, X
  - X

### Scilla peruviana
- **Peruvian Scilla**
  - X
  - X
  - X
  - X
  - L
  - X
  - X
  - X
  - 2'
  - X
  - X
  - X
  - blue
  - violet

### Scorpiurus californica
- **California Figwort**
  - X
  - X
  - X
  - X
  - X
  - X
  - X
  - X
  - 3.5'
  - X
  - X
  - X
  - maroon
  - X

**Bloom Colors:**
- **Blue**
- **Purple**
- **White**
- **Pink**
- **Lavender**
- **Yellow**
- **Red**
- **Creamy White**
- **Blue, Lavender**
- **White, Lavender**
- **Blue, Lavender**
- **Lavender, X**
## Understory Planting Palette

<table>
<thead>
<tr>
<th>TYPE</th>
<th>PLANTING AREA WIDTH</th>
<th>ECOCOLOGY</th>
<th>HEIGHT</th>
<th>SPREAD</th>
<th>SPECIAL USE</th>
<th>TOLERANCE</th>
<th>BLOOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accent Tree (Small)</td>
<td>Shrub</td>
<td>Herbsaceous Plants</td>
<td>Standard</td>
<td>Ornamental Grasses</td>
<td>Vines</td>
<td>Small Planting Areas</td>
<td>Medium Planting Area</td>
</tr>
<tr>
<td>Sedum pachyphyllum</td>
<td>Jelly-bean</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>L</td>
</tr>
<tr>
<td>Sedum x rubrotinctum</td>
<td>Pork and Beans</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>L</td>
</tr>
<tr>
<td>Senecio cineraria</td>
<td>Dusty Miller</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>L</td>
</tr>
<tr>
<td>Senecio greyi (Brachyglottis ‘Sunshine’)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>M</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Senecio mandraliscae</td>
<td>Blue finger</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>L</td>
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<tr>
<td>Senecio serpens</td>
<td>Blue chalksticks</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td>L</td>
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<tr>
<td>Senecioviridis</td>
<td>Dusty Miller</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>L</td>
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<tr>
<td>Senna phyllodinea</td>
<td>Silvery Cassia</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>L</td>
<td>X</td>
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<tr>
<td>Sesleria autumnalis</td>
<td>Autumn Moor Grass</td>
<td>X</td>
<td>X</td>
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<td>X</td>
<td>X</td>
<td>M</td>
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<tr>
<td>Sesleria caerulea</td>
<td>Blue Moor Grass</td>
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<td>X</td>
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<td>X</td>
<td>X</td>
<td>M</td>
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<tr>
<td>Slavynrichium bellum</td>
<td>Blue-eyed Grass</td>
<td>X</td>
<td>X</td>
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<td>X</td>
<td>L</td>
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</tr>
<tr>
<td>Sphaeralcea ambigu and cultivars</td>
<td>Apricot Mallow</td>
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<td>X</td>
<td>X</td>
<td>L</td>
<td>X</td>
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<tr>
<td>Sporobolus airoides</td>
<td>Alkali Sacaton</td>
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<td>X</td>
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<td>L</td>
<td>X</td>
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<tr>
<td>Stachys byzantina</td>
<td>Lamb's Ears</td>
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<td>X</td>
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<td>X</td>
<td>M</td>
<td>X</td>
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<tr>
<td>Symphoricarpos albus var. laevigatus ‘Tilden Park’</td>
<td>Tilden Park Snowberry</td>
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<td>X</td>
<td>X</td>
<td>L</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Symphoricarpos mollis</td>
<td>Creeping Snowberry</td>
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<td>X</td>
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<td>L</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Symphyotrichum (Aster) chilensis</td>
<td>California Aster</td>
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<td>X</td>
<td>X</td>
<td>-</td>
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<td>X</td>
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<tr>
<td>Tecoma stans</td>
<td>Yellow Bells</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>L</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Tecoma x ‘Orange Jubilee’</td>
<td>Orange Trumpet Bush</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>L</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Tecoma x ‘Sunrise’</td>
<td>Sunrise Esperanza</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>L</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Teucrium chamaedrys (x lucidrys)</td>
<td>Germander</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>L</td>
<td>X</td>
</tr>
<tr>
<td>Teucrium fruticans</td>
<td>Bush Germander</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>L</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Teucrium fruticans ‘Compactum’</td>
<td>Bush Germander</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>L</td>
<td>X</td>
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</tr>
<tr>
<td>Thalictrum fendleri</td>
<td>Mountain Meadow Rue</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>M</td>
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<td>Thalictrum polycarpum</td>
<td>Meadow Rue</td>
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<td>X</td>
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<tr>
<td>UNDERSTORY PLANTING PALETTE</td>
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<table>
<thead>
<tr>
<th>TYPE</th>
<th>PLANTING AREA WIDTH</th>
<th>ECOLOGY</th>
<th>HEIGHT</th>
<th>SPREAD</th>
<th>SPECIAL USE</th>
<th>TOLRANCE</th>
<th>BLOOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accent Tree (Small)</td>
<td>Small Planting Areas</td>
<td>4-9' Wide</td>
<td>Tall (5')</td>
<td>Narrow (&lt;4')</td>
<td>Average (4-8')</td>
<td>Minimum Spacing (Ft)</td>
<td>Fire Rating - Resistant</td>
</tr>
<tr>
<td>Star Jasmine</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td>X</td>
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<tr>
<td>Trachelospermum jasminioides</td>
<td>Star Jasmine</td>
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<td>X</td>
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<td>X</td>
<td>X</td>
<td>spreading</td>
</tr>
<tr>
<td>Trichostema lanatum</td>
<td>Wooly Blue Curls</td>
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<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>spreading</td>
</tr>
<tr>
<td>Trifolium wormskiioides</td>
<td>Cow Clover</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>UNK</td>
<td>X</td>
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<tr>
<td>Tulbaghia violacea</td>
<td>Society Garlic</td>
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<td>X</td>
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<td>X</td>
<td>L</td>
<td>X</td>
</tr>
<tr>
<td>Verbena lasiotachys</td>
<td>Western Verbena, Western Vervain</td>
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<td>X</td>
<td>X</td>
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<tr>
<td>Verbena ilicica</td>
<td>Lilac Verbena</td>
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<td>Andropogon glomeratus</td>
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<td>Anigozanthos ‘Harmony’</td>
<td>Red-Yellow Kangaroo Paw</td>
<td>Performs best in sandy soil; attracts hummingbirds</td>
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<tr>
<td>Anigozanthos species</td>
<td>Kangaroo Paw</td>
<td>Cut spent flower stalks to ground to prolong blooming; attracts hummingbirds</td>
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<td>Aquilegia formosa</td>
<td>Western Columbine</td>
<td>Likes summer water; attracts hummingbirds and butterflies</td>
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<td>Arbatus unedo</td>
<td>Strawberry Tree</td>
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<td>Arbatus unedo ‘Comacts’</td>
<td>Compact Strawberry Tree</td>
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<p>| <strong>VOLUME 2: DESIGN &amp; MANAGEMENT PLAN</strong> | <strong>2-87</strong> |</p>
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<tr>
<th>UNDERSTORY PLANTING PALETTE</th>
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<th>UNDERSTORY PLANTING PALETTE</th>
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<tr>
<td>Buddleja species</td>
<td>Butterfly Bush</td>
<td>Attracts butterflies</td>
<td>Chaenomeles cultivars</td>
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<td>Caesalpinia mexicana</td>
<td>Mexican Bird of Paradise Bush</td>
<td>Attracts hummingbirds</td>
<td>Chrysanthemum frutescens</td>
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<td>Caesalpinia pulcherrima and cultivars</td>
<td>Red Bird of Paradise Bush</td>
<td>Cut in ground in early spring to keep compact; deciduous, may be evergreen in mild winters</td>
<td>Cistus hybridus</td>
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<tr>
<td>Calliandra californica</td>
<td>Baja Fairy Duster</td>
<td>Attracts hummingbirds, songbirds, and butterflies</td>
<td>Cistus salvifolius</td>
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<td>Calliandra eriophylla</td>
<td>Pink Fairy Duster</td>
<td>Attracts hummingbirds, songbirds, and butterflies</td>
<td>Cistus skanbergii</td>
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<tr>
<td>Calycanthus occidentalis</td>
<td>Spice Bush</td>
<td>Deer resistant; deciduous; attracts songbirds and butterflies</td>
<td>Cistus ‘Victor Reiter’</td>
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<td>Calystegia macrostegia ‘Anacapa Pink’</td>
<td>Anacapa Pink Morning Glory</td>
<td>Drought deciduous; attracts hummingbirds, songbirds, and butterflies</td>
<td>Cistus x pulverulentus ‘Sunset’</td>
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<td>Carex barbaraee</td>
<td>Santa Barbara Sedge</td>
<td>Attracts songbirds</td>
<td>Comarostaphylis diverfullula</td>
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<td>Carex pansa</td>
<td>Dune Sedge</td>
<td>Evergreen; turf alternative; needs regular water; better adapted to sandy soil; attracts songbirds</td>
<td>Cordia boissieri</td>
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<td>Carex praegracilis</td>
<td>California Field Sedge</td>
<td>Highly adaptable; attracts songbirds</td>
<td>Cordia parvifolia</td>
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<td>Carex testacea</td>
<td>Orange Sedge</td>
<td>Low maintenance; cut back in very early spring; leave flower spikes to allow reseeding; Short-lived, but reseeds; does best in moist, well-draining soils; deer tolerant</td>
<td>Coreopsis auriculata ‘Nana’</td>
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<td>Ceanothus ‘Concha’</td>
<td>Concha Ceanothus</td>
<td>Attracts hummingbirds, songbirds, and butterflies</td>
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<td>Ceanothus ‘Dark Star’</td>
<td>Dark Star Ceanothus</td>
<td>Attracts hummingbirds, songbirds, and butterflies</td>
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<td>Ceanothus ‘Frosty Blue’</td>
<td>Frosty Blue Lilac</td>
<td>Attracts hummingbirds, songbirds, and butterflies</td>
<td>Coreopsis species</td>
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<tr>
<td>Ceanothus gloriosus ‘Anchor Bay’</td>
<td>Point Reyes Ceanothus</td>
<td>Attracts hummingbirds, songbirds, and butterflies</td>
<td>Corinna sericea (stolonifera)</td>
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<tr>
<td>Ceanothus griseus var. horizontalis</td>
<td>Carmel Creeper</td>
<td>Spreads quickly; attracts deer which feed on it (hinders growth)</td>
<td>Currea ‘Carmine Bells’</td>
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<td>Ceanothus griseus ‘Yankee Point’</td>
<td>Carmel Creeper</td>
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<td>Ceanothus ‘Joyce Coulier’</td>
<td>Joyce Coulier Ceanothus</td>
<td>Attracts hummingbirds, songbirds, and butterflies</td>
<td>Cotoneaster congestus ‘Loki’</td>
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<td>Ceanothus leucodermis</td>
<td>Chaparral Whitethorn Ceanothus</td>
<td>Attracts hummingbirds, songbirds, and butterflies</td>
<td>Cotoneaster dammen ‘Lowfast’</td>
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<td>Ceanothus ‘Ray Hartman’</td>
<td>Ray Hartman Ceanothus</td>
<td>Attracts hummingbirds, songbirds, and butterflies</td>
<td>Cotoneaster horizontalis</td>
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<td>Ceanothus nigidis ‘Snowball’</td>
<td>White Monterey Lilac</td>
<td>Tolerates deer better than other Ceanothus varieties; Attracts hummingbirds, songbirds, and butterflies</td>
<td>Cotoneaster luteus</td>
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<td>Ceanothus ‘Sierra Blue’</td>
<td>Sierra Blue Ceanothus</td>
<td>Attracts hummingbirds, songbirds, and butterflies</td>
<td>Crocosmia crocosmiiflora</td>
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<td>Ceanothus thyrsiflorus ‘Snow Flurry’</td>
<td>Snow Flurry Ceanothus</td>
<td>Attracts hummingbirds, songbirds, and butterflies</td>
<td>Dasyidron wheeleri</td>
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<td>Ceanothus ‘Wheeler Canyon’</td>
<td>Wheeler Canyon Ceanothus</td>
<td>Attracts hummingbirds, songbirds, and butterflies</td>
<td>Dendromecon har福德ii</td>
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<td>Centaurea cineraria</td>
<td>Dusty Miller</td>
<td>Attracts bees</td>
<td>Dendromecon rigida</td>
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<td>Centaurea gymnocarpa</td>
<td>Velvet Centaura</td>
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<td>Cercis canadensis</td>
<td>Eastern Redbud</td>
<td>Attracts butterflies</td>
<td>Dianella revoluta &amp; cultivars</td>
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<td>Cercis occidentalis</td>
<td>Western Redbud</td>
<td>Attracts hummingbirds, songbirds, and butterflies; supports carpenter bees</td>
<td>Dianella tasmanica &amp; cultivars</td>
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<td>Cerococarpus betuloides</td>
<td>Mountain Mahogany</td>
<td>Attracts songbirds and butterflies</td>
<td>Dietes bicolor</td>
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<td>Euphorbia characias wulfenii</td>
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<td>Crown of Thorns</td>
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<td>Golden Shrub Daisy</td>
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<td>Gazania species and hybrids</td>
<td>G. linearis can be invasive</td>
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<td>Island Alumroot</td>
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<tr>
<td>Heuchera species</td>
<td>Alum Root, Coral Bells</td>
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<tr>
<td>Hypericum calycinum</td>
<td>St. John's Wort</td>
</tr>
<tr>
<td>Iris douglasiana and cultivars</td>
<td>Douglas Iris</td>
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<tr>
<td>Isomeris (Peritoma) arborea</td>
<td>Bladderpod</td>
</tr>
<tr>
<td>Iva hayesiana</td>
<td>Haye's Iva, Poverty Weed</td>
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<tr>
<td>Jasminum polyanthum</td>
<td>Pink Jasmine</td>
</tr>
<tr>
<td>Juncus effusus and cultivars</td>
<td>Soft Rush</td>
</tr>
<tr>
<td>Juncus mexicanus</td>
<td>Mexican Rush</td>
</tr>
<tr>
<td>Juncus patens</td>
<td>Wire Grass</td>
</tr>
<tr>
<td>Juncus torreyi</td>
<td>Torrey's Rush</td>
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<tr>
<th>UNDERSTORY PLANTING PALETTE</th>
<th>NOTES</th>
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<tbody>
<tr>
<td><strong>J. californica</strong></td>
<td>California Juniper</td>
</tr>
<tr>
<td><strong>J. chinsis ‘Mint Julep’</strong></td>
<td>Mint Julep Juniper</td>
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<tr>
<td><strong>J. chinsis ‘Parsonii’</strong></td>
<td>Prostrate Juniper</td>
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<tr>
<td><strong>J. virginiana ‘Silver Spreader’</strong></td>
<td>Silver Spreader Juniper</td>
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<td><strong>J. californica</strong></td>
<td>Chuparosa</td>
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<tr>
<td><strong>K. antirrhinoides</strong></td>
<td>Yellow Bush Snapdragon</td>
</tr>
<tr>
<td><strong>K. cordifolia</strong></td>
<td>Heartleaf Penstemon</td>
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<tr>
<td><strong>K. uvaria</strong></td>
<td>Red Hot Poker</td>
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<tr>
<td><strong>L. montevidensis</strong></td>
<td>Trailing Lantana</td>
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<tr>
<td><strong>L. angustifolia</strong></td>
<td>English Lavender</td>
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<tr>
<td><strong>L. dentata</strong></td>
<td>French Lavender</td>
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<td><strong>L. ‘Goodwin Creek Grey’</strong></td>
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<tr>
<td><strong>L. stoechas and cultivars</strong></td>
<td>Spanish Lavender</td>
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<td><strong>L. assurgentiflora</strong></td>
<td>Malva Rosa, Tree Mallow</td>
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<td><strong>L. ‘Prissima’</strong></td>
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<tr>
<td><strong>L. leonurus</strong></td>
<td>Lion’s Tail</td>
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<td><strong>L. laevigatum</strong></td>
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<tr>
<td><strong>L. scoparium cultivars</strong></td>
<td>New Zealand Tea Tree</td>
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<tr>
<td><strong>L. candidum and cultivars</strong></td>
<td>Texas Silverleaf, Silverleaf Ranger,</td>
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<tr>
<td><strong>L. frutescens and cultivars</strong></td>
<td>Texas Sage</td>
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<tr>
<td><strong>L. cinereus</strong></td>
<td>Basin Wild Rye</td>
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<tr>
<td><strong>L. condensatus</strong></td>
<td>Giant Wild Rye</td>
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<tr>
<td><strong>L. condensatus ‘Canyon Prince’</strong></td>
<td>Canyon Prince Wild Rye grass</td>
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<tr>
<td><strong>L. japonicum ‘Texanum’</strong></td>
<td>Waxleaf Privet</td>
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<tr>
<td><strong>L. grandiflorum</strong></td>
<td>Flowering Flax, Scarlet Flax</td>
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<tr>
<td><strong>L. maritima</strong></td>
<td>Sweet Alyssum</td>
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<tr>
<td><strong>L. perfolatum</strong></td>
<td>Woodbine, Honeysuckle</td>
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<tr>
<td><strong>L. scoparius</strong></td>
<td>Deerweed</td>
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<tr>
<td><strong>L. bicolor</strong></td>
<td>Pigmy Lupine</td>
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<tr>
<td><strong>L. excubitus</strong></td>
<td>Grape Soda Lupine</td>
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<tr>
<td><strong>L. nanus</strong></td>
<td>Sky Lupine</td>
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<tr>
<th>UNDERSTORY PLANTING PALETTE</th>
<th>NOTES</th>
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<tbody>
<tr>
<td><strong>Lupinus succulentus</strong></td>
<td>Anojoyo Lupine</td>
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<tr>
<td><strong>Macfadyena unguis-cati</strong></td>
<td>Yellow Trumpet Vine, Cat’s Claw</td>
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<tr>
<td><strong>Mahonia (Berberis) aquifolium ‘Compacta’</strong></td>
<td>Compact Oregon Grape</td>
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<td><strong>Mahonia (Berberis) aquifolium ‘Golden Abundance’</strong></td>
<td>Golden Abundance Barberry</td>
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<tr>
<td><strong>Mahonia (Berberis) fremontii</strong></td>
<td>Desert Barberry</td>
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<tr>
<td>** Mahonia (Berberis) nevini**</td>
<td>Nevini’s Barberry</td>
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<tr>
<td><strong>Mahonia (Berberis) repens</strong></td>
<td>Creeping Barberry</td>
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<tr>
<td><strong>Mahonia (Berberis) pinnata</strong></td>
<td>California Holly Grape</td>
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<td><strong>Malacothamnus fasciculatus</strong></td>
<td>Chaparral Mallow, Bush Mallow</td>
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<tr>
<td><strong>Malosma laurina</strong></td>
<td>Laurel Sumac</td>
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<tr>
<td><strong>Melica californica</strong></td>
<td>California Melic</td>
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<tr>
<td><strong>Mimulus (Diplacus) aurantiacus</strong></td>
<td>Sticky Monkeyflower</td>
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<tr>
<td><strong>Mimulus (Diplacus) longiflorus</strong></td>
<td>Conejo Monkeyflower</td>
</tr>
<tr>
<td><strong>Mimulus (Diplacus) hybrids</strong></td>
<td>Sticky Monkeyflower</td>
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<tr>
<td><strong>Mirabilis multiflora</strong></td>
<td>Four O’Clock</td>
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<tr>
<td><strong>Miscanthus sinensis and cultivars</strong></td>
<td>Silvergrass, Eulalia Grass</td>
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<tr>
<td><strong>Monarda didyma</strong></td>
<td>Coyote Mint</td>
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<tr>
<td><strong>Muhlenbergia capillaris</strong></td>
<td>Pink Muhly</td>
</tr>
<tr>
<td><strong>Muhlenbergia dubia</strong></td>
<td>Mexican Muhly</td>
</tr>
<tr>
<td><strong>Muhlenbergia rigens</strong></td>
<td>Deer Grass</td>
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<tr>
<td><strong>Muhlenbergia ‘White Cloud’</strong></td>
<td></td>
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<tr>
<td><strong>Myoporum parvifolium</strong></td>
<td>Myoporum</td>
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<tr>
<td><strong>Myrtus communis</strong> (not ‘Compacta’)</td>
<td>True Myrtle</td>
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<tr>
<td><strong>Nandina domestica ‘Nana’</strong></td>
<td>Dwarf Heavenly Bamboo</td>
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<tr>
<td><strong>Nassella / Stipa cernua</strong></td>
<td>Nodding Needlegrass</td>
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<tr>
<td><strong>Nassella / Stipa lepida</strong></td>
<td>Foothill Needlegrass</td>
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<tr>
<td><strong>Nassella / Stipa pulchra</strong></td>
<td>Purple Needle Grass</td>
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<tr>
<td><strong>Nerium dwarf forms</strong></td>
<td>Dwarf Oleander</td>
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<tr>
<td><strong>Nerium oleander and cultivars</strong></td>
<td>Oleander</td>
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<tr>
<td><strong>Oenothera berlandieri (speciosa)</strong></td>
<td>Mexican Evening Primrose</td>
</tr>
<tr>
<td><strong>Oenothera californica</strong></td>
<td>Evening Primrose</td>
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</table>
### UNDERSTORY PLANTING PALETTE

<table>
<thead>
<tr>
<th><strong>NOTES</strong></th>
<th><strong>Oenothera elata</strong> Evening Primrose</th>
<th>Attracts songbirds and butterflies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Opuntia basilaris</strong> Beavertail Cactus</td>
<td>Deer resistant; attracts large numbers of native bees</td>
<td></td>
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<tr>
<td><strong>Opuntia ficus-indica</strong> Indian Fig</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Opuntia robusta</strong> Giant Prickly Pear</td>
<td>Tolerates full shade; may be difficult to remove once attached to buildings/walls</td>
<td></td>
</tr>
<tr>
<td><strong>Pachycereus marginatus</strong> Mexican Fence Post Cactus</td>
<td>Water deeply and infrequently to develop drought tolerance; attracts butterflies</td>
<td></td>
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<tr>
<td><strong>Parthenocissus tricuspidata</strong> Boston Ivy</td>
<td>Lady's Slipper, Slipper Plant</td>
<td></td>
</tr>
<tr>
<td><strong>Passiflora caerulea</strong> Passion Vine, Blue Passion Flower</td>
<td>Requires regular water; will grow as small tree without regular pruning</td>
<td></td>
</tr>
<tr>
<td><strong>Pedilanthus macrocarpus</strong> Pachytylum</td>
<td>Deciduous; tolerates light shade; attracts hummingbirds</td>
<td></td>
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<tr>
<td><strong>Pennisetum x advena 'rubrum'</strong> Red Fountain Grass</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Penstemon eatonii var. eatonii</strong> Firecracker Penstemon</td>
<td>Attracts hummingbirds and butterflies</td>
<td></td>
</tr>
<tr>
<td><strong>Penstemon heterophyllus</strong> Foothill Penstemon</td>
<td>Attracts hummingbirds and butterflies</td>
<td></td>
</tr>
<tr>
<td><strong>Penstemon spectabilis</strong> Showy Penstemon</td>
<td>Attracts hummingbirds and butterflies</td>
<td></td>
</tr>
<tr>
<td><strong>Perovskia atriplicifolia</strong> Russian Sage</td>
<td>Requires regular water; will grow as small tree without regular pruning</td>
<td></td>
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<tr>
<td><strong>Philadelphus lewisi and cultivars</strong> Wild Mock Orange, Lewis Mockorange</td>
<td>Attracts songbirds and butterflies</td>
<td></td>
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<tr>
<td><strong>Phormium tenax and cultivars</strong> New Zealand Flax</td>
<td>Chinese Photinia, Chinese Hawthorn</td>
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<tr>
<td><strong>Phyllanthera serratifolia</strong> (serafatifolia)</td>
<td>Attracts birds and bees</td>
<td></td>
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<tr>
<td><strong>Pitopsis eugenioides</strong> Tarata, Lemonwood</td>
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<td></td>
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<tr>
<td><strong>Pitopsis tenfolium</strong> Kohuho</td>
<td></td>
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<tr>
<td><strong>Pitopsis tobra 'Wheelen'</strong> Dwarf Mock Orange</td>
<td>Low maintenance</td>
<td></td>
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<tr>
<td><strong>Plumago scandens</strong> Plumago</td>
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<tr>
<td><strong>Plumago auriculata (P. capensis)</strong> Cape Plumago</td>
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<tr>
<td><strong>Prunus caroliniana</strong> Carolina Laurel Cherry</td>
<td>Attracts birds</td>
<td></td>
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<tr>
<td><strong>Prunus ilicifolia (ssp. ilicifolia)</strong> Holly Leaf Cherry</td>
<td>Attracts songbirds and butterflies</td>
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<tr>
<td><strong>Prunus ilicifolia lyonii</strong> Catalina Cherry</td>
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<tr>
<td><strong>Prunus lusitanica</strong> Portugal Laurel</td>
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<tr>
<td><strong>Punica granatum 'Wonderful'</strong> Pomegranate</td>
<td>Attracts hummingbirds</td>
<td></td>
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<tr>
<td><strong>Ranunculus californicus</strong> California Buttercup</td>
<td>Summer deciduous; attracts butterflies</td>
<td></td>
</tr>
<tr>
<td><strong>Rhamnus (Frangula) californica cultivars</strong> Coffeeberry</td>
<td>Attracts songbirds and butterflies</td>
<td></td>
</tr>
<tr>
<td><strong>Rhamnus (Frangula) californica Eve Case</strong> California Coffeeberry</td>
<td>Attracts songbirds and butterflies</td>
<td></td>
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<tr>
<td><strong>Rhamnus alaternus</strong> Italian Buckthorn</td>
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<tr>
<td><strong>Rhamnus crocea</strong> Redberry</td>
<td>Attracts songbirds and butterflies</td>
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<table>
<thead>
<tr>
<th><strong>NOTES</strong></th>
<th><strong>Rhaphiolepis dwarf forms</strong> Dwarf Indian Hawthorn</th>
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<tbody>
<tr>
<td><strong>Rhaphiolepis indica</strong> India Hawthorn</td>
<td>Attracts birds</td>
<td></td>
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<tr>
<td><strong>Rhaphiolepis umbellata</strong> Yeddo Hawthorn</td>
<td>Attracts birds</td>
<td></td>
</tr>
<tr>
<td><strong>Ribes malvaceum</strong> Chaparral Currant</td>
<td>Prefers acidic soil; summer deciduous; attracts hummingbirds, songbirds, butterflies</td>
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<tr>
<td><strong>Ribes sanguineum</strong> Red Flowering Currant</td>
<td>Attracts hummingbirds and butterflies</td>
<td></td>
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<tr>
<td><strong>Ribes speciosum</strong> Fuchsia-flowering Gooseberry</td>
<td>Attracts hummingbirds and songbirds</td>
<td></td>
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<tr>
<td><strong>Ribes viburnifolium</strong> Evergreen Currant</td>
<td>Great under oaks; attracts birds</td>
<td></td>
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<tr>
<td><strong>Romneya coulteri</strong> Matilija Poppy</td>
<td>Can be invasive; deciduous summer-fall</td>
<td></td>
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<tr>
<td><strong>Rosa banksiae</strong> Lady Banks' Rose</td>
<td>Prune after flowering; shade tolerant, attracts bees, butterflies, and birds</td>
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<tr>
<td><strong>Rosa 'Blaze'</strong> Climbing Rose</td>
<td></td>
<td></td>
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<tr>
<td><strong>Rosa californica</strong> California Rose</td>
<td>Attracts songbirds and butterflies</td>
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<tr>
<td><strong>Rosa 'Cecile Brunner'</strong> Cecile Brunner Rose</td>
<td></td>
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<tr>
<td><strong>Rosa 'Flower Carpet'</strong> Carpet Rose</td>
<td>Attracts butterflies</td>
<td></td>
</tr>
<tr>
<td><strong>Rosa nuckana var. nuckana</strong> Nootka Rose</td>
<td>Attracts songbirds and butterflies</td>
<td></td>
</tr>
<tr>
<td><strong>Rosa woodsii var. ultramontana</strong> Interior Rose</td>
<td>Can be invasive; winter deciduous; attracts songbirds and butterflies</td>
<td></td>
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<tr>
<td><strong>Rosmarinus officinalis</strong> Rosemary</td>
<td>Attracts butterflies</td>
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<tr>
<td><strong>Rosmarinus officinalis cultivars</strong> Trailling Rosemary</td>
<td>Attracts butterflies</td>
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<tr>
<td><strong>Rosmarinus officinalis 'Lockwood de Forest'</strong> Prostrate Rosemary</td>
<td>Becomes woody and bare in center with age; attracts butterflies</td>
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<tr>
<td><strong>Rudbeckia hirta</strong> Black-eyed Susan, Gloriosa Daisy</td>
<td>Attracts butterflies</td>
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<tr>
<td><strong>Ruella brittoniana and cultivars</strong> Mexican Petunia</td>
<td>Attracts bees, butterflies, and birds</td>
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<tr>
<td><strong>Ruella peninsularis</strong> Desert Ruella</td>
<td>Attracts butterflies and hummingbirds</td>
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<tr>
<td><strong>Ruscus aculeatus</strong> Butcher's Broom</td>
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<tr>
<td><strong>Russelia equisetiformis</strong> Firecracker Plant</td>
<td>Attracts butterflies and hummingbirds</td>
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<tr>
<td><strong>Salvia 'Allen Chickering'</strong> Allen Chickering Sage</td>
<td>Attracts hummingbirds, songbirds, and butterflies</td>
<td></td>
</tr>
<tr>
<td><strong>Salvia apiana</strong> White Sage</td>
<td>Attracts hummingbirds, songbirds, bees, and butterflies</td>
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</tr>
<tr>
<td><strong>Salvia 'Bee's Bliss'</strong> Bee's Bliss Sage</td>
<td>Attracts hummingbirds, songbirds, and butterflies</td>
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</tr>
<tr>
<td><strong>Salvia brandegei</strong> Santa Rosa Island Sage</td>
<td>Attracts hummingbirds, songbirds, and butterflies</td>
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<tr>
<td><strong>Salvia chamaedryoides</strong> Gerander Sage, Blue Sage</td>
<td>Blooms more with more water; attracts hummingbirds</td>
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<tr>
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<tr>
<td>Salvia clevelandii</td>
<td>Cleveland Sage</td>
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<td>Salvia 'Dara’s Choice'</td>
<td>Dara’s Choice Sage</td>
</tr>
<tr>
<td>Salvia leucantha</td>
<td>Mexican Sage</td>
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<tr>
<td>Salvia leucophylla</td>
<td>Purple Sage</td>
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<tr>
<td>Salvia leucophylla 'Figueroa'</td>
<td>Figueroa Sage</td>
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<tr>
<td>Salvia leucophylla 'Point Sal Spreader'</td>
<td>Point Sal Spreader Sage</td>
</tr>
<tr>
<td>Salvia melifera</td>
<td>Black Sage</td>
</tr>
<tr>
<td>Salvia mollis</td>
<td>Black Sage</td>
</tr>
<tr>
<td>Salvia melifera 'Terra Seca'</td>
<td>Prostrate Black Sage</td>
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<td>Salvia sonomensis</td>
<td>Creeping Sage</td>
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<tr>
<td>Salvia sonomensis 'Mrs. Beard'</td>
<td>Mrs. Beard Sage</td>
</tr>
<tr>
<td>Salvia spathacea</td>
<td>Hummingbird Sage</td>
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<td>Sambucus mexicana</td>
<td>Elderberry</td>
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<tr>
<td>Santolina chamaecyparissus</td>
<td>Lavender Cotton</td>
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<td>Pincushion Flower</td>
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<td>Scilla peruviana</td>
<td>Peruvian Scilla</td>
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<td>Scrophularia californica</td>
<td>California Figwort</td>
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<tr>
<td>Sedum pachyphyllum</td>
<td>Jelly-bean</td>
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<tr>
<td>Sedum x rubrotinctum</td>
<td>Pork and Beans</td>
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<tr>
<td>Senecio cineraria</td>
<td>Dusty Miller</td>
</tr>
<tr>
<td>Senecio greyi (Brachyglossis 'Sunshine')</td>
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</tr>
<tr>
<td>Senecio mandraliscae</td>
<td>Blue finger</td>
</tr>
<tr>
<td>Senecio serpens</td>
<td>Blue chalksticks</td>
</tr>
<tr>
<td>Senecio viravira</td>
<td>Dusty Miller</td>
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<tr>
<td>Seneca phylodina</td>
<td>Silvery Cassia</td>
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<tr>
<td>Sesleria autumnalis</td>
<td>Autumn Moor Grass</td>
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<tr>
<td>Sesleria caerulea</td>
<td>Blue Moor Grass</td>
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<tr>
<td>Sisyrinchium bellum</td>
<td>Blue-eyed Grass</td>
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<td>Sphaeralcea ambigua and cultivars</td>
<td>Apricot Mallow</td>
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<td>Sporobolus aloides</td>
<td>Alkalai Sacaton</td>
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<td>Stachys byzantina</td>
<td>Lamb’s Ears</td>
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<thead>
<tr>
<th>UNDERSTORY PLANTING PALETTE</th>
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<tbody>
<tr>
<td>Symphoricarpos albus var. laevigatus 'Tilden Park'</td>
<td>Tilden Park Snowberry</td>
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<tr>
<td>Symphoricarpos mollis</td>
<td>Creeping Snowberry</td>
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<td>Sympyrischicum (Aster) chilensis</td>
<td>California Aster</td>
</tr>
<tr>
<td>Tecoma stans</td>
<td>Yellow Bells</td>
</tr>
<tr>
<td>Tecoma x ‘Orange Jubilee’</td>
<td>Orange Trumpet Bush</td>
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<td>Sunrise Esperanza</td>
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<tr>
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<td>Bush Germander</td>
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<tr>
<td>Tecoma x lucidryss</td>
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<tr>
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<td>Mountain Meadow Rue</td>
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<tr>
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<td>Star Jasmine</td>
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<td>Wooly Blue Curls</td>
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<td>Trifolium wormskoldii</td>
<td>Cow Clover</td>
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<tr>
<td>Tulbaghia violacea</td>
<td>Society Garlic</td>
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<td>Verbena ilicicifolia</td>
<td>Lilac Verbena</td>
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<td>Verbena rigida</td>
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<td>Viburnum tinus</td>
<td>Laurustinus</td>
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<td>Vinca minor</td>
<td>Dwarf Periwinkle</td>
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<tr>
<td>Vitis californica ‘Roger’s Red’</td>
<td>Roger’s Red California Grape</td>
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<td>Westringia fruticosa</td>
<td>Coast Rosemary</td>
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<td>Woodwardia fimbriata</td>
<td>Giant Chain Fern</td>
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<tr>
<td>Xylosma congestum</td>
<td>Shiny Xylosma</td>
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<td>Yucca baccata</td>
<td>Banana Yucca</td>
</tr>
<tr>
<td>Yucca (Hesperoyucca) whipplei</td>
<td>Our Lord’s Candle</td>
</tr>
<tr>
<td>Zantedeschia aethiopica</td>
<td>Calla Lilly</td>
</tr>
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7. Community Forest Management Guidelines

This section outlines the major strategies for managing the community forest, many of which have been adapted from classical forestry for use in the urban environment. It provides city staff with guidelines to assist them in monitoring and managing the rates of planting and removal and the overall composition of the forest. Policy makers, business people, developers and residents will find these strategies of interest since they set the context for day-to-day decisions affecting the forest.

From the perspective of the long-term health and appearance of the community forest, maintaining a diversity of tree species and ages is vital. A diverse forest, like a diverse natural ecosystem or a diversified economy, is likely to be more stable than a simple one. Should a pest, disease, climatic occurrence or other problem cause the removal of an entire species, diversity provides insurance against the kind of wholesale denuding of the forest cover that took place in many eastern communities with the invasion of Dutch elm disease.

1. **Monitor overall species and age diversity.**
   The city staff must keep track of the percentages of each species in the city and assess where imbalances may be developing. This monitoring will be a primary use of the city's tree inventory, with assessments made periodically.

2. **Encourage planting a variety of species and cultivars.** When a species begins to be over-planted, the City should discourage its use and recommend alternative species. A variety of cultivars of a single species might also be appropriate, if each is known to possess tolerances to certain conditions not found in the others. Although environmental stresses that are predictable will be selected against, a range of adaptability in the tree stock ensures against unanticipated problems. In general, the city as a whole should contain no more than 10% of any species, no more than 20% of any genus, and no more than 30% of any family. Species native to this area may be planted at 20% city-wide.

3. **Test new species and cultivars for wider application.** The City should actively seek to expand its palette of acceptable trees by test-planting species not widely planted here and monitoring their performance. Since availability is often a limiting factor to the use of new species, the City could contract with nurseries both to provide experimental stock and to supply usable quantities once a species is proven. The city might also contract to have nurseries provide oaks and other native species grown from local genetic stock rather than those developed elsewhere in California.

4. **Monitor pests and diseases within Thousand Oaks and other communities.** To prepare for problems which may entail largescale removal and replacement of trees, the City should actively monitor all major pest and disease populations, both locally and regionally, that could adversely affect its forest. Preparations should then include special preventative health care of targeted tree
species to help them withstand the disease, pest or other threat.

5. **Foster age diversity by immediately replacing trees as they are removed.** Replacement at removal will create a staggered-age new generation providing more or less continuous tree cover.

6. **Anticipate removals and plan for plantings accordingly.** To properly monitor age diversity, a useful life expectancy must be established for each species. This describes approximately how long the tree can be expected to remain in a healthy and vigorous condition, before serious decline sets in. At that point, the expense of maintaining the tree in a pleasing and non-hazardous condition may exceed the benefits it provides. Its removal should then be considered, although the final decision should be subject to the removal evaluation process per the latest City policies.

7. **Use the inventory to reduce operations and maintenance costs.** Refer to the Thousand Oaks Community Forest Implementation Recommendations for more information on how to use the inventory for:
   - Efficient scheduling
   - Accurate annual budgets
   - Preventative maintenance
   - Decreased liability
   - Timely removals
   - Balanced species composition

8. **Keep the inventory current.** In order to gain the full benefits of the inventory, it is essential that each servicing of a tree be recorded in the inventory, together with an updating of the information about the tree to reflect any change in its status or condition. An accurate inventory will serve as the nerve center of a forestry effort which maximizes both program efficiency and forest benefits.

9. **Inform the residents of the horticultural needs of trees fronting their property,** especially for drought-tolerant species in parking strips in front of houses.

**Removing Trees**

Tree removal is perhaps the most sensitive decision to be made regarding the community forest. The depth of people's attachment to trees and the benefits associated with them become clear when one is slated for removal. However, when seen in the context of the lifecycle of the forest, and when complemented by vigorous efforts to preserve and replant trees, removals are an essential part of the overall care of the forest. Establishing clear criteria and a well-defined process for determining removals will help ensure that this aspect of forest management is accepted by the community.

In general, trees in a city should be allowed to grow to the maximum age possible. Unlike traditional forestry management, where value is measured by monetary return when harvested, the value of city trees comes from their ability to grow old and large, providing shade and beauty. As a part of routine maintenance, all trees will be monitored for hazardous conditions.

The relationship between timely removals and the long-term health of the forest cannot be overemphasized. Educating the community about the benefits of a managed forest is essential to avoid problems later on. Meeting with environmental groups to explain city management policies, as well as informing the public about tree removal criteria, will help the tree removal process proceed more smoothly.
Volume 3: COMMUNITY PARTICIPATION & EDUCATION

Volume 3 suggests ways of involving members of the community in forestry issues and practices. Primarily meant for use by city staff, it will also prove useful to citizens interested in promoting community forestry.

1. Introduction
The community forest is inextricably linked to the people of Thousand Oaks - the residents, business people, institutional employees, and city staff whose collective decisions have a cumulative impact on the viability of the forest. Involving as many people as possible in the processes of creating and maintaining the forest increases its visibility to all people in the community, thus ensuring its long term health and growth.

This volume suggests ways to involve the people of Thousand Oaks in the creation and maintenance of their community forest. It is primarily intended for use by city staff, but anyone interested in promoting the community forest will find it useful.

Who to Involve in the Community Forest
The entire community benefits from an extensive, healthy, well-designed forest, as envisioned and described in the previous volumes of this plan. Yet without an informed, involved populace, such a forest is difficult to attain. Each individual tree requires proper care to thrive, while the forest as a whole needs long-term planning and support to assure its growth. Community involvement is therefore essential to the life of the forest.

The following paragraphs describe who might be involved in the decisions regarding the community forest.

Residents of Thousand Oaks are perhaps most emotionally affected by decisions regarding the forest. Those who call the city home are apt to feel somewhat proprietary about its public amenities, of which the community forest is among the most visible elements.

In regards to the forest, residents will have particular interest in their immediate neighborhood or street. But as the City's commitment to its forest grows, there will also be increasing numbers who are passionately interested in citywide tree issues.

Contact with residents can be on an individual basis, as in City-initiated newsletters delivered to all households, or through groups such as homeowners' associations or neighborhood-improvement
organizations. The formation of such groups should be encouraged, in order to help disseminate information and enlist support for the forest. Organizations also create social bonds that help build community spirit.

Local business of all kinds, including large corporations with local offices, benefit from the community forest. A community full of trees makes the city a more attractive place to do business, helps attract and keep workers, and reduces energy costs. Trees planted on or near business sites have a positive impact on the image of the business as well as the city as a whole. Treelined commercial districts draw more customers than treeless ones. Corporate campuses with impressive groves to relax in with clients or during lunch are far more memorable than corporate landscapes of grass berms and shrubs. Industrial sites are often improved by the screening effects of trees. Shade trees in parking lots and near buildings can greatly reduce cooling costs. It should be noted that the enhanced public image resulting from the private sector’s involvement in the community forest is also an effective marketing strategy.

The type of involvement depends on the type of business. Developers play a major role in the community forest’s growth, of course, but so can other businesses if given the opportunity and inspiration. As with residents, interaction may be between the City and individual business people or groups of businesses. Such groups can be particularly influential in the expansion of the forest, especially when their intent is to make commercial districts more attractive and humane.

Institutions - schools, hospitals and libraries offer many opportunities for the community forest. Their grounds provide room to expand the forest, and their strong connections to the community create a natural interest in the forest. Schools and libraries are especially invaluable in their role as community teachers, but will need city support and advice to fully develop this function.

Organizations such as Girl Scouts, Boy Scouts, community volunteer groups, civic organizations, and environmental groups can be encouraged to play an active role in the creation and maintenance of the forest. These groups will assist with community education as well as participating in the physical needs of the forest. Outreach programs aimed at these groups will ensure their ongoing interest and participation.

2. Involving the Community

This section describes some of the many ways to bring the community into the process of creating and maintaining the forest.

2.a Types of Participation

The primary avenues for community participation in the forest fall into the following categories:

Selecting trees. Residents usually have a strong notion of how their neighborhood should look and what its character should be. In addition, having a hand in the design process will result in a more personal connection between residents and their neighborhood, engendering greater pride of place. Citizens should therefore be brought into this process as much as possible to review planting plans for their areas.

Planting trees. While all work associated with the forest is important, perhaps the most satisfying job is planting trees. This is where people develop emotional attachments and a lifelong interest in the forest. The more individuals who personally plant a tree in the city, the greater the long term support for the forest.
This axiom is especially applicable to the children of Thousand Oaks. Setting a goal of having each child plant a tree ensures that the ideals of the community forest will be carried into the next generation.

Maintaining trees. Residents already play a hand in the maintenance of the neighborhood street trees - many people at least water the tree fronting their house, and some go beyond this to include fertilizing, minor pruning and the like. Providing residents with standards for care will result in healthier trees. In addition, residents as well as businesses should be alerted to signs of poor tree health or maintenance. Having all eyes focused on the forest will increase the ability of the forestry staff to engage in preventive maintenance, possibly saving trees in the early stages of ill-health and eliminating potential accidents.

Funding tree planting or maintenance. Providing the mechanism for citizens, including businesses and institutions, to donate money earmarked for this work is an important avenue of participation, particularly for people with time or physical constraints.

Providing land for expansion of the forest. Landowners with room to spare can be brought into the forestation process without sacrificing property rights. The benefits of trees to the community - and to the planet - provide convincing reasons to join the effort.

Advising the City on forestry decisions. As particular issues arise, the City may consider forming ad hoc advisory committees to provide a connection between the city bureaucracy and citizens, as well as a way for both sides to exchange information and voice concerns. The city forestry staff cannot be expected to handle every decision about every tree in the forest without such help. Encouraging citizen input will give weight to the term “community forest.”

Educating others about the forest. The community’s teachers, biologists, naturalists, historians, artists, landscape architects, and horticulturists all have a great deal to offer toward this worthy endeavor.

2.b Ways for Residents to Participate
- Encourage neighborhood tree associations to ensure a close relationship between residents and their part of the forest. Activities could include planting parties and maintenance workshops, as well as celebratory events, all of which help build ties between neighbors.
- A participatory process should be used when city staff begin planning for tree plantings or removals in a neighborhood. This process might include community meetings, preference surveys, or design charrettes. It is advisable to seek the needs and preferences of residents in the case of neighborhood parks as well.
- Residents interested in planting trees community-wide might form a nonprofit organization based on San Francisco’s “Friends of the Urban Forest” or Los Angeles’ “Tree People.” However, while such groups can play an invaluable role in the community forest, they should not be expected to substitute for city support and forestry resources. If such a group is formed, and depending on the available resources, the City should offer assistance and legitimization by way of seed money, grant-writing assistance, technical advice, meeting space and staff assistance.

2.c Getting the Participation of Business
- Inform businesses of options for supporting the forest. A pamphlet describing the benefits of trees could be distributed to the business community.
- Inform retail businesses of the decision-making process regarding street trees. Involve those interested in the process as much as possible.
- Businesses with large reserves of land in Thousand Oaks should be encouraged to join the growing ranks of companies nationwide that are converting portions of their holdings to wildlife habitat. Some ways this can be done:
  - Convert standard turf to native grasses, which have a higher wildlife value (and require no summer water).
  - Create shrubby edges to allow hiding and nesting places for wildlife.
  - Include as many native species of plants as possible.
  - Include plants that provide sources of food for a variety of creatures. A single oak, for example, can support more than 300 species of insects, which in turn support dozens of species of birds. Acorns from oaks also feed a wide variety of
2. The Role of Institutions

Schools offer perhaps the greatest opportunity for participation in community forest programs. Our youngest citizens are tomorrow's caretakers of the forest, so concentrating outreach efforts on them will have important long term benefits.

The outdoor environment of most American schools consists of equal parts asphalt and grass, with a scattering of trees (often in street-tree-like rows), some play or recreation equipment, and lunch tables. This type of schoolyard is usually a sterile place, not conducive to outdoor learning or creative play. The extension of the community forest into the schoolyards of Thousand Oaks can help remedy this situation.

There are many creative ways to bring the community forest to the schools, such as:

- The oak-woodland ecosystem has particularly high value for both play and learning. Its place in the city's natural and social histories lends itself to a variety of lessons, while the playfulness comes from bringing a bit of the wild into the schoolyard. Oaks combined with appropriate understory plants provide a rich environment for fantasy play, hide and seek, building forts, and all the other kinds of play not generally provided for in standard schoolyards. Elementary schools should include such places on their campuses.

- Plant groves of fruits, nuts, or hardwoods to act as hands-on educational labs as well as potential sources of revenue for the schools. Such groves would be best suited to high schools or colleges, where classes in the life sciences, agriculture, community forestry and woodworking could all have a hand in care and planting.

- School groups could help plant heritage oaks in open space or parks. Such efforts could be used both to express community pride and to provide living science lessons and a source of ongoing experiments in wildlife biology, botany, and similar subjects.

- Involve students of all ages in tree planting, particularly plantings at schools. Personal involvement in the process will reduce the likelihood of vandalism and damage due to carelessness (a potential problem with young children unschooled in the ways of newly planted trees).

- Use the Master Plan in the classroom. The subject is a natural for civics classes as well as the sciences. Additionally, the California Department of Education provides resources for environmental education curriculum. A wide variety of topics are covered, including forestry and fire protection.

- Set up nesting boxes for various birds (owls and other raptors adjust particularly well to these manmade homes). The local Audubon Society is one source of information for the specifics of this project.

- Sponsor a workshop bringing together city staff and local teachers to brainstorm other ways to bring the community forest into the classroom.

Libraries are symbols of the community's commitment to lifelong learning. The library should act as the prime repository for books and publications on trees and community forestry, since it is accessible to the entire community. The Center for Oak Tree Studies should be re-established and expanded to include all available resources on the community forest.

In addition to the indoor possibilities, a grove of trees on the grounds of the main library could act as a shady reading and resting spot as well as reflect the bookish contents of the building. Trees with literary associations could be used to create the structure for a Great Books Garden, for example.

Hospitals are the community's place for healing. As such, they are appropriate places to represent the overall health of the community as symbolized by the planting of trees. A grove of trees with medicinal value would make an appropriate “outdoor room” for patients, visitors and staff to use. One quarter of prescribed drugs in the U.S. pharmacopea contain plant derivatives; examples of species include Salix alba and the native Rhamnus pershiana.
2.e How Organizations Can Help
Environmental groups need no convincing about the benefits of trees. Some tasks that might be carried out with their help:

- Planting parking lots to reduce the heat-island effect in the city.
- Replanting native oak woodlands in the area’s appropriate open lands.
- Restoring creeks to their native state through tree planting and, in the case of culverted creeks, replacing concrete ditches with more natural forms of flood control, such as rock gabions or willow wattling.
- Establishing “Clean Air Groves.”
- Join the California ReLeaf network for statewide support of community forestry projects.
- Helping businesses convert company land to wildlife habitat.

3. Spreading the Word
The City can instigate a number of programs to increase community awareness of its forest resource. These actions fall into three broad categories: publicizing city policies (including this Master Plan), soliciting community support and enthusiasm, and educating people about trees and the forest as a whole. This section suggests ways to do this, organized in these categories.

3.a Publicizing City Policies
- Publicize the Master Plan on the City website, in local newspapers (both online and print), and flyers posted at local nurseries.
- Invite citizens to a community forestry open house, attended by all city staff members involved in the forest’s creation and care. This could be a special focus during Public Works Week.
- Make the Master Plan easily available; keep a digital file posted for public access on the City website.

3.b Soliciting Community Support
- Publish a pamphlet that illustrates the steps a citizen needs to take to plant a tree. Include horticultural basics as well as bureaucratic steps. Include a reference to the detailed planting and maintenance information found in the Thousand Oaks Planting and Maintenance Manual. The pamphlet can be posted digitally to the City’s website, as well as distributed to homeowner’s associations and other community organizations. Printed copies can be made available at city libraries and other public facilities.
- Continue to support the Arbor/Earth Day celebration in April. Use this event as a venue for interaction between city staff, environmental groups, and the general community to build support for forestry efforts.

3.c Providing Education
- Produce pamphlets that give residents guidance on tree planting and care. Pamphlet topics could include: proper tree pruning and reasons to not top trees, the benefits of deep-watering street trees, keeping a two-foot circle around the trunk free of other plantings, and keeping a minimum 4’ x 6’ planting area around street trees if installing pavement near them. These maintenance efforts will greatly enhance the health of the city’s street trees.
- Offer hands-on tree-care workshops, either free or with fees going to support the community forest.
- Continue to engage the public during Public Works Week as an opportunity for the community to learn about community forestry.

4. Conclusion
The adoption and subsequent updates of the Forestry Master Plan is an important opportunity to build public awareness and appreciation of the community forest. The undertaking of a comprehensive community forestry program is an important initiative for Thousand Oaks, and as such should receive ample attention. The City should continue to involve residents in the review, implementation, and future updates of the Forestry Master Plan.
BIBLIOGRAPHY


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Tree & Plant Palette Sources (2017)


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City of Oakland. *Green Streets.*


ADDITIONAL RESOURCES

American Forests
1220 L Street, NW
Suite 750
Washington, DC 20005
Phone: 202 737 1944
Web: www.americanforests.org

Summary: Our mission is to restore threatened forest ecosystems and inspire people to value and protect urban and wildland forests.

The Arbor Day Foundation
100 Arbor Avenue
Nebraska City, NE 68410
Phone: 1 888 448 7377
Web: www.arbordayfoundation.org

Summary: The Arbor Day Foundation is a 501(c)(3) nonprofit conservation and education organization. A million members, donors, and partners support our programs to make our world greener and healthier.

Tree City USA Summary: The Tree City USA program has been greening up cities and towns across America since 1976. It is a nationwide movement that provides the framework necessary for communities' to manage and expand their public trees. Tree City USA is an Arbor Day Foundation Program in cooperation with U.S. Forest Service, U.S. Department of Agriculture’s Urban and Community Forest, and the National Association of State Foresters.

California Oaks
428 13th Street, Suite 10A
Oakland, CA 94612
Phone: 510 763 0211
Web: www.californiaoaks.org

Summary: California Oaks is a project of the California Wildlife Foundation.

Cal Poly San Luis Obispo Department of Forestry & Natural Resources (NRES)
Cal Poly San Luis Obispo
San Luis Obispo, CA 93407
Phone: 805 756 2702
Web: http://nres.calpoly.edu/fnr/index.ldml

Summary: The Society of American Foresters accredits the Forestry & Natural Resources (NRES) program. Graduates are employed throughout the world: establishing, managing and sustaining forests and urban wildland areas; providing opportunities for a full range of uses; teaching; extension; research; and protecting the environment.

Cal Poly Urban Forestry Ecosystems Institute
Urban Ecosystems Institute
NRES Department
California Polytechnic State University
San Luis Obispo, CA 93407
Web: http://uei.calpoly.edu/index.lasso

Summary: The Urban Forest Ecosystems Institute addresses the in creating need for improved management of the urban forests in California.

TreePeople
12601 Muholland Drive
Beverly Hills, CA 90210
Phone: 818 753 4600
Web: www.treepeople.org

Summary: TreePeople inspires and supports the people of LA to come together to plant and care for trees, harvest the rain, and renew depleted landscapes. We unite with communities to grow a greener, shadier, and more water-secure city at homes, neighborhoods, schools and in the local mountains. We work with volunteer leaders using our unique Citizen Forester model, and we influence government agencies for a healthy, thriving Los Angeles. We have involved more than 2 million people in planting and caring for more than 2 million trees.

State of California Governor’s Office of Planning and Research: Urban Forestry
Web: https://www.opr.ca.gov/s_urbanforestry.php

Summary: Office of Planning and Research
(OPR) provides the following information for local governments to plan for a healthy urban forest that optimizes the benefits urban forests can provide to the environment, public health, economy and more.

- CAL FIRE Urban Forestry Program, Regional Staff, and Grants
- California Urban Forestry Act of 1978
- Strategic Council Urban Greening Grants
- USDA Forest Service Urban and Community Forestry
- CA Urban Forests Council Management Plan Toolkit
- ISA Tree Ordinance Guidelines
- US EPA Heat Island Mitigation Strategies
- US Forest Service Pacific Southwest Research Station
- US Forest Service Urban Forests and Climate Change
- University of Illinois, Landscape and Human Health Laboratory
- University of Washington, Green Cities

**California ReLeaf**
2115 J Street, Suite 213
Sacramento, CA 95815

Phone: 916 497 0034
Web: www.californiareleaf.org

**Summary:** California ReLeaf works statewide to promote alliances among community-based groups, individuals, and encouraging each to contribute to the livability of our cities and the protection of our environment by planting and caring for trees.

**International Society of Arboriculture**
PO Box 3129
Champaign, IL 61826

Phone: 217 355 9411
Web: www.isa-arbor.com

**Summary:** Through research, technology, and education, the ISA promotes the professional practice of arboriculture and fosters a greater worldwide awareness of the benefits of trees. Includes a Western Chapter.

**Society of Municipal Arborists**
Phone: urbanforestry@prodigy.net
Web: www.urban-forestry.com

**Summary:** SMA is an organization of municipal arborists and urban foresters, and consultants, commercial firms and citizens who actively practice or support some facet of municipal forestry.

**Wildlife Habitat Council**
8738 Colesville Road, Suite 800
Silver Spring, MD 20910

Phone: 301 588 8994
Web: www.wildlifehc.org

**Summary:** The Wildlife Habitat Council promotes and certifies habitat conservation and management on corporate lands through partnership and education.

**National Tree Benefit Calculator**
Developed by Casey Trees, Washington, D.C.
Web: www.treebenefits.com/calculator/

**ASLA Health Benefits of Nature**
American Society of Landscape Architects, Professional Practice
Web: https://www.asla.org/healthbenefitsofnature.aspx

**Summary:** Webpage contains links to research that proves what we all know to be true: nature is good for us and has both long and short term mental and physical health benefits. Here, hundreds of free research studies, news articles, and case studies are organized by adult and children health topic.