

# Post Fire Conversation: **Maintaining Urban Canopy Goals**



Presentation by Meagan Beaver & Elizabeth Lanham



# Teamwork Collaborations

This project could not have happened  
without...



- **Community Foresters, Arborists, and Staff...**
  - Local fire specialists, officials, and councils...
  - And so many more...



# Project Goals



- **Healthy Urban Forests**
- **Safe Urban Wildlands**
- **Improved understanding from policymakers**
- **Better resulting policies and procedures**

# Plan Actualization

## Policy Planning Portfolio

- Interviews
- BMPs for Policy and Maintenance
- Recommended Planting List
- Curated Research







**UNDERSTANDING THE  
DISTINCT POLICIES  
AND PROCEDURES  
BETWEEN THE URBAN  
CORE, URBAN  
WILDLAND, AND  
FORESTED WILDLAND**

# Urban Core

17 acre lot (about the size of Biltmore Village) without a block



A mall transitions to an urban pattern of development by adding blocks

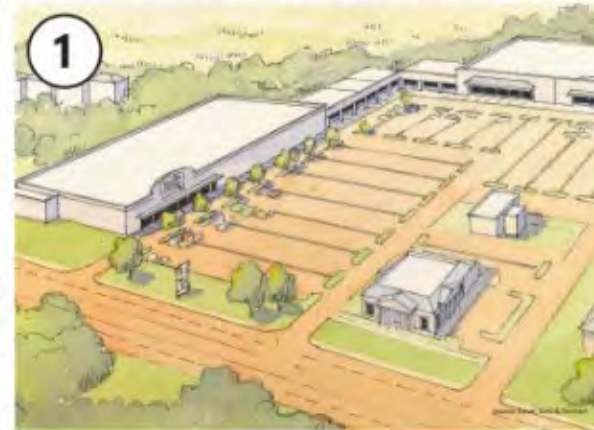


Image from The City of Asheville, Urban Centers Project

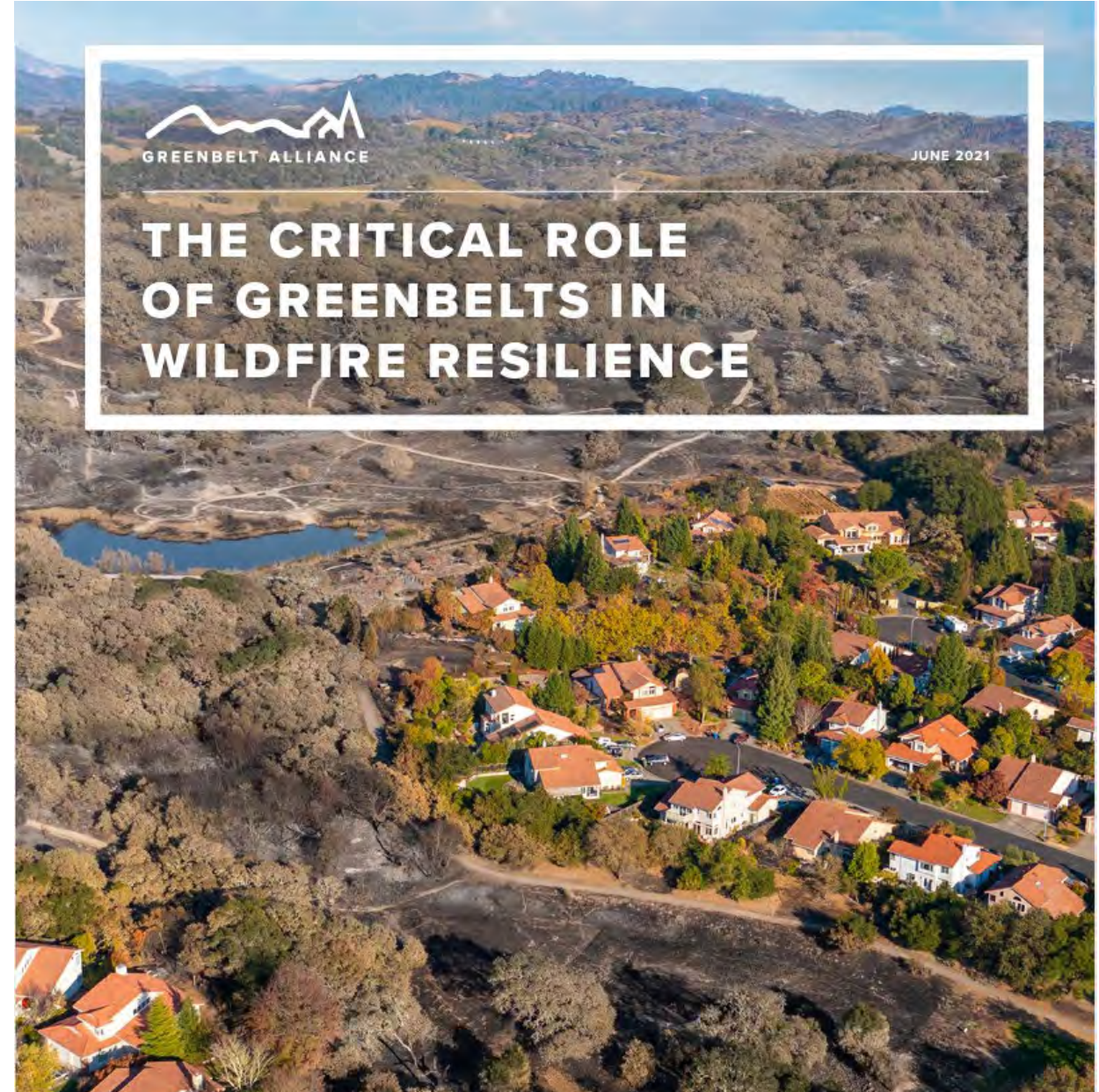


# Urban Core





# Urban Wildland



GREENBELT ALLIANCE

JUNE 2021

## THE CRITICAL ROLE OF GREENBELTS IN WILDFIRE RESILIENCE



# Forested Wildland





# Curated Research



- **National Urban and Community Forestry Advisory Council**
- **CALFIRE**
- **California Forest Management Task Force**
- **California Wildfire and Forest Resistance Task Force**
- **Association of Bay Area Governments**
- **Society of American Foresters**
- **And more...**



# Document Library

This library serves as a resource for homeowners and municipalities looking for guidance. It includes up to date information on home hardening, wildfire preparedness, forest development, scientific research supporting new methods, as well as examples of successful practices and implementation.



## Urban Core

Kondo, Michelle,  
Bernadette Hohl,  
SeungHoon Han,  
Charles Branas.  
2016.

Effects of Greening  
and Community Reuse  
of Vacant Lots on  
Crime

Urban Studies 53, no 15  
(2016): 3279-3295.  
Accessed May 2, 2022.

Kondo, Michelle,  
Natalie Mueller,  
Dexter H. Locke,  
Lara A. Roman,  
David Rojas-Rueda,  
Leah H. Schinasi,  
Mireia Gascon, Mark  
J. Nieuwenhuijsen.  
2020.

Health Impact  
Assessment of  
Philadelphia's 2025  
Tree Canopy Cover  
Goals

Lancet Planet Health 4,  
(2020): 149-157. Accessed  
May 2, 2022.

Los Angeles Urban  
Research Center

Los Angeles Urban  
Forest Equity  
Assessment Report

Nowak, David J., Eric  
J. Greenfield.

## Urban Wildland

Circle 3  
Tree Planting Guide

Circle 3  
Tree Care Guides and Tips

City of Oakland Public  
Works  
How to Measure a Tree

Community Planning  
Association for  
Wildfire  
Working with  
communities to reduce  
wildfire risks through  
improved land use  
planning

El Dorado Resource  
Conservation District  
Performance of Fire  
Adapted 50 Fuel  
Treatment Units During  
the Caldor Fire

FireSafe Marin  
Prepare Yourself: Find out  
how to prepare yourself  
and your home for  
wildfire

FireSafe Marin  
Topography: Plant  
Spacing Affected by Slope

FireSafe Marin

## Forested Wildland

FireSafe Marin  
Topography: Plant  
Spacing Affected by  
Slope

FireSafe Marin  
Plant & Tree Spacing

Global Forest Watch  
Tree Cover Loss In  
California  
Accessed on June 6, 2022.

Greer, Brin.  
Resource  
Conservation  
District of Tehama  
County.  
Forest & Water  
Resources; A Sound  
Investment to  
Safeguard Tehama  
County

Headwaters  
Economics  
Library of Trails  
Benefits

Insurance Institute  
for Business & Home  
Safety  
Protect Your Property  
from Wildfire

Insurance Institute

# Video Library

The video library covers a wide array of subjects being discussed across multiple agencies. Some videos are interviews DRG hosted with expert speakers discussing topics pertinent to the changing tactics of fire mitigation and urban forest management. Some videos are hosted by agencies such as Arbor Day Foundation, Greenbelt Alliance, California Fire Science Consortium, Philly Tree Plan, FireSafe Marin, and USDA Forest Service, discussing proper tree care, the science behind our changing fire patterns, ecological impacts, management techniques, and new strategies.

Check out our Mind the Divide video playlists to access our library of hundreds of resources available to you.

**URBAN CORE + URBAN  
WILDLAND PLAYLIST**

**FORESTED WILDLAND PLAYLIST**

**Not sure which area you live in?  
Read more [here!](#)**

Press play below to autoplay our entire [Mind the Divide Video Playlist](#).





Search



## Urban Core + Urban Wildland | Mind the Divide

219 videos • No views • Updated yesterday



California Urban  
Forests Council

SUBSCRIBE

1



### How to Help Your Mature Trees Survive the Dry Months

BeWaterSmartinfo

2



### How to Give Young Trees the Water They Need

BeWaterSmartinfo

3



### Tree Watering Tips - How to Properly Water your Trees

Texas A&M Forest Service

4



### How to properly plant a tree

Sacramento Tree Foundation

5



### How to Plant a Tree, Step by Step (garden.org)

National Gardening

6



### Best Watering Practices for Newly Planted Trees

UMN Urban Forestry

7



### How to Care for Newly Planted Trees

The Davey Tree Expert Company

8



### How to Select a Tree from a Nursery

The Davey Tree Expert Company

9



### The Benefits of Trees

UMN Urban Forestry



Search



## Forested Wildland | Mind the Divide

8 videos • No views • Updated yesterday



California Urban  
Forests Council

SUBSCRIBE



What if there were 1 trillion more trees? - Jean-François Bastin

TED-Ed



The Surprising Truth Behind Planting Trees and Climate Change

PBS Terra



If We Plant 1 TRILLION Trees Can We Stop Climate Change?

Be Smart



Inside the Fight to Save an Ancient Forest (and the Secrets it Holds) | Overview

PBS Terra



Rachel Lee Hall | We The Forest Profile

Healthy Forests, Healthy Communities



What is forest resilience and how do we measure it in forest restoration? Virtual panel

California Fire Science Consortium



Forestry careers - Goforestry

GoForestry



Wildfires 101 | National Geographic

National Geographic





# Trees You Can Plant Today For A Better Tomorrow

Mind The Divide has put together a tree list with the hope that it will ease the selection process for municipalities and home owners as they work toward their goals of canopy cover. It is organized by USDA zones in California. If you are unsure of your zone, please [take a look at our map](#). Due to ongoing water shortages across California, most trees are low or very low water use once established, based on Selectree.com standards. Please go to our [video library](#) for videos on the different methods of watering newly planted trees versus mature trees to better understand how to establish your trees and keep them happy.

The tree list focused on an array of trees, including some native, some utility line friendly, a few with showy flowers, options with little to no mess from fruit, and some with special concern for root uplift in areas with rigid sidewalks. It does not include invasive species, nor does it include species deemed highly flammable by experts.




This list is a starting point for increasing canopy cover and does not include all possible options. When choosing a planting site and making species selections, please remember the needs of the tree while it grows as well as its needs once established. Refer to our sections on the 10/20/30 Rule as well as the Seven Deadly Sins when choosing options. Also, ask yourself these questions:

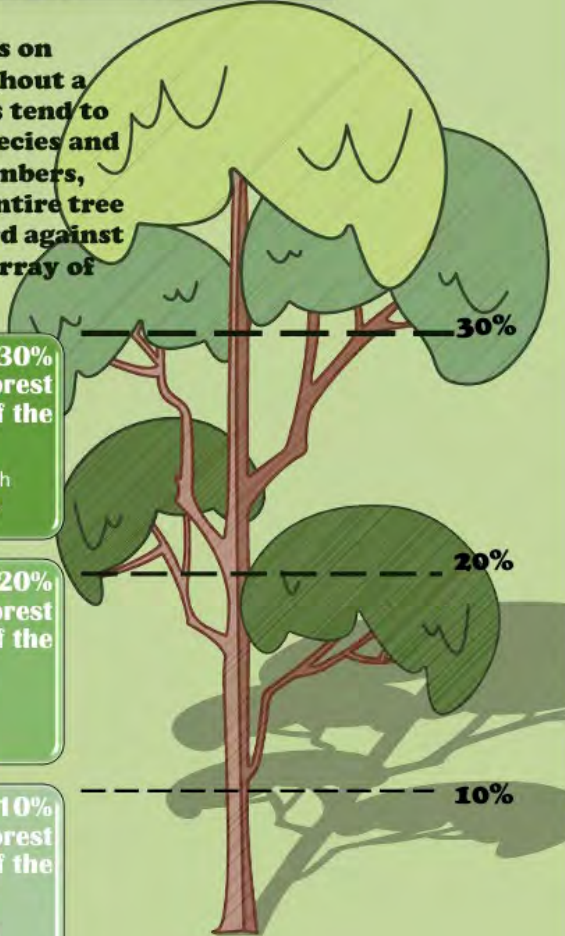
- How will this species handle my zone?
- How will this species handle climate change's warmer weather patterns?
- How much space can I offer a tree's roots, branches, and overall height once fully grown?
- How does this tree's water, sun, and shade needs pair with my current vegetation?



## 10 – 20 – 30 Rule

The 10-20-30 Rule focuses on diversity of trees throughout a city. Diseases and insects tend to target particular tree species and other closely related members, potentially wiping out entire tree populations. To safeguard against this, planting a diverse array of tree species is essential.

-  No more than 30% of the urban forest is comprised of the same FAMILY
  - i.e. Cornaceae which includes Dogwoods
-  No more than 20% of the urban forest is comprised of the same GENUS
  - i.e. Cornus
-  No more than 10% of the urban forest is comprised of the same SPECIES
  - i.e. Cornus nuttallii, Cornus alternifolia



## The Seven Deadly Sins of Tree Care

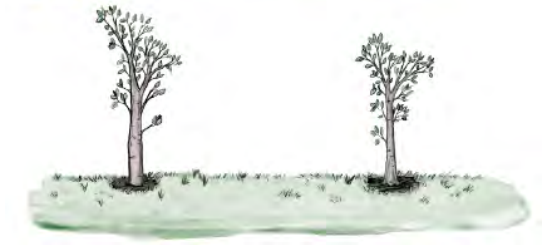
By Tina McKeand

Below you will find tips for avoiding the seven deadly sins, or mistakes, that tree owners most commonly make, including:

1. Right Tree, Wrong Place
2. Structural Defects
3. Planting at the Right Depth
4. Over and Under Watering
5. Poor or Neglected Staking
6. Premature Removal of Juvenile Branches
7. Poor Pruning or Topping

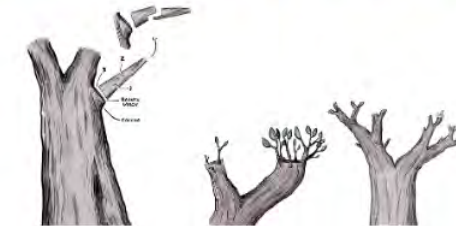
Learning about how trees grow and what they need will help you avoid these deadly sins and give your tree a better chance at survival!

### 3. Planting at the Right Depth



Many things can, and often do, go wrong during the tree planting process. One of the most common deadly sins is planting a new tree too deep. It is always best to plant a tree so that the root flare is level or slightly above the finished grade. Planting too deep allows moisture and soil particles to soften and abrade buried bark tissue. This promotes infection and decay and often leads to premature death.

### 7. Poor Pruning or Topping



The objective of proper pruning should be the correction of major structural defects, such as crossed branches and dead or diseased wood. But, since urban trees are destined to be part of a community, they also should be expected to conform to community standards. Keep in mind, however, that pruning creates wounds that shape growth and divert energy, so if you want to promote healthy tree structure while preserving it's natural grace and character, prune wisely and sparingly.



*Cedrus deodara*

## Deodar Cedar

Family Pinaceae



*Chilopsis linearis*

## Desert Willow

Family Bignoniaceae

### Site Conditions

- Planting area: 10'
- Root Damage Potential : Mode
- SelecTree Water Use: Medium
- USDA zones: 7, 8, 9
- Sun exposure: Partial Shade to
- Soil texture: Loam, Sand, or Clc
- Soil pH: Very Acidic to Very Alk
- Soil salinity tolerance: Modera
- Powerline friendly: No

### Tree Characteristics

- Tree Shape: Conical
- Foliage type: Evergreen
- Maximum height: 60 feet
- Canopy width: 20-30 feet
- Growth rate: ~36 in/year
- Flowers: Fragrant
- Flowering: Fall
- Fruiting: Spring
- Litter: Large Green and Brown Cone

### Site Consideration

Parkland, Wildland, Tree Specimen



### Site Conditions

- Planting area: 2' - 5'
- Root Damage Potential: Low
- SelecTree Water Use: Very Low
- USDA zones: 8, 9
- Sun exposure: Partial Shade to Full Sun
- Soil texture: Loam, Sand
- Soil pH: Neutral to Very Alkaline
- Salt spray tolerance: Low
- Powerline friendly: No

### Tree Characteristics

- Tree Shape: Rounded
- Foliage type: Deciduous
- Maximum height: 30 feet
- Canopy width: 10-20 feet
- Growth rate: ~24-36 in/year
- Flowers: Showy, Fragrant
- Flower color: Purple or Pink or Red or White
- Flowering: Spring or Summer
- Fruit: Brown Capsule
- Fruiting: Fall
- Fruit value: Wildlife use it
- Litter: Dry Fruit

# Why Does it Matter?





# Our Community's Trees. Our Community's Benefits.



WATER QUALITY



CITY DESIGN AND  
DEVELOPMENT



COMMUNITY  
SAFETY



EQUITY



HUMAN HEALTH



ECONOMIC  
IMPROVEMENT



AIR QUALITY

# Mind the Divide

## Learning Lab for Urban Forest Growth

### Our Mission

Here at Mind The Divide, our goal is to guide communities through a collaborative process as they plan, establish, and properly invest in a sustainable urban forest, as well as create defensible spaces and harden structures in a time of unprecedented fire behavior so that these resources can flourish for generations to come.



### What is Mind the Divide?

California is facing a multifaceted dilemma. Wildfires continue to increase in frequency and severity, where megafires are no longer the exception but the norm. Housing demands keep rising as population increases, thus it is becoming more common to build further into the Urban Wildland (formerly known as the WUI or wildland urban interface). Our atmosphere's CO<sub>2</sub> is at dangerous levels and climbing. Roughly 80% of our population is found in the Urban Core, yet we are losing an average of 27% tree cover in cities per year, including all the services that come from them (Nowak and Greenfield 2012, 21). Heat island effect is getting worse as we put in more concrete, asphalt, dark colored roofs, and buildings. The link between these challenges are the *methods in which we prepare for wildfire, develop our cities, and foster our varying types of forests*. Mind The Divide provides recommended standards to guide the development of proactive management strategies in building up and maintaining healthy urban and wild forests.





# Thank You

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