SAN DIEGO TREE ADVOCACY HANDBOOK
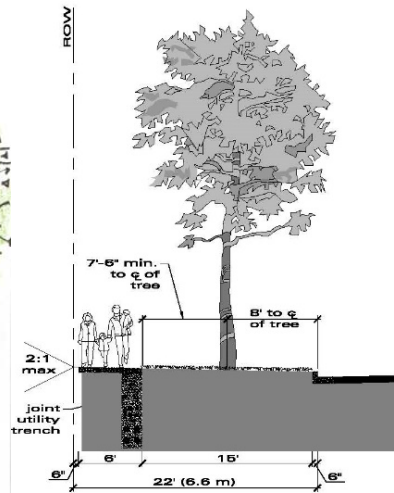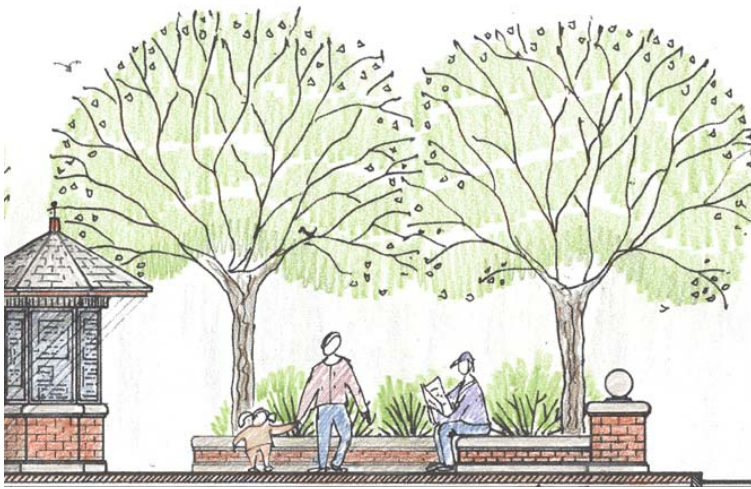

Reference Handbook for Tree Advocacy Class

June 14 and August 9, 2017
Tecolote Nature Center

A link to this Tree Advocacy Handbook will be posted at http://sdrufc.com/resources/.

This handbook is a draft document. Corrections, suggested changes, and other comments are welcome, and can be sent to afege@sdrufc.com.

The Tree Advocacy Class gives an overview of these materials in a 2- to 3-hour class, and can be requested for a community or professional group by sending a note to Anne S. Fege at afege@sdrufc.com. A 10- to 15-minute presentation on trees and urban forestry is also available.

San Diego Tree Advocacy Handbook

Contents

Foreword

Community leaders and local professionals are often willing to support and speak out for trees and urban forest management, but they often don't know what, why, or how to ask. This Tree Advocacy Handbook, and the accompanying Tree Advocacy Class, assembles relevant local information on city policies and practices, as well as the principles and resources for urban forest management. The handbook was originally written by local professionals for Ocean Beach and the City of San Diego (sometimes referred to as "City" in this handbook), and this revision broadens it to other cities in the San Diego Region. Hopefully it will inspire as well as inform!

Anne S. Fege, Ph.D., Chair, Community Forest Advisory Board,
and Executive Committee, San Diego Regional Urban Forests Council, June 2017

This handbook was begun by *Save Peninsula Trees* in San Diego's Ocean Beach community (OB) as a way to collaboratively process the tragic loss of three magnificent Torrey Pine trees (*Pinus torreyana*) in OB in the summer of 2016. It was a loss resulting from an inattention to, and a series of missteps in, local government management, municipal ordinances, and mature tree maintenance. Yes, the trees were over 100 years old and yes, even old trees eventually succumb to the ravages of time and humans, but what was glaring in the story was how much more *could* have been done to extend and conserve the 300 years of life in those much beloved public trees.

OB's iconic Saratoga Avenue Torrey pines are important both intellectually and spiritually. Many long-time residents just assume that everyone else understands how significant and unique these trees are; that they are an endangered species, that they are endemic to San Diego, that they provide the best needles for basket-making, that there are estimated to be less than 3,000 Torrey Pine trees remaining on the planet! Good grief, these trees are national treasures!

Some people in the community didn't know those particular facts, but they sure knew a beloved tree when they saw one! When the third tree within a six-month period was felled by City crews, the community stood up and spoke back. They gathered, listened, mourned, and responded to local government, not only on behalf of the rare Torrey pines, but on behalf of all public trees in their District. Seven other mature trees were identified and added to the Heritage Tree List, hopefully protecting them from future carelessness or neglect. Mitigation for the loss of those trees is ongoing, but that, too, could be *so much* better with more citizen participation.

The community embraced the recognition of its new stewardship with earnest, but as we looked into the various processes involved in the care and maintenance of City street trees, the more we realized that trees *really need* advocacy. They need an aware citizenry, a set of rules that protect them, and an investment of local government's time, funding, and energy to ensure the sustainability of the benefits provided by them. We also realized that local citizens *really need* a crib sheet: How do I protect a tree? Who do I call? Who's in charge? What trees are worth protecting? What's a tree violation? What's the process for tree removal? And therefore, the Handbook was started. And then a Tree Advocacy Class was organized and taught in OB on March 25, 2017.

Ocean Beach provides a great example of the potential of small, non-wealthy communities to positively affect climate change and quality of life, and conserve the many, many benefits that their public trees provide. Ocean Beach has a new "tree pride" and it feels good!

Save Peninsula Trees, March 2017

I. Why Advocate for Trees?

Trees along streets, in parks, and in open space areas provide shade, save energy, improve air quality and public health, mitigate climate change, reduce stormwater runoff, increase property values, create wildlife habitat, and enhance quality of life.

In California, the General Plans of most cities and counties have a strong urban forestry element. Increasingly, Climate Action Plans include a strategy that depends on trees to sequester carbon, reduce energy use, and make neighborhoods cooler. Armed with knowledge of the city laws, regulations, and processes, and what it takes for urban trees to thrive, tree advocates can influence positive change and work for better tree protection, management, and care city-wide.

Advocacy works! **Notable 2016-2017 Ocean Beach examples include:**

- Identifying the City and State regulations that protect Torrey pine trees.
- Completing the Heritage Tree nomination process for six additional Torrey pines and one Aleppo pine in Ocean Beach.
- Facilitating dialog with the City, with a short presentation from the City Forester to the Ocean Beach Planning Board and citizens.
- Completing the nomination process for District 2 representation on the Community Forest Advisory Program.
- Collaborating with the Point Loma community for support with City tree advocacy.
- Sponsoring the Tree Advocacy Class on March 25, 2017.

I. A. Trees in San Diego's History

Trees have played a substantial role in San Diego's history. Characterized by warm, dry summers and mild winters, San Diego's original, native habitat was drought-resistant chaparral and shrubby, sage scrub vegetation. Native oaks grew on the northern and eastern slopes while sycamore, cottonwood, and willow trees habited the riparian areas along creeks and rivers.

San Diego's steep topography and ocean proximity also created diverse habitats that enabled many non-native trees to thrive. Olive trees were cultivated in the 1790s, followed by eucalyptus trees in the 1800s. The agricultural planting of citrus trees in the 1900s was gradually replaced by urban development in the 1950s. For several decades, planners and landscapers have been incorporating trees into urban designs, but lax supervision and oversight between proposed and built designs, coupled with inadequate mitigation for trees removed during development, have resulted in a net loss of canopy.

Balboa Park began as 1,400 acres of land set aside in 1868 by San Diego civic leaders. Known then as "City Park", it was a scrub-filled mesa overlooking downtown San Diego. It has a rich history as it hosted world fairs, museums, art and culture, http://www.balboapark.org/info/history. Today, although the Park has been reduced to 1,200 acres, the compound supports more than 15,000 native and non-native trees and has become a significant horticultural and botanical resource.

In the late 1990s, the City of San Diego's mayor, city council and community leaders established urban forestry initiatives and, as a result, the Community Forest Advisory Board (CFAB) was established, the city was certified as a Tree City USA, and in 2005 a Tree Protection Policy was adopted. Urban forestry guidelines were incorporated into the General Plan in 2008,

and in 2016 the City finalized the Urban Forestry Program Five-Year Plan, a program designed to implement both the Climate Action Plan and the General Plan, and provide a guideline for the management and care of the City's 200,000 trees.

I.B. Benefits of Urban Trees

Our city's trees do more than just look beautiful. They positively affect climate change and ensure San Diego's sustainability. San Diegans' quality of life depends on the urban forest as trees also contribute to the sense of community, neighborhoods, energy savings, and air quality. Shade trees reduce pollution and the effects of "urban heat islands," and neighborhoods with generous tree canopies are uplifting and good for public health. Trees retain storm water, serving as "green infrastructure." Tree-lined streets have a traffic calming effect, and reduce noise pollution. Thriving trees on well-maintained streets also indicate pride of ownership.

Trees provide food, homes, and shelter for many native and migratory animals. Adding trees, particularly native trees, provides valuable habitat for wildlife. San Diego is often cited as a region with more plant and animal species than any other in the United States, yet urbanization and the destruction of valuable ecosystems have led to the decline of many indigenous species.

In Los Angeles, the non-profit organization, *Tree People*, supports people and communities who come together to plant and care for trees, harvest the rain, and renew depleted landscapes. Here are the top 22 benefits of trees listed by *Tree People* at https://www.treepeople.org/resources/tree-benefits:

Top 22 Benefits of Trees

Trees combat climate change: Excess carbon dioxide (CO_2) caused by many factors is building up in our atmosphere and contributing to climate change. Trees absorb CO_2, removing and storing the carbon while releasing the oxygen back into the air. In one year, an acre of mature trees absorbs the amount of CO_2 produced when you drive your car 26,000 miles.

Trees clean the air: Trees absorb odors and pollutant gases (nitrogen oxides, ammonia, sulfur dioxide and ozone) and filter particulates out of the air by trapping them on their leaves and bark.

Trees provide oxygen: In one year an acre of mature trees can provide enough oxygen for 18 people.

Trees cool the streets and the city: Average temperatures in Los Angeles have risen 6°F in the last 50 years as tree coverage has declined and the number of heat-absorbing roads and buildings has increased. Trees cool the city by up to 10°F, by shading our homes and streets, breaking up urban "heat islands" and releasing water vapor into the air through their leaves.

Trees conserve energy: Three trees placed strategically around a single-family home can cut summer air conditioning needs by up to 50 percent. By reducing the energy demand for cooling our houses, we reduce carbon dioxide and other pollution emissions from power plants.

Trees save water: Shade from trees slows water evaporation from thirsty lawns. Most newly planted trees need only fifteen gallons of water a week. As trees transpire, they increase atmospheric moisture.

Trees help prevent water pollution: Trees reduce runoff by breaking rainfall thus allowing the water to flow down the trunk and into the earth below the tree. This prevents stormwater from carrying pollutants to the ocean. When mulched, trees act like a sponge that filters this water naturally and uses it to recharge groundwater supplies.

Trees help prevent soil erosion: On hillsides or stream slopes, trees slow runoff and hold soil in place.

Trees shield children from ultra-violet rays: Skin cancer is the most common form of cancer in the United States. Trees reduce UV-B exposure by about 50 percent, thus providing protection to children on school campuses and playgrounds - where children spend hours outdoors.

Trees provide food: An apple tree can yield up to 15-20 bushels of fruit per year and can be planted on the tiniest urban lot. Aside from fruit for humans, trees provide food for birds and wildlife.

Trees heal: Studies have shown that patients with views of trees out their windows heal faster and with less complications. Children with ADHD show fewer symptoms when they have access to nature. Exposure to trees and nature aids concentration by reducing mental fatigue.

Trees reduce violence: Neighborhoods and homes that are barren have shown to have a greater incidence of violence in and out of the home than their greener counterparts. Trees and landscaping help to reduce the level of fear.

Trees mark the seasons: Is it winter, spring, summer or fall? Look at the trees.

Trees create economic opportunities: Fruit harvested from community orchards can be sold, thus providing income. Small business opportunities in green waste management and landscaping arise when cities value mulching and its water-saving qualities. Vocational training for youth interested in green jobs is also a great way to develop economic opportunities from trees.

Trees are teachers and playmates: Whether as houses for children or creative and spiritual inspiration for adults, trees have provided the space for human retreat throughout the ages.

Trees bring diverse groups of people together: Tree plantings provide an opportunity for community involvement and empowerment that improves the quality of life in our neighborhoods. All cultures, ages, and genders have an important role to play at a tree planting or tree care event.

Trees add unity: Trees as landmarks can give a neighborhood a new identity and encourage civic pride.

Trees provide a canopy and habitat for wildlife: Sycamore and oak are among the many urban species that provide excellent urban homes for birds, bees, possums and squirrels.

Trees block things: Trees can mask concrete walls or parking lots, and unsightly views. They muffle sound from nearby streets and freeways, and create an eye-soothing canopy of green. Trees absorb dust and wind and reduce glare.

Trees provide wood: In suburban and rural areas, trees can be selectively harvested for fuel and craft wood.

Trees increase property values: The beauty of a well-planted property and its surrounding street and neighborhood can raise property values by as much as 15 percent.

Trees increase business traffic: Studies show that the more trees and landscaping a business district has, the more business will flow in. A tree-lined street will also slow traffic – enough to allow the drivers to look at the store fronts instead of whizzing by.

Two organizations have made posters and flyers, that simply and clearly display the benefits of trees:

- Invest from the Ground Up, from California Urban Forests Council, "infographics" in English and Spanish on benefits of trees for communities, businesses, and residents, http://investfromthegroundup.org/resources/#Tools

- "Green Issue Briefs" from Casey Trees, http://caseytrees.org/issues/ , nine 2-page briefs on tree benefits for residences, jobs, neighborhoods, business districts, schools, parks, streets, and parking lots.

How Do You Calculate Tree Benefits?

U.S. Forest Service *i-Tree Streets* Programs

The U.S. Forest Service, in partnership with the U.S. Department of Agriculture and the Pacific Southwest Research Station, designed a *Trees Pay Us Back* campaign to highlight the *i-Tree* programs. This suite of software tools developed by the Service can calculate the benefits of trees and help users assess and manage the structure, function, and value of trees and forests regardless of community size or technical capacity. The program supports effective natural resource management by providing information for advocacy, planning, informed decision-making, and standardization for monitoring. It promotes a better understanding of the ecosystem services provided by trees and forests, and helps justify investment in stewardship, operations, and maintenance.

There are several applications; the *i-Tree Eco v6* program uses field data from inventories or sampled plots with local hourly air pollution and meteorological data to quantify forest structure, environmental effects, and values.

The *i-Tree Hydro* software simulates the effects of changes in tree and impervious cover on hourly stream flow and water quality. *Hydro* features pre-calculated topo indices that eliminate the need for GIS expertise, and applicability for non-watershed areas.

The *i-Tree Streets* program estimates ecosystem services and structure of street tree populations. It uses a sample or inventory to assess energy use, improved air quality, captured CO2, stormwater, and increased property values. The i-Tree applications can be accessed at http://www.itreetools.org.

Casey Trees Tree Benefit Calculator

The *Tree Benefit Calculator* is another online program based on the *i-Tree Streets* program and designed by Casey Trees and the Davey Tree Co. that allows anyone to make a simple estimation of the benefits that individual street-side trees provide. With inputs of location, type of tree and tree size, users can get an understanding of the environmental and economic value trees provide on an annual basis.

The program is intended to be simple and accessible and as such, makes a great starting point for understanding trees' value in the community. For access to the calculator and for more detailed information on urban forest assessments, see www.treebenefits.com/calculator/.

II. Where are the Trees?

The term "urban forest" generally refers to the trees growing within an urban area. The California Forestry Act of 1978 defines the urban forestry as "the cultivation and management of native or introduced trees and related vegetation in urban areas for their present and potential contribution to the economic, physiological, sociological, and ecological well-being of urban society."

San Diego's Urban Forest Management Five-Year Plan calls the urban forest "…simply trees and vegetation in and around a city environment. Like a natural forest, an urban forest is an entire ecosystem which includes trees on both public and private property. However, unlike a natural forest, an urban forest usually needs help from people to survive."

II.A. Tree Canopy Assessment

Tree canopy is one important measure of the urban forest resource, and the urban canopy refers to the layer of leaves, branches, and stems of trees that cover the ground when viewed from above. Although estimates of San Diego's tree cover vary, a study by American Forests showed that the City had lost 27 percent of its tree cover between 1985 and 2002 (http://www.ufei.org/files/pubs/SanDiegoUEA.pdf), mostly due to development. The City is currently removing many more trees than it is replacing and in the last several years the budget for tree planting, maintenance, inspections, and compliance has been drastically reduced.

How Much Canopy Do We Have?

In 2015 the City received a grant to complete a San Diego Urban Tree Canopy Assessment (UTCA) with the assistance of the University of Vermont Spatial Analysis Lab. The UTCA is a data-based program designed to help communities understand how much canopy they have and where they have room for additional trees. This analysis is based on the Light Detection and Ranging (LiDAR) remote sensing method was used to collect high-resolution aerial imagery for urban areas in San Diego County in 2014. The UTCA methodology is described at https://www.nrs.fs.fed.us/urban/utc/.

The geospatial information can be used to project and evaluate the existing canopy in dozens of ways, as well as targeting and conceptualizing specific areas where the canopy can be increased and improved. In addition to the vegetation mapping, the program provides information about all types of land cover including buildings, concrete and asphalt, and grey and green infrastructure. The data layers will be accessible on the SANGIS portal, and can be combined with health, pollution, watershed, and other data layers for analysis and planning. This tool can now be applied to setting and achieving the canopy goals in climate action plans.

The analysis covered all 18 cities in the County of San Diego, and tree cover ranged from 6 to 9% in Imperial Beach, Santee, and Coronado, to more than 20% in Del Mar, Encinitas, and Solana Beach. It estimated that 13% of land (42,266 acres) within the City of San Diego is covered by trees. Residential land use has the greatest percentage of land covered by tree canopy at 19%, followed by institutional 13%, commercial 12%, transportation (mostly street trees) 10%, and 2% in military areas.

How Many Trees Could We Have?

According to the UTCA, an additional 65% (120,000 acres) of the City of San Diego's land area could theoretically be modified to accommodate tree canopy, termed Possible Tree Canopy.

Within this category, 46% (90,000 acres) of total land area was classified as Vegetated Possible, another 19% as Impervious Possible (37,000 acres), and 27% (42,000 acres) generally not suitable for establishing new tree canopy (buildings and roads).

Most Community Plans set goals for tree planting. In order to increase tree canopy, these goals need to be translated into projects and funded using a variety of sources. Trees can be planted in streets and parkways, community centers, schools, colleges, and other public properties, State and Federal properties, and residential and commercial properties, especially parking lots. Other planting opportunities are in older established neighborhoods where trees may have declined and removed, in new treeless neighborhoods, around schools, along arterial streets, and in areas around freeway interchanges.

II.B. Street Tree Inventory

The City of San Diego's Streets Division completed a street tree inventory in 2002, estimating 200,000 street trees in San Diego. In 2015, the City received a grant from the Cal Fire Urban & Community Forestry Program to conduct an inventory of street trees, and a contractor selected to conduct the field work in 2017. Escondido and National City also were awarded grants for inventories.

For a street tree inventory, the following information is generally collected for each tree: mapping coordinate, parcel location, species, diameter, stems, condition, maintenance needs, hardscape conditions, growing space, and damage, growing space, and other notes. Inventories are commonly done by staff and/or contractors, and some cities have organized trained "citizen science" volunteers to collect data.

II.C. Infrastructure Asset Management

The City is currently working on an integrated Infrastructure Asset Management systems to manage infrastructure assets, including trees, at a desired level of service for the lowest lifecycle cost. This will enable the City to use information on assets to assess and measure lifecycle costs, evaluate the broader costs and benefits of infrastructure projects, and to develop optimal routine maintenance and capital investment strategies. Once implemented, routine tracking and reporting on trees will allow for the number of trees planted, maintained, and removed to be monitored for trends and management insight.

III. Who Owns the Trees?

To protect a public tree, you need to know who owns it. You also need to know your local leaders and representatives tallows you to help make trees a priority in your neighborhood and citywide. Engaging with city leaders about the issues impacting San Diego's trees is the best way to turn targets into allies.

III.A. Public Property

Public trees belong to the public, and most are managed by the City in its oversight of nearly 40,000 acres of land. This includes all street trees in public rights of way, and the trees in more than 340 public and pocket parks, including 25 miles of shoreline from Sunset Cliffs to La Jolla. Unfortunately, The City's land parcels can be viewed online through SANGIS in several layers, such as Parks and Recreation, Water, Streets, and housing. The SANGIS maps can be accessed at http://sandiego.maps.arcgis.com/apps/Viewer/index.

Street Trees

Street trees are located in medians and street rights-of-way, often on private property that has a City easement for the street, sidewalk and related improvements. Public street trees are managed by Transportation & Stormwater and an updated street tree inventory is underway. For tree replacements, the City encourages the use of native trees and highly recommends them for areas where growing space and soil type are conducive to healthy native tree development. The City created a Street Tree Selection Guide which has also been updated to identify additional species and remove those less suitable for street tree planting. The guide can be accessed at https://www.sandiego.gov/sites/default/files/legacy/street-div/pdf/treeguide.pdf.

Park Trees

Parks are important neighborhood amenities deserving of our collective attention and investment. Both state and city-owned parks provide tangible benefits to the community. Planting trees in these parks, which have significant planting space, will increase park use, reduce upkeep needs, and help the city achieve healthy tree canopy. The general fund is used to maintain trees in undeveloped open spaces and work is only done to remediate safety issues. The City's Open Space Division Canyon Program supports various groups by assisting with environmental education, canyon enhancement planning, weed management, trail maintenance, and kiosk installation. The City is currently revising the Parks Master Plan, last updated in 1956.

Some parks are supported by the community, sometimes with a non-profit organization. The non-profit Balboa Park Conservancy works with other organizations such as Tree San Diego, and supports a number of programs for trees, including an educational program for young tree stewards. For more information on the Conservancy and their programs, visit http://balboaparkconservancy.org/project/tree-stewards/.

Trees in Schoolyards

School districts own land, and install and maintain trees and other landscaping. Some school properties are managed as Joint Use parks with the City of San Diego's Park and Recreation Department. Some school campuses have trees and others are dominated by asphalt and lack trees, vegetation, and outdoor play areas. Extensive information about "Green Schoolyards" is found at http://www.greenschoolyards.org/

Some "joint use parks" are established cooperatively with the San Diego Unified School District and the City of San Diego, but generally have not planted trees as part of the improvement of the sports fields (https://www.sandiego.gov/planning/programs/parkplanning/playallday and https://www.sandiegounified.org/joint-use).

III.B. Private Property

Private properties in the City, including homes and businesses, provide good opportunities for expanding the city's tree canopy because they have available planting space, good soils, and property owners likely to care for trees. The City has a residential Tree Selection Guide to assist citizens in selecting the best tree for the space.

With respect to the City streets and rights-of-way, property owners are responsible for sidewalk damage when city trees are not involved. Private property owners may nominate significant trees on their property for the Heritage Tree Program.

III.C. State, Federal and Military Property

There are two state parks in the City of San Diego: Torrey Pines State Naturel Reserve (https://torreypine.org/) and and Old Town San Diego (http://www.parks.ca.gov/?page_id=663P\). Torrey Pines was originally designated as a City Park in 1889 and was later included within the State system and converted to a reserve. While current population numbers vary in the literature, the estimated remaining natural population of Torrey pines is less than 3,000 trees. https://torreypine.org/.There are ten State parks in other cities in San Diego County, mostly along beaches.

The only federally operated park within the County is the Cabrillo National Monument, managed by the U.S. National Park Service (NPS) For more information about the park go to https://www.nps.gov/cabr/index.htm. The USDA Forest Service manages the Cleveland National Forest in the County, but none of the land is within an urban area.

There are several military lands within the City, notably the Naval Bases Point Loma and San Diego, and the Marine Corps Recruit Depot. Military facilities have their own Natural Resource Management Plans (INRMPs) and staff who assess, monitor and maintain the vegetation.

IV. What Laws Apply to Trees?

Most laws governing trees are local, rather than state or Federal. The City of San Diego has laws, regulations and policies designed to counter tree canopy loss and enhance the current canopy. Urban forestry laws and policies are found in the General Plan, Community Planning documents, the City's Policies (guidelines), regulations and codes (laws), approved tree lists, and landscape, street, and other design manuals. This section outlines policies for the City of San Diego, and other local cities have some of the same policies.

Being familiar with these laws and regulations will allow you to know when and how to stand up for trees. Most are short and straightforward, but the wording is important. Some of the regulations, like parking notices, seem petty and insignificant, but non-compliance with the details is reflective of inattention and often a prevailing attitude. The City must comply with the California Environmental Quality Act (CEQA) for most plans and projects.

Many large trees on public property are protected under municipal laws, but ensuring that all the City's departments and divisions responsible for trees are actually complying with the codes and guidelines is the larger challenge. As an example, a locally contested tree removal was stopped (albeit temporarily) simply because the crew did not have signed copies of the removal permits with them…demonstrating the administrative record is the thread that unravels who's responsible. A citizen can always ask to see the paperwork that authorizes any public tree activity, and may insist on work stoppage until it is produced.

The City currently proposes to revise some of the tree regulations to streamline them as they are outdated, but the trees would benefit more from code revisions that strengthen rather than simply streamline. With environmental policies, streamlining frequently results in undermining the intent of the regulation and diminishing its power, so citizens should be wary of 'revisions' and request community participation in any changes to regulations affecting their neighborhoods. All San Diego City codes and policies can be accessed on the City's website https://www.sandiego.gov/city-clerk/officialdocs/legisdocs/muni, and a few of the more important codes are summarized below.

Guidance on tree ordinances is available at http://www.isa-arbor.com/education/onlineResources/treeOrdinanceGuidelines.aspx, and a long document providing guidelines for developing and evaluating tree ordinances is posted at http://www.isa-arbor.com/education/resources/educ_treeordinanceguidelines.pdf

IV.A. Policies and Municipal Codes

Council Policy 200-05, Planting of Trees on City Streets (1993).

This policy establishes guidelines for the planting and removal of trees from city street rights-of-way, http://docs.sandiego.gov/councilpolicies/cpd_200-05.pdf. The Park and Recreation Department has authorized Development Services to issue the No- Fee Permit, which is required for all street tree planting, pruning, and removal. This policy may also be revised to require property owners remove stakes and grates that restrict trunk growth.

City Council Policy 900-19. Public Tree Protection (2005).

This policy protects designated trees and includes the Heritage Tree Program with four categories for protection (see below) and stated penalties for unauthorized removals. The policy

may undergo revision to clarify the tree removal processes.
http://docs.sandiego.gov/councilpolicies/cpd_900-19.pdf

Municipal Code Chapter 14, Article 2, Division 4: Landscape Regulations.

Describes types of development affected, planting and irrigation requirements, street tree requirements, brush management regulations, and water conservation goals. Applies to new structure, additions, parking areas, and some other actions. The City is considering revisions, in the "11th land development code revision."
http://docs.sandiego.gov/municode/MuniCodeChapter14/Ch14Art02Division04.pdf

Municipal Code Chapter 6, Article 2: Public Rights-of-Way and Land Development, Division 6, Street Planting

Establishes rules and regulations to control and protect planting on city streets. City approval required for planting or removing street trees. Prohibits fastening animals, rope, wire, protective guards, and electrical devices to trees. City required to prepare street planting map.
http://docs.sandiego.gov/municode/MuniCodeChapter06/Ch06Art02Division06.pdf

Municipal Code Chapter 6, Article 3, 63.07, Protection of Torrey Pines (1952).

Torrey pines (*Pinus torreyana*) have been long recognized by the City of San Diego and are considered iconic landmarks, so much so that in order to further protect and highlight the significance and fragility of this remarkable species, the City adopted Municipal Code Chapter 6, Ordinance 63.07:

> *"§63.07 Destruction, Injury of Torrey Pines Trees — Prohibited that it shall be unlawful for any person or persons to cut, injure or destroy any trees known as the "Pinus Torreyana" growing upon ...or any other public lots or lands, belonging to and within the corporate limits of the City of San Diego. (Incorporated 1–22–1952 by O–5046 N.S.)"*

Torrey pines are the rarest pine in North America and are globally critically endangered. Most of the estimated less than 3,000 trees are protected within the TPSNR. With 99 percent of the world population in a single, fire-prone location, the species remains at great risk, and this heightens the importance of the outlying specimens in communities such as Ocean Beach. Within the City of Del Mar, the Torrey Pine is protected by law and has become their Heritage tree. Within Coronado, Torrey pines on public property have been identified in their Master Tree Inventory and have also been designated as Heritage Trees.

Any potential effects to these trees must also go through an environmental review process per regulations under the California Environmental Quality Act (CEQA), as Torrey pines meet the definition of rare or endangered under CEQA Guidelines §15125; (c) and/or §15380.

San Diego Traffic Control Bulletin No. 177

This seemingly small regulation can have a big impact on a neighborhood. When the City is preparing to conduct maintenance on trees, whether it's a removal, pruning, or planting, the contractors are required to provide 24 hours of no- parking notification prior to the commencement of activity, as outlined in https://www.sandiego.gov/sites/default/files/dsdib177.pdf. If the work involves closing off driveways, tenants and property owners should also be notified. If the City staff are communicating effectively through the Planning Boards and Town Councils, the community will already be aware of any upcoming tree activities and the no-parking signs will be expected. But as this is frequently *not* the case, the required appearance of the signs functions as an 11th hour alert that something will be happening to the trees. Ask the crew distributing the signs

what the extent of the activity is, ask to see the permit that authorizes the work, and if it seems unusual, ask to speak with an arborist in the Streets Department.

IV.B. Planning Documents

San Diego General Plan

The San Diego General Plan was adopted in 2008 and established specific urban forestry goals and the Plan's Conservation Element contains the goals of protecting and expanding a sustainable urban forest. The Policies address development of street tree master plans within community plans and implementing the plans through the development process. The *Conservation Element, Section J. Urban Forestry*, provides the most in-depth description and discussion of urban forestry and identifies the benefits of and policies relating to trees. The General Plan can be accessed at https://www.sandiego.gov/planning/genplan.

San Diego Climate Action Plan

The Climate Action Plan (CAP) was adopted in 2015 and identifies trees as a solution, and establishes canopy cover goals. The CAP calls for increasing urban tree coverage by 15 percent by 2020 and 35 percent by 2035. It also specifies completing the UTCA and implementing the UFMP. The City's Climate Action Plan can be accessed at

https://www.sandiego.gov/sites/default/files/legacy/mayor/pdf/2014/climateactionplan2014.pdf

Community Plans

There are 52 CPAs within the city, each with its own Community Plan. The intent of Community Plans is to establish specific neighborhood goals regarding planning and development, business, amenities, natural resources, and all elements of the community that define it. Some Plans address tree selection, while others do not. Community Plans typically follow the policies of the General Plan, further interpreting and refining them to suit the community needs and choices. The list of Community Plans currently being updated is at https://www.sandiego.gov/planning/community .

Ocean Beach Community Plan

The OB Community Plan is the community's policy statement regarding growth and development over the next twenty years; it was approved in 2015 and is posted at https://www.sandiego.gov/planning/community/profiles/oceanbeach/plan.. Critical to the community's vision is Section 7, the Conservation Element, and Section 7.7. specifically addresses Urban Forestry and Sustainable Landscape Design. Four of the elements are:

- *Require new development to retain significant and mature trees unless they are diseased and pose a threat to safety and welfare.*

- *Replace street trees that are 'missing' to restore a 'visual resource' or 'continuous canopy'*

- *Incorporate shade-producing street trees along all streets and roadways.*

- *Preserve Torrey Pines and other rare trees that exist throughout the community. Encourage new development to incorporate the Torrey Pine as a street tree along Saratoga Avenue to continue the existing character of the street.*

Urban Forestry Program Five-year Plan

An effective urban forestry program is critical to meeting the City's commitment to sustainability, carbon sequestration, storm water runoff reduction, wildlife habitat preservation and enhancement, water conservation, healthy communities, and climate change mitigation and resiliency, as set out in the General Plan and Climate Action Plan. The Urban Forestry Five-year Plan (UFMP) brings together existing policies and guidelines, best urban forestry management practices, and community planning, and is posted at https://www.sandiego.gov/sites/default/files/final_adopted_urban_forestry_program_five_year_plan.pdf .

The UFMP has been designed to provide the roadmap for the City's management of the urban forest, including implementing the goals and objectives of both the General Plan and the Climate Action Plan. The three primary goals of the urban forestry program are to:

- Increase the City's urban tree canopy cover, maximize the benefits of trees and preserve and increase the urban tree canopy cover.
- Maximize the efficiencies in maintaining the benefits of trees by unifying and coordinating the forest management practices, and promote inclusiveness, equity and effective communication with the urban communities.
- Minimize the risk of trees in the urban environment by improving the health of the urban forest with superior tree care and maintenance.

IV.C. The Heritage Tree Program

The City of San Diego's Heritage Tree Program, incorporated into Public Tree Protection Policy (No. 900-19) was designed to recognize, conserve and provide permanent protection for mature trees on public and private land. The Program provides special policies to protect designated trees located in the public rights-of-way, on city-owned open space, in parks or other publicly owned lands. It is also known as the "Conserve-a-Tree" program.

Anyone (individual citizen, community group, City staff, council member) can ask for a tree protection designation under one of four categories: Heritage, Landmark, Parkway Resource, or Preservation Grove. Nominated trees may be anywhere in public space, and a tree on private

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Torrey Pines in Ocean Beach

As of 2017, ten trees in Ocean Beach are on the Heritage Tree List. All of the trees are considered Landmarks and five have been designated both Landmark and Heritage Trees. Eight of the trees are situated along Saratoga Avenue, and nine of the ten are the rare Torrey pines. OB hopes to identify and nominate all the remaining significant trees in the community, and to continue their efforts with the City to have replacement pines planted along appropriate streets and in the Sunset Cliffs Natural Park.

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property may also be designated for protection. The policy does not restrict the removal of any designated tree, on public or private property, if the tree is a threat to public safety after reasonable efforts have been made for additional care, corrective actions or maintenance. Nomination forms can be accessed here: https://www.sandiego.gov/street-div/services/forestry/ Once the nomination has been submitted, each tree is assessed in terms of overall health, and if eligible, a monetary value is determined by the City Forester. The Community Forest Advisory Board reviews and makes a recommendation, and the City Forester makes the designation.

The monetary value is important as it is used to assess penalties for any damages or unnecessary death of the tree. For example, a large Torrey pine in Mission Beach was recently estimated to have a mitigation value in the 5-figure range, so potential penalties for damage are significant. The trees are also identified in the Master Tree Inventory and go on record as Heritage trees. For more information on how trees are assessed see www.treesaregood.org/treecare/resources/TreeValues.pdf . For protected trees, fines in the amount of up to 300% of the assessed value may be levied for anyone responsible for topping, pruning, or intentionally removing trees without permit or causing fatal damage to any tree found in the public ROWs.

IV.D. Other Guidance Documents

Tree ordinances are good tools for striving to attain a healthy and well-managed urban forest, but they cannot assure that the trees will be improved or even maintained, they simply provide the authorization and standards for management activities. The activities and policies must then be integrated into an overall management strategy (such as the UFMP) to be efficient and effective. For more information on how to draft ordinances and policies related to trees, the International Society of Arboriculture (ISA) has published several guidelines which can be accessed at http://www.isa-arbor.com/education/onlineResources/treeOrdinanceGuidelines.aspx.

Listed below are a few other documents that are relevant to various aspects of the City's tree maintenance and development activities:

Council Policy 100-21, Funding for Maintenance Assessment Districts (2004)

Street Design Manual. Specifications are provided for trees in residential, commercial, collector, and major streets.

Low Impact Development Design Manual. This document includes guidance for siting, installing, and maintaining bio-swales and other stormwater retention basins and structures.

Multiple Species Conservation Plan (MSCP). The MSCP is a regional effort to preserve a network of habitat and open space.

Clarification of Brush Management Regulations and Landscape Standards. This document pertains to development within the wildland/urban interface. It describes brush management and fire protection requirements.

Pedestrian Master Plan. This plan promotes the contribution of shade trees in enhancing the pedestrian experience, protecting walkers from the elements, providing visual interest, increasing safety from passing traffic, and buffering adjacent uses.

V. Who Takes Care of the Trees?

The policies, regulations, and planning documents establish a framework for planting, maintaining, preserving and enhancing a healthy urban forest. However, fiscal challenges in the past several years in most cities have resulted in limitations to tree planting and pruning, palm trimming, code compliance, and public education. Significant investments are needed to implement a management program to achieve a healthy urban forest, particularly for street tree planting and replacement, watering, and pruning.

In some cities, the urban forestry program is placed within the public works department and street trees are managed with streets, sidewalks, water, sewer lines, and underground utilities. Other cities place the program in the planning department, to ensure that trees and their management are incorporated into planning decisions and applications.

The success of an urban forestry program depends not only on the expertise of professionals, but also on the commitment of property owners, local businesses, and citizens to take care of all the trees in their communities.

V.A. City Government

At the City of San Diego, the urban forestry programs are overseen and coordinated by the City Forester, with advice from the Community Forest Advisory Board, and are then implemented through six City departments. While all six are involved with tree planning and policy issues, the Departments of Park & Recreation, Transportation & Stormwater, and Public Works have the most comprehensive roles in street tree care, and are involved in the preservation, maintenance, planting, risk management, and emergency response. Links to these departments are at https://www.sandiego.gov/city-hall/departments.

Department of Park and Recreation (Parks, open space, and maintenance assessment districts)

The Park and Recreation Department manages dozens of City parks and recreation centers, which may have trees as prominent vegetation or just around buildings. The Open Space Division manages more than 26,000 acres of open space, including canyons and parklands.

The City has 63 maintenance assessment districts (MADs) and Park & Recreation oversees 55 of them. Approximately 3,200 acres are citywide neighborhood canyons and parklands that are overseen by the Open Space Canyon Program staff. MADs maintain approximately 3,886 acres, and trees within the city's rights-of-way are regularly pruned and maintained through the program.

Department of Transportation and Stormwater (Street trees)

The Streets Division performs most of the street and sidewalk tree maintenance. The City conducted a sidewalk assessment and determined there are approximately 5,000 miles of sidewalk throughout San Diego. The Division is responsible for planting, maintenance, and preservation of all trees within the rights-of-way throughout the city that are not part of the MAD program.

The Division hires contractors to assist with the maintenance and planting work. One contractor is *Urban Corps*, a local non-profit conservation corps and charter school for youths in work-learn programs who plants trees for the city. Each year more than 1,000 trees are planted in the public rights-of-way. The city requires the adjacent property owner to maintain the trees, and obtains signed agreements from property owners who commit to regular watering. Funding for tree replacement is from the city's general fund.

Development Services Department (Code Compliance)

The Development Services Department (DSD) reviews and approves permits for development on private land. The Code Enforcement section is responsible for adherence to City regulations and responds to community concerns regarding compliance. DSD oversees the permitting for both planting and removal of trees under the City's jurisdiction, including the No-Fee Tree Permit.

Planning Department (Community Plan updates)

The Planning Department is responsible for land use policies and regulations, for developing the General Plan and more specific plants (such as the Urban Forest Management Five-year Plan and the Parks Master Plan), and for updating community plans. Many resources are posted on the Community Planning site, https://www.sandiego.gov/planning/community. The Planning Department is responsible for the administrative aspects and central coordination of the citywide Urban Forestry Program

Department of Economic Development (Business districts)

The Department of Economic Development is responsible for the administration and oversight of the trees within eight MADs and Business Improvement Districts (BIDs). The districts are, for the most part, adequately funded to maintain trees. The Chief Sustainability Office provides leadership for implementation of the Climate Action Plan.

Public Works (Capital Improvement Program)

The Public Works Department provides engineering services, including technical and operational support, design, and construction for the Capital Improvement Program (CIP). The department is also involved in planning and policy and the development of public infrastructure and facilities.

Community Forest Advisory Board (CFAB)

The Community Forest Advisory Board has members from each of the nine City Districts who are involved with tree issues and actions. In addition to the representatives, the Board includes the Chair, a landscape architect, certified arborist, horticulturist, non-profit representative, and an artist. Members are appointed by the Mayor, confirmed by the City Council, and serve no more than two three - year terms and/or until a successor is appointed. The meetings are also attended by departmental staff, including the Urban Forester and City Arborists.

The CFAB provides recommendations for the urban forestry master plan and tree inventory, revisions to forestry-related policies and programs, networking with boards, agencies, and communities, promoting volunteerism, reviewing compliance with policies and programs; advocating for funding, and promoting a strong sense of community. CFAB is also authorized to plant trees on City-owned properties, including local parks and schools.

The Board meets the second Wednesday of the month in the City Administration Building and any member of the public is invited to attend. Individuals and representatives of community groups may appear before the Board to relate challenges impacting residents that are either caused by or can be resolved by the CFAB or the City of San Diego. For more information visit the CFAB website at www.sandiego.gov/planning/boardcomm/cfab.

Other Agencies

Natural resource agencies may be involved in tree issues if they are related to sensitive species or habitats or are otherwise protected by law. The California Department of Fish and Wildlife (CDFW) oversees the management of many open space and mitigation areas, including enforcing compliance with laws that affect wildlife habitat. The U. S. Fish and Wildlife Service (USFW) oversees and regulates issues affecting listed species and their habitats, such as migratory birds and species protected by the Endangered Species Act (ESA).

Professional Associations

Many professional fields contribute to the planning, installation, and management of trees. Their associations often have resources and guidance about urban forestry.

American Planning Association, https://www.planning.org/research/forestry/

American Public Works Association, http://www.apwa.net/MYAPWA/Apwa_Public/Tech_Cmtes/Facilities_and_Grounds/Guidance/Quality_Management_of_the_Urban_Forest.aspx

American Society of Landscape Architects, www.asla.org

Professional Tree Care Association, www.ptcasandiego.org

Society for Municipal Arborists, http://www.urban-forestry.com/

U.S. Green Building Council www.usgbc.org

V.B. The Decision-Making Process

One of the most important places to advocate for trees is locally! We need to ensure that the city, and our communities within it, develop in a way that benefits both residents and the environment. Through effective communication with developers, legislatures, and other decision makers we can help re-establish San Diego's tree canopy for future generations.

Planning Boards and Town Councils

Planning Boards and Town Councils hold monthly meetings to discuss neighborhood issues, like development projects and street improvements. At these meetings, you can voice your opinions to city leaders and residents on issues affecting trees in your neighborhood. Planning Boards are responsible for ensuring that the guidelines of the Community Plan are followed and that the community is informed of City actions that affect their neighborhoods. More information about City of San Diego planning boards at https://www.sandiego.gov/planning/community/cpg

Town Councils function in a similar way, but are more focused on the communities' businesses, and provide a forum for communicating the views and needs of the community to the appropriate agencies in local government. City staff often attend these meetings so there can be good opportunities to engage directly with City staff about tree issues.

San Diego City Council and the Mayor

As the legislative branch of local government, the Council enacts laws, holds public hearings, approves the annual budget, and oversees the operations of all City government agencies. The Council is composed of councilmembers who are elected by the District residents. The City of San Diego is divided into nine Council Districts and each District is further divided into several Community Planning Areas (CPAs). For example, Ocean Beach is in District 2, which also includes the CPAs of Point Loma, Midway, Mission Beach, Pacific Beach, and Linda Vista.

The Mayor, or chief executive of the City, is tasked with enforcing city laws, issuing orders, and has the power to veto bills passed by the City Council and propose new laws. The mayor also manages city agencies.

Budget Process

The budget is not just an accounting document—it is a management and planning tool. The City budget is adopted for each fiscal year (FY), from July 1 to June 30, and is a planning, management, and accounting tool. A thorough overview is provided in the "Budget Guide 2015," https://www.sandiego.gov/sites/default/files/legacy/iba/pdf/bpguide.pdf , with roles and schedules starting on page 17. For FY 2018, the schedule is posted at https://www.sandiego.gov/iba. The adopted budgets, including FY 2017, are posted at https://www.sandiego.gov/fm/annual.

Citizens are encouraged to provide their input through multiple forums including contacting the Mayor and staff as the budget is developed; contact Councilmember to "weigh in on important issues in your community," and attend and participate in City Council meetings, Budget & Government Efficiency Committee meetings, and annual budget hearings.

Key budget dates are January, for Councilmembers declaring their priorities; April for the Mayor to present proposed budget to Council; May for Budget Review Committee hearings (scheduled by department); and June for Council approval. The Office of the Independent Budget Analyst (IBA) assists the City Council throughout the budget process by providing research, objective analysis, and recommendations for the budget, including reviews of proposed budget, posted at https://www.sandiego.gov/iba .

Capital Improvement Projects

Trees can be planted and maintained in many City projects. Infrastructure includes the basic physical structures, systems, and facilities needed to provide services to residents and for the functioning of a community and its economy, such as sidewalks, streets, parks, fire stations, police facilities, and water and sewer systems. Like many cities, the City of San Diego has a Capital Improvements Program (CIP) for installing new and replacing or rehabilitating existing infrastructure. A thorough "Citizen's Guide to Infrastructure," is available at https://www.sandiego.gov/sites/default/files/legacy/iba/pdf/bpguide.pdf.

Capital projects generally take multiple years to complete, require special funding sources, and are included in the CIP Budget which is separate from the City's Operating Budget. The complex CIP process includes identifying, prioritizing, and finding funding for needed projects; developing and approving the annual CIP Budget; and implementing multi -year capital improvement projects. Key departments are: those who own assets, such as Park and Recreation; and Public Works-Engineering & Capital Projects (E&CP) that implements and manages approved projects in the CIP Budget.

The CIP is constrained by limited available funding and funding sources that have specific restrictions on how they can be used, and is not funded by the General Fund. The City's infrastructure needs significantly exceed available resources, so the City has competing priorities for limited funds. Those funds often have restrictions on how they can be used, for the type of project , a specific community, or geographic location.

V.C. Other Cities in San Diego County

Most other cities manage their public trees with a few staff in their Parks, Public Works or other landscaping departments. Further information is available for these cities:

Chula Vista, http://www.chulavistaca.gov/departments/public-works/operations/urban-forestry

Del Mar (no City page), Public tree policy manual (2003) at http://www.delmar.ca.us/DocumentCenter/View/264; Residents' guide to tree ordinance at http://www.delmar.ca.us/DocumentCenter/View/85

El Cajon, http://www.ci.el-cajon.ca.us/your-government/departments/public-works/parks

Encinitas, http://ci.encinitas.ca.us/Government/Departments/Public-Works/Field-Operations/Urban-Forest-Management-Program

Escondido, https://www.escondido.org/urbanforestinitiative.aspx

Imperial Beach (no online information)

La Mesa, http://www.cityoflamesa.com/224/Street-Trees

Lemon Grove (no online information)

National City, http://www.nationalcityca.gov/city-government/engineering-public-works/public-works/parks/parks-tree-trimming

Oceanside, http://www.ci.oceanside.ca.us/gov/pw/maintops/median.asp

Poway, http://www.poway.org/279/Urban-Forestry

San Marcos, http://www.san-marcos.net/departments/public-works/parks-landscape-maintenance

Solana Beach (no online information)

Vista, http://www.cityofvista.com/services/city-departments/public-works/graffiti-potholes/tree-urban-forest-management

V.D. Local and Regional Organizations

There are several local and regional organizations involved in urban forestry issues. All of them have free educational programs and materials that can be used to promote awareness and knowledge of trees and urban forest management.

California Urban Forests Council

Invest from the Ground Up is a campaign project of the nonprofit California Urban Forests Council. The California Council is the nation's oldest urban forest council, and works to make California's communities cleaner, healthier and more prosperous by supporting urban forestry in the care and management of trees within our communities. In addition to the campaign project, the Council is active in community tree planting programs, educational workshops, and collaboration with urban foresters to develop management plans. For more information about the program and the organization visit the website at investfromthegroundup.org/.

San Diego Regional Forests Council

San Diego Regional Urban Forests Council is a coalition of agencies, businesses and educators that work to improve our urban forest assets. They promote the benefits of trees for a cleaner, healthier and more prosperous San Diego region. They have bimonthly meetings and focus on networking regional professionals as well as providing professional training, resource development, and educational presentations. More information at http://sdrufc.com/.

Tree San Diego

Tree San Diego is a county-wide non-profit organization that works to "benefit San Diego County's 18 cities, unincorporated areas, military bases, and Native American reservations by providing public and professional education and advocacy to make our region a healthier place to live. Tree San Diego's mission is to significantly impact the quantity of quality urban forest in San Diego County. Quantity means increasing the percentage of urban forest. Quality means the right trees, in the right places, properly maintained." For more information visit www.treesandiego.org.

Arbor Day Foundation

Administered by *Arbor Day Foundation,* the Tree City USA recognition is nationally coveted, earned, and sustained by hundreds of cities. Cities must have a tree board or urban forestry department, tree care ordinances, a community forestry program with an annual budget of at least $2 per capita, and an annual Arbor Day proclamation and observance. Locally, Tree City USA cities include Chula Vista, Coronado, El Cajon, Encinitas, La Mesa, Oceanside, Poway, San Diego, and Santee. Recognitions are also given for Tree Campus USA and Tree Utility USA. More information at https://www.arborday.org/programs/treecityusa/

International Society of Arboriculture

The *International Society of Arboriculture* (ISA) promotes the professional practice of arboriculture and fosters a greater worldwide awareness of the benefits of trees, through research, technology, and education. They set standards and grant credentials for Certified Arborists. Further information at www.isa-arbor.com.

Arborists are knowledgeable about planting, caring for, and maintaining individual trees, and are trained and equipped to provide proper care. Certified Arborists have knowledge in the art and science of tree care through experience and by passing a comprehensive examination. They must continue their education to maintain their certification and adhere to a Code of Ethics. Property owners are advised to hire Certified Arborists to invest in the health and economic value of their trees. Pruning or removing trees, especially large trees, can be dangerous work, and poorly maintained trees can be a significant liability.

Other Organizations

Many cities and regions have organizations that promote, support, and advocate for trees. They can be a source of information and inspiration, and include:

- TreePeople, Los Angeles, https://www.treepeople.org/
- Sacramento Tree Foundation, http://www.sactree.com/
- Casey Trees, Washington, DC, http://caseytrees.org/
- Friends of Trees, Portland OR, http://www.friendsoftrees.org

VI. What Does It Take to Manage Trees?

The first priority for urban forest management is to take care of the trees we have, and secondarily to plant and replace trees in communities to increase the tree canopy and tree benefits. Strategies are needed for three aspects: tree preservation, maintenance, and planting.

- Tree preservation is the protection of existing trees from disease, insects, drought, and construction. As trees mature, the environmental benefits they provide increase. Mature trees have much greater function and value than young trees.
- Tree maintenance includes watering, pruning, and treatment of established trees to promote their continued survival and growth. When managing a large population of trees efficient maintenance is critical and requires up to date tools for communication, coordination, and documentation.
- Planting is critical in maintaining a sustainable urban forest to replace natural and precipitated senescence. By focusing on the right tree at the right site, trees can grow to their full maturity and provide the greatest benefits.

The International Society of Arboriculture has a website with a many educational brochures that offer guidance for management throughout the life of a tree, including tree selection and planting, mature tree care. and risk assessment. These brochures can help tree owners understand best management practices and to promote a greater awareness of the benefits that trees provide in our communities. http://www.treesaregood.org/treeowner/treeownerinformation.aspx.

VI.A. Tree Selection--Right Tree, Right Place, Right Purpose

To ensure the long-term health and benefit of a tree is to first plant the right tree in the right place for the right purpose. When the wrong tree is planted in the wrong place – such as a large tree underneath power lines, it will cause future problems. There are three "non-negotiable" requirements for trees: climate zone, soil type, and space.

Climate zone

Climate zones are areas defined by seasonal temperature, rainfall, humidity, altitude and coastal influence. Each tree is uniquely designed to tolerate certain temperatures, humidity and water, as the seasons change. Los Angeles Sunset climate zones vary from 18-24. Because of this broad range, it is important to know the climate zone of the planting area to provide the best temperature and moisture conditions for the tree. To find the climate zone, go online to http://www.sunset.com/garden/climate-zones/

Soil

Trees have soil preferences, and soil type must be considered in tree selection. Planting trees in the proper soil type will ensure proper moisture levels. Sand, clay, and silt are the main textural soil categories and their varying percentages of sand, clay, and silt in the soil determine the water movement in the soil, both downward and laterally. Clay has a higher water and nutrient-holding capacity than sand, so it can hold moisture in the ground longer. If trees will be planted near each other they should have the same water use needs.

Soil structure and volume often limit tree growth and create conflicts with sidewalks and other hardscape infrastructure. The soil structure required in the Low Impact Development (LID) guidelines should be examined for compatibility with tree growth. Soil structure should promote tree growth and absorb precipitation, irrigation, and stormwater.

Space

Available space for the roots and trunk to grow is an important factor in determining the type of tree to plant. The goal is selecting a tree that will not outgrow the space provided. Plant trees at least 10-15 feet away from the foundation of a building and at least 5 feet away from patios and driveways. Tree spacing should be extended to allow for trees of larger size to grow without root crowding, and the soil should be loosely compacted to optimize growing conditions.

Leaves and Flowers

Flowers add color to the landscape and attract butterflies, birds, pollinators and other wildlife and color adds beauty in the fall. Tree shapes can be oval, pyramidal, round, spreading, vase-shaped or narrow. Many varieties of fruits and nuts can be grown in southern California.

Evergreens keep their leaves all year, are good trees for privacy, wind breaks and hot areas, and should be planted on the north side of a home or building. Evergreens are similar to deciduous trees in environmental benefits, including sequestering carbon, capturing rain fall, filtering pollutants, and more.

Deciduous trees lose their leaves in fall or winter. They are often planted on the south and west sides of a home or building to provide shade in the summer and warmth in the winter when the sun can shine through. Deciduous trees from Mediterranean and other climates (low- medium water trees) are good selections for Southern California.

Pests and Diseases

Unsuitable species are those that have serious pest problems, are invasive, drop a lot of fruit, and/or have structural weaknesses, such as limbs breaking off. There are several insect pests in southern California that threaten tree health, including the Polyphagous Short Hole Borer and the Gold Spotted Oak Borer. Two-page overview on tree insect and disease problems, at http://www.treesaregood.org/treecare/resources/InsectAndDisease.pdf . More information on pests that occur on trees, http://ipm.ucanr.edu/PMG/GARDEN/plantmenu.html.

Native Species

Policies such as planting only native species around open space areas should ensure that appropriate species are planted in the appropriate location for the right reasons. Non-native or invasive trees should not be planted near any natural canyons, creeks, or hillsides that contain native vegetation. When non-native invasive species are found in open space areas, the city uses resources to remove them. A buffer should also be established wherein only local native street trees are planted adjacent to open space.

Some trees are invasive, that is, they grow aggressively, spread easily to nearby yards or natural areas, are difficult to control, and/or displace native plants. Trees that most invasive and should not be planted include Ailanthus (tree of heaven), Eucalyptus red gum and blue gum, tamarisk (salt cedar), Canary Island date palm, and Mexican palm. A comprehensive list is available at https://www.asla-sandiego.org/aslasdwp/wp-content/uploads/2014/10/Most_Invasive_Plant_Guide.pdf.

Palms

Palms are planted along some City streets, mostly near the coast. Botanically and anatomically, they are grasses (monocots), lacking the cambium that produces diameter growth in trees. Rows of palms are visually distinctive, but provide far fewer benefits at the pedestrian scale than shade trees. Palms can invade creek bottoms, storm water channels, and have high

maintenance costs. Trunks of the tall slender "king palms" trunks need to be pruned every 2-3 years. Palms are usually approved for visual effect or when an existing adopted community. For more information on palms see http://www.treesaregood.org/treecare/resources/palms.pdf.

Street Tree Selection Guide

The City's Street Tree Selection Guide recommends trees suitable for planting as street trees. The guide was reviewed and revised in 2014 by local tree care professionals, landscape architects, and planners to identify additional species and remove those less suitable for street tree planting. The revised guide will be posted at https://www.sandiego.gov/trees/planting (currently link is to outdated guide). Street tree species must be consistent with approved community plans, Master Street Tree Plans or other applicable documents for the location. Although there is considerable discussion about the suitability of palms as street trees, some suitable palms are included in the revised Guide.

Check on the requirements of individual trees at the SelecTree database, at http://selectree.calpoly.edu/. For resources about native species, visit Las Pilitas Nursery at www.laspilitas.com.

VI.B. Proper Tree Planting

Tree planting requires that the site be prepared (including irrigation), digging the hole and placing the tree and roots properly, building a watering berm with mulch covering the soil, placing tree stakes, and watering the tree. For the City of San Diego, the Landscape Standards of the Land Development Code from Development Services also provides guidance on planting standards, https://www.sandiego.gov/sites/default/files/dsdldc_landscapestandards_2016-04-05.pdf, with a number of references listed in Appendix A.

Get more information from these excellent resources for tree planting:

"How To" resources and videos from TreePeople (Los Angeles), https://www.treepeople.org/resources

Tree selection and placement, http://www.treesaregood.org/treecare/resources/TreeSelection.pdf

Buying high quality trees, http://www.treesaregood.org/treecare/resources/buying_qualitytrees.pdf

Planting a new tree, http://www.treesaregood.org/treecare/resources/New_TreePlanting.pdf

Mulching, http://www.treesaregood.org/treecare/resources/ProperMulching.pdf

VI.C. Tree Maintenance and Pruning

Proper tree maintenance increases the longevity of trees, reduces premature failures, and maximizes the benefits trees provide. An established pruning cycle is needed to create a routine inspection cycle, as inspecting trees on a routine cycle is more important than pruning for the sake of pruning. Generally, the criteria used for determining whether a tree will be trimmed are to:

- Promote tree health and longevity.
- Eliminate immediate hazards- this is required public safety trimming. Arborists determine whether a tree's condition is an immediate hazard.
- Provide visibility- for motorists, pedestrians, traffic signals and other traffic devices-this may include trimming on private property that encroaches on the public right-of-way.

- Clear the public Right of Way, removing lower limbs and other growth from to provide adequate clearance for vehicles, cyclists, pedestrians, and construction activities.

A No-Fee permit is required for property owners to trim, remove, or prune roots of street trees, following inspection by City staff. The permit applications are available by calling (619) 236-5513, or visiting the website at: https://www.sandiego.gov/street-div/services/forestry.

These brochures provide more information for property owners and managers.

Mature tree care, http://www.treesaregood.org/treecare/resources/Mature_TreeCare.pdf

Pruning young trees, http://www.treesaregood.org/treecare/resources/Pruning_YoungTrees.pdf

Pruning mature trees, http://www.treesaregood.org/treecare/resources/Pruning_MatureTrees.pdf

Why topping hurts trees, http://www.treesaregood.org/treecare/resources/WhyToppingHurts.pdf

VI.D. Tree Watering

Trees require very little water during and after establishment, and provide many benefits. Trees shade other landscaping and reduce their water needs. Even the strictest drought restrictions allow for watering trees on residential and commercial properties, and landscape vegetation in parks, schools, and other public places. If trees die due to lack of water, removing them requires professional help, which can cost $1000 or more per tree.

What are the best ways to water trees? Use drip irrigation, and set up separate irrigation zones for trees. Roots often extend far beyond the edge of the canopy, or drip line. Water under and just beyond the drip line. Most absorbing tree roots are in the upper 18 to 24 inches of the soil. Water only needs to reach that deep. When lawns are removed, trees still need to be watered and tree roots need to be trained to grow deeper. In the first year, gradually increase the duration and decrease the frequency of watering the trees. Save water by planting trees in the fall and winter when rains and cooler weather reduce the watering needs.

Urban trees have been dying due to the extended drought. The hotter summer months have stressed the urban trees, just as they have trees in parks and forests. For five years, trees have not been getting enough water in the usually wet, winter months. Trees need deep watering. Irrigating only 5 minutes twice a week does not reach tree roots. Property owners stopped watering their lawns, slowly killing the trees. Businesses and government agencies turned off irrigation systems, so they got credit for "gallons saved" but killed trees in public places.

There are now some excellent flyers, videos and webpages about watering trees.

Calif. Dept. of Water Resources and state watering agencies, http://saveourwater.com/trees,

SD County Water Authority, http://www.watersmartsd.org/news/help-your-trees-survive-drought,

TreePeople (Los Angeles) https://www.treepeople.org/action/drought-solutions, and

California ReLeaf, http://californiareleaf.org/saveourtrees/faqs/ .

How to water a tree, 1-minute video from TreePeople, https://www.youtube.com/watch?v=J29E82DWM2g&feature=youtu.be

Watering mature trees, 4-minute video https://www.youtube.com/watch?v=lrirPBMTYi0&feature=youtu.be

Watering young trees, 4-minute video https://www.youtube.com/watch?v=P_kQZriJ38U&feature=youtu.be

VI.E. Trees and Sidewalks

Trees grow in the same physical spaces as infrastructure. They can damage sidewalks, curbs, gutters, streets and other paved surfaces; grow underground into cracked sewer lines and aboveground into overhead utilities; and block signs, traffic lights and sight lines at traffic intersections and commercial properties.

Yet, design and construction solutions exist when arborists and engineers work together. Proper arboriculture can save existing trees adjacent to sidewalks, redesign and resurface sidewalks without removing trees, and plant trees suitable to limited parkway or project space. Projects can be designed to allow storm water and other runoff from streets to infiltrate into the soil, be absorbed by tree roots, and reduce stormwater runoff and pollution. A "Trees and Sidewalks Operations Plan" was developed in Seattle and shows best management practices, http://www.seattle.gov/transportation/docs/TreeSidewalksOperationsPlan_final215.pdf . Another report offers designs for trees and sidewalks, to get adequate soil volume and prevent compaction, http://caseytrees.org/wp-content/uploads/2012/02/tree-space-design-report-2008-tsd.pdf .

VI.F. Tree Protection During Construction

Trees should be properly protected when they are near construction work. If left unprotected, they can be damaged or even destroyed by vehicles and materials. Good tree protection begins before construction starts; developers and contractors should provide protection for all the surrounding trees, include the trees' critical root zone (CRZ). This zone extends past the dripline (the canopy edge) to ensure that the tree and its root system are not damaged, giving it a better chance to survive. Fencing should be erected and all construction materials kept from the area. You can advocate that all tree protection at a work site meets official industry standards. More information on avoiding tree damage during construction is at http://www.treesaregood.org/treecare/resources/AvoidingTreeDamage.pdf

VI.G. Tree Risks and Emergencies

Risk management monitors and mitigates tree risk. Tree risk is the likelihood of a failure occurring that results in injury, death, property damage, or disruption of services. It is impossible to maintain trees free of risk; when trees age and increase in size they are more likely to shed limbs or develop conditions that increase the likelihood of failure. However, tree risk can be minimized through sound planting and routine inspection and maintenance, following risk management protocol. Risk assessments should be conducted by an arborist with Tree Risk Assessment Qualification, http://www.isa-arbor.com/certification/becomequalified/becomequalified.aspx. For more information on managing tree risk as a homeowner or property owner, see http://www.treesaregood.org/treecare/resources/TreeRisk.pdf.

Emergency management is a coordinated effort in response to tree emergencies like downed limbs and trees; or in the larger context of disasters, like flooding, wind, or wild fires. Sound protocols expedite an efficient response, accelerate recovery, and avoid unnecessary tree removal. Severe weather can result in a significant number of tree emergencies in a rather short time that can easily overload the capacity of the various response Departments. The Transportation and Stormwater Department addresses the tree emergencies in the right-of-way and the Park and Recreation Department addresses tree emergencies in parks and the ROWs of the maintenance assessment district. Both departments typically handle emergencies during business hours with in-house and contract crews.

VII. How Can Citizens Influence Tree Management?

The most powerful action you can take to protect and enhance tree canopy is to speak on behalf of trees whenever you have an opportunity. Citizen support plays a vital role in supporting urban forestry. Tree-related advocacy groups are now common in many cities and they provide volunteer support and promote urban forestry programs. Tree planting volunteers join professionals on the front lines. More importantly, citizens provide the political support to sustain public investment in green infrastructure and the urban forest. Effective urban forestry depends ultimately on the public policy supporting it—financially, administratively, and legally.

Citizen action can make a difference, and this story is told well in the 25-minute episode, "Urban Forests: Trees and Plants in The City." It is part of "A Growing Passion" series, produced for KPBS and available at http://agrowingpassion.com/episode-505-urban-forests-trees-plants-city/.

VII.A. What You Can Do to Advocate on Behalf of Trees

Trees can be planted in neighborhoods and on public land, and existing trees need to be protected. We are losing mature trees faster than newly-planted ones can grow. Proper maintenance, care and the continual replacement of the existing canopy as mature trees age out, will be as critical to increasing the canopy as new plantings will be.

Local Planning Board and Town Council Meetings

Your Planning Board and Town Council meet monthly to discuss new developments and neighborhood issues. They make recommendations to the City Council and various City agencies, based on public input. Monthly meetings are a great place to bring up tree-related issues.

Most neighborhoods have citizen-led associations to share information and foster community engagement. Representatives from various agencies and often the City Council attend these meetings to discuss community issues and initiatives. These are opportunities to encourage greener community design and inspire neighborhoods to plant trees in their yards. Tree advocates can ask for new trees or tree preservation as a public benefit.

City Council

The City Council offers many opportunities to testify on legislative, regulatory, performance or budget concerns. Most often your testimony will be directed to a specific committee that oversees the relevant aspects of the Streets Division and/or the Department of Parks and Recreation.

Testifying before the Council can have a big impact. It is also the Council's chance to hear directly from the people they are elected to represent, and to ask clarifying questions in person. Members of the public can speak in front of the City Council in a variety of ways, on either docketed items or non-agenda items, by filling out a speaker slip. Time allotted to each speaker is determined by the Chair and, in general, is limited to two to three minutes per speaker per item.

You can also submit written testimony, call, or email your political representative to make your opinion count. Policies are written around the concerns raised most often by the public. If you are trying to influence a municipal decision, most City ordinances and resolutions require a simple majority of Council votes to be adopted. Start by calling or writing a letter to your Councilmember, and to the Mayor.

If you want to demonstrate community support, develop and submit an informal petition, or have others call or send letters. With the backing of five Councilmembers, your idea can become municipal policy. The City has additional information about getting involved in the legislative process at https://www.sandiego.gov/city-clerk/elections/process/difference. Tree advocates can also ask for new trees or tree preservation as a public benefit in the community outreach process.

Other Citizen Actions that Support Trees

- Educate neighbours and co-workers about trees and advocate for canopy-lined streets
- Encourage community groups and environmental organizations to support urban forestry
- Get involved in community plan updates and incorporate trees in capital improvement projects
- Support funding of tree planting and maintenance programs
- Seek ways to help businesses understand the economic values of trees
- Encourage replacement of trees that were required when developments were built

VII.B. Notice and Report Tree Problems

With limited staff and funding in most urban forestry programs, there will always be trees that need routine and scheduled maintenance, trees that may pose a hazard and need to be trimmed or removed, and violations of city regulations regarding trees. Citizens can be the "eyes and ears" of City staff, and bring situations to their attention, while being respectful of the workloads of current city staff. In the mid- and long-term, it is the attention of citizens to funding, implementation, and policies that will bring additional resources for trees.

In the City of San Diego, call 619-527-7500 to report a problem. Or use the "get it done" system to file a report online or with a downloadable "app," at https://www.sandiego.gov/get-it-done. The form for "tree hazards" is posted at https://getitdone.force.com/TSWNewReport?type=Tree%20Hazard. Provide the nearest address, type of problem, description, and image (optional), and contact information (optional).

Tree Pruning

The City of San Diego's Streets Division provides street tree maintenance services and they will trim trees for vehicular and pedestrian clearances following a request. The work may be done by City crews or contractors. The City's Park and Recreation Department maintains trees in parks and open space.

A No-Fee Street Tree Permit Application is required for property owners to trim, remove, or prune roots of street trees, following inspection by City staff. The permit form is posted at https://www.sandiego.gov/sites/default/files/legacy/ced/pdf/streettreepermitapplication.pdf.

Tree Removal

Only dead trees, or trees deemed an immediate hazard are removed from the right-of-way as soon as possible. All other removal requests are evaluated for preservation or removal, per the City's Council Policy 200-05. If it is determined the tree must be removed in order to repair other infrastructure, concurrence of the abutting property owner is required. Tree hazards can be reported on this form, https://getitdone.force.com/TSWNewReport?type=Tree%20Hazard.

Tree Damage

As for the public and enforcement of the protections of trees, currently, property owners face few consequences when they use poor pruning practices or illegally remove a public tree.

Tree-topping is illegal and results in trees that are not only aesthetically inferior but are unsafe due to weak trunks and limbs. Vandalism is also an issue in parks. Proactive enforcement of tree-related regulations is currently a lower priority than other code violations.

Trees on public property are protected against general damage by law. This may include accidental damage or vandalism, such as posting a sign to a tree with a nail. You play an essential role in keeping our city's trees healthy by reporting any tree damage you see. More information about code compliance is at https://www.sandiego.gov/ced/report, and a request for investigation can be filed at www.sandiego.gov/ced/report/investigation .

Tree Replacement and New Street Trees

The City of San Diego will plant a tree in the street right-of-way for residential property owners, pending available funds and an agreement by the owner to water the tree. Call 619-527-7500, or requesting a tree in the "Get it done" system, at https://getitdone.force.com/TSWNewReport?type=Tree%20Hazard. A No-Fee Street Tree Permit Application is required for all street tree plantings, which includes agreement to water, https://www.sandiego.gov/sites/default/files/legacy/ced/pdf/streettreepermitapplication.pdf.

VII.C. How to Advocate

Success depends on a well-crafted, inspirational message delivered to the right people at the right time. Persuasiveness can add a big impact to efforts; mastering the art of persuasion also entices others to join the cause. To be heard, the message should be organized and easy to understand, using an easy, short formula.

Express why you are advocating for trees

As a tree advocate, expressing why you dedicate your time to the cause helps to connect with your target on a personal level. When the request matches your ethics, there is an understanding that the cause is driven by important values. By starting with why, the audience becomes engaged.

State the action clearly

Clearly and concisely state the action you'd like to see taken. The simpler your request, the easier it is for your target to say yes. Also consider what steps you'd like to see taken and do as much work as you can on their behalf, in advance of your request. For example, if you want the language in a piece of legislation to be modified, consider drafting the changes yourself. If you want trees planted in a new development project, consider providing the number, type, and location of trees. This makes it easier for the designer or landscape architect to update the plans.

State a positive result that makes everyone feel good

Targets of advocacy are people, too, and a well-crafted "result" will inspire and energize them. Understanding their motivation is essential to successful persuasion. If your council member, representative, or neighbor has a green agenda or is passionate about improving community health, you could say "this action will create community health benefits for years to come." End on a strong note and you will be remembered and successful.

Take advantage of volunteer opportunities

Many organizations and projects throughout the city, county, state and nationally could really benefit from your participation! Visit some of the websites in this handbook, to get familiar with citizen actions and local organizations that support climate change and urban forestry.

VIII. Acknowledgements

Glossary

Arborist: A professional who specializes in the cultivation, management, and study of individual trees. Arborists are responsible for managing trees in green spaces on public land in communities.

Biodiversity: The variety of lifeforms in an environment. If an environment has higher biodiversity, such as a wide variety of tree species, organisms and communities in that environment are more resilient to pests, diseases, and natural disasters.

DBH (diameter at breast height): A standard measure of the diameter of the trunk of a standing tree. Breast height is measured at 4.5 feet above the ground.

Heritage Trees: Mature trees that have been designated with protected status.

Low Impact Development (LID): Design and engineering that works with nature to manage stormwater.

Open Space: Applies to land or water areas generally free from development or developed with very low-intensity uses that respect natural environmental characteristics. Open Space is generally non-urban in character and may have utility for: park and recreation purposes, primarily passive; conservation of land, water, or other natural resources; or historic or scenic purposes.

Public Right-of-way (ROW): The public right-of-way (ROW) consists of the travel lanes, on-street parking, sidewalk area, and other public space situated between the property lines on either side of a street. Street trees are a part of the public ROW.

Stormwater Runoff: Excess stormwater runs over lawns, streets and enters the sewer system. In urban areas, the high level of impervious surfaces cause stormwater runoff to overload treatment plants during heavy storms, and polluted stormwater to enter rivers untreated. Directing stormwater to bioretention areas can combat polluting overflows.

Tree Canopy: Layer of leaves, branches and stems covering the ground, when viewed from above

Urban Forest: All of the trees (street trees, park trees, and private trees) within city boundaries.

Urban Heat Island: Metropolitan areas are hotter than nearby rural due to increased paving, traffic, and lower tree cover.

Utility Pruning: The pruning of branches by utility companies so they do not interfere with high-voltage electric lines. Advocates can ask for electricity wires to instead be buried underground.

Zoning Code: Construction and land use requirements based on location.

Other sources for "tree terms" are http://media2.lpb.org/images/pdf/CaseyTreesGlossary.pdf

NOTES

Tree Advocacy Class Worksheet

1. What is your favorite childhood memory of a tree? _____

   _____

2. What City services do trees provide, in your life? _____

   _
   _____

3. How do trees enhance your health and personal life? _____

   _____

4. Walk to a nearby park or row of street trees. Mark three (3) trees, measure the circumference of each tree, divide by 3 to calculate dbh (diameter at breast height) of each tree, and record here.

   _____inches   _____inches   _____inches

5. Locate the trees on GoogleEarth or GoogleMaps, and print out an image of the area. Mark where more trees could be planted.

6. Practice advocacy messages: Request the city, business district, or homeowners' association to plant more trees on a street in your neighborhood.

   Reasons _____

   _____

   Requested action _____

   _____

   Positive result _____

   _____

7. What two actions will you take in the next 3 months, to advocate for trees?

   _____

   _____

Contact Information for Local Community Groups

Urban Forestry Organizations

- San Diego Regional Urban Forests Council, http://sdrufc.com/
- Tree San Diego, http://www.treesandiego.org/

Environmental Organizations

- California Native Plant Society San Diego, https://www.cnpssd.org/
- San Diego Canyonlands, http://sdcanyonlands.org/
- San Diego Audubon, http://www.sandiegoaudubon.org/
- San Diego Sierra Club, http://sandiegosierraclub.org/

Organizations Working on Climate Change Issues

- Climate Action Campaign http://www.climateactioncampaign.org/
- San Diego Climate Mobilization Coalition, https://www.facebook.com/SDClimateMobilization
- San Diego 350, http://sandiego350.org/

Other Groups

- Historical Societies, http://www.sandiegohistory.org/historical-societies/
- Chambers of Commerce, http://www.sdchamber.org/membership/
- City of San Diego Community Planning Groups, https://www.sandiego.gov/planning/community/cpg
- San Diego County Water Authority, http://sdcwa.org/

Example of Elected Official Contacts (for Ocean Beach)

- Mayor Kevin Faulconer   kevinfaulconer@sandiego.gov (619) 236-6330
    - John Ly, Director of Outreach jly@sandiego.gov
    - Anthony George, Senior Representative georgea@sandiego.gov
- Councilmember Lori Zapf (Distr. 2) loriezapf@sandiego.gov (619) 236-6622
    - Ocean Beach staff, Conrad Wear bwear@sandiego.gov (619) 236-7351
- Ocean Beach Town Council, https://obtowncouncil.org/
- Ocean Beach Planning Board, http://oceanbeachplanning.org/, John Ambert, Chair, johnambert@gmail.com

Contributors to this and earlier versions of the Tree Advocacy Handbook: