

AMPING UP YOUR URBAN FORESTRY PROGRAM WITH STATE SUPPORTED PROGRAMS AND TOOLS

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Tools and Examples for...



- Advocacy and Education of Decision-Makers
- Community Involvement and Education
- Forest Management and Forest Inventory
- Various other Urban Forest Needs

Advocacy at the State Level



- California ReLeaf's Decision-Maker Education Campaign
 - ▣ Reaching out to inform state decision-makers on the importance of Urban Forestry in our Communities
- <http://californiareleaf.org/programs/legislative-advocacy>

Advocacy at the State Level

- Tools used to advocate:
 - ▣ Environmental Scan of UF Opportunities
 - An assessment of the opportunities and challenges within UF in California
 - <http://californiareleaf.org/resources>
 - ▣ Economic Impacts of UF in California (Clemson Study)
 - http://www.fire.ca.gov/communications/downloads/fact_sheets/UrbanForesty_factsheet_print2011.pdf

Advocacy at the State Level



- Arbor Week in California
 - ▣ Works to unite cities, businesses, community organizations and individuals to educate Californians on the value of trees.
 - ▣ March 7th – 14th each year

- Working to get Urban Forestry written into State policy

Advocacy at the Local Level



- What can be done locally to showcase the importance of Urban Forestry?
 - ▣ Use the facts and studies that have already been created to educate local government officials (Mayor, City Council members, etc.)
 - ▣ Determine other communities (possibly of similar size) in the state that can be used as a model for positive Urban Forestry change

Getting the Community Involved

- No need to Reinvent the Wheel
 - ▣ Many cities and non-profits do an great job in involving the community in urban forestry and can serve as a solid example for your city or organization
- Just a Few Examples
 - ▣ TreePeople's Citizen Forester Program
 - Provides training and support for community members to become volunteer tree care leaders
 - ▣ Sac Tree Foundation's GreenPrint
 - Provides a roadmap and empowers community partners and volunteers to plant 5 million trees in Sacramento by 2025



Tools to Manage your Urban Forest

i-Tree

i-Tree



- i-Tree is a software tool designed for urban forestry that is adaptable and scalable to your community's needs
- It consists of multiple components that can be used in various aspects of urban forestry planning and management

i-Tree Components



□ Applications:

- Eco (formerly UFORE)
- Streets (formerly STRATUM)
- Hydro
- Vue
- Design
- Canopy

□ Utilities:

- Species
- Pest
- Storm

i-Tree Components (Cont'd)



Eco

- Provides a broad picture of the entire urban forest

Streets

- Focuses on the benefits provided by a municipality's street trees

i-Tree Components (Cont'd)



Hydro

- Simulates the effects of trees and hardscape on stream flow and water quality

Vue

- Estimates tree canopy cover and ecosystem benefits provided by the urban forest

i-Tree Components (Cont'd)



Design

- See how tree selection, tree size, and placement around your home effects energy use and other benefits

Canopy

- Estimates land cover types (e.g., tree cover) using aerial images available in Google Maps

i-Tree Components (Cont'd)



Species

- A tree species selection tool

Pest

- Allows you to observe a tree for possible insect or disease problems

i-Tree Components (Cont'd)

Storm

- Establishes a standard method to assess widespread damage immediately after a severe storm in a simple and efficient manner

Overall Benefits of i-Tree



- Get a greater understanding of the structure of your urban forest
- Gather information on management concerns
- Determine the value of your urban forest
- Create informative summary reports



Tools to Manage your Urban Forest

Management Plan Toolkit

Urban Forest Management Plan Toolkit



- Framework for developing an UF management plan
- Step-by-step process
- List and descriptions of elements
- Online work plan tool
- Online editing tool to assist with the complete details – notes input by multiple collaborators
- Resources

www.ufmptoolkit.com

UF Mgmt Plan Toolkit- Website

The screenshot shows the homepage of the Urban Forest Management Plan Toolkit website. The background is a photograph of a tree-lined street. At the top left, the title "Urban Forest Management Plan Toolkit" is displayed in white and yellow text. In the top right corner, there are "Sign Up" and "Log In" buttons. Below the title is a navigation menu with four yellow buttons: "Getting Started", "Management Planning Process", "UFMP Outline", and "Resources". The main content area features a large white text box on the left explaining the toolkit's purpose, a smaller white text box on the right with a green "It's Free! GET STARTED NOW" button, and a bottom section with logos for California Urban Forests Council and Inland Urban Forest Council, along with a green "Watch now! INTRODUCTORY TOUR" button.

Urban Forest Management Plan
Toolkit

Sign Up Log In

Getting Started Management Planning Process UFMP Outline Resources

The **Urban Forest Management Plan (UFMP) Toolkit** website can be used by anyone managing a large population of trees in or near urban areas. [The Toolkit website](#) is intended to help urban forest managers develop management plans that are appropriate for their urban forests.

It's Free!
GET STARTED NOW

You can view the contents of the Toolkit website without registering, but [registration](#) is required to take advantage of the online editing capabilities.

Watch now!
INTRODUCTORY TOUR

This is a project of California Urban Forests Council, and the Inland Urban Forest Council.

urban forests CALIFORNIA

INLAND URBAN FOREST COUNCIL

What is an urban forest?

“ The sum of all woody and associated vegetation in and around dense human settlements, ranging from small communities in rural settings to metropolitan regions. ”

From Urban Forestry, Planning and Managing Urban Greenspaces by Robert W. Miller: 1988. New Jersey: Prentice Hall.

What is urban forestry?

Develop a management plan for your urban forest

The UFMP Toolkit provides

- an overall framework for developing an urban forest management plan;
- an overall process to organize the steps involved;
- a list and descriptions of elements that may be included;
- an online work plan tool;
- an online editing tool to assist in the development of a complete detailed plan outline with notes input by multiple collaborators.



Tools to Manage your Urban Forest

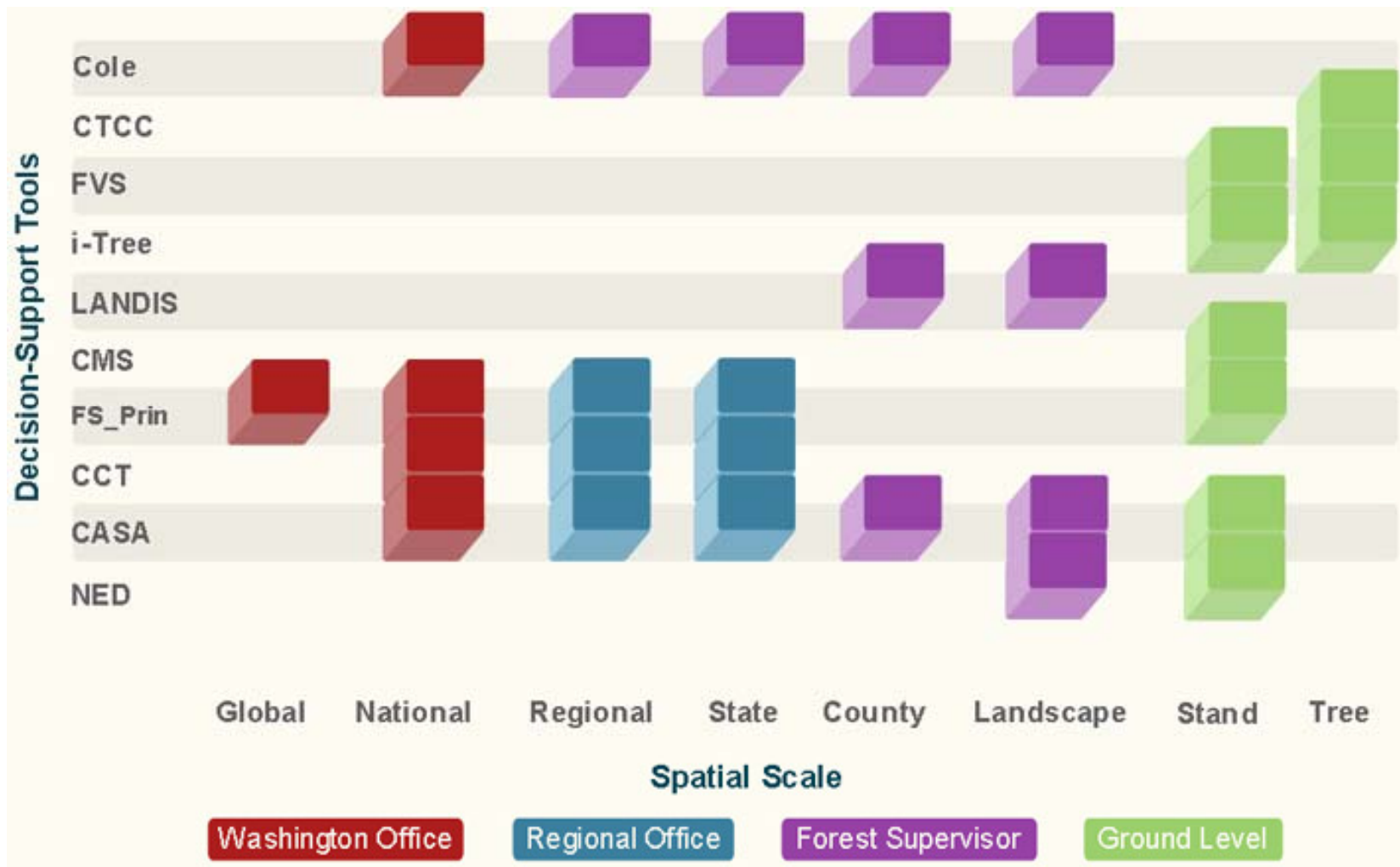
Tree Carbon Calculator

Tree Carbon Calculator Overview



- Designed by the US Forest Service Urban Ecosystems and Processes Team
- The only tool approved by the California Climate Action Reserve's for quantifying CO₂ sequestration from GHG tree planting projects.
- What is it used for?
 - ▣ Calculate an individual tree's CO₂ sequestration and...
 - ▣ Calculate building energy savings provided by individual trees

Carbon Estimation Tools



Carbon Calculator- Screenshot

CUFR Tree Carbon Calculator

Developed by the Center for Urban Forest Research
Pacific Southwest Research Station
US Forest Service

In partnership with the California Department of
Forestry and Fire Protection

Figure 1 Project Data entry

Data name	Data entry	Units	Description
Flag1	1		Tree dbh selected
Flag2	1		Shade & climate selected
Climate Zone	2 (South Coast)		South Coast
Electricity CO2 emissions factor\$	395	(kg/MWh)	
Electricity CH4 emissions factor\$	0.0030	(kg/MWh)	
Electricity N2O emissions factor\$	0.0017	(kg/MWh)	

\$ Required for energy project

Figures 6 & 9 Tree and Building Data entry

Enter Tree data below one tree at a time, then record results

Data name	Data entry	Units	Description
Species code and scientific name	FIMI (<i>Ficus thoningii</i>)		indian laurel fig
DBH (in)	19	DBH (in)	29.5 ft high
Tree azimuth	1	N	
Tree distance class	1	Adj	
Building vintage	1		pre-1950
air conditioning equip.	1		Central air/heat pump
Heating equip.	1		natural gas
Heating emissions factor- CO2\$	53.1	(kg/MBtu)	
Heating emissions factor CH4\$	0.0059	(kg/MBtu)	
Heating emissions factor N2O\$	0.0001	(kg/MBtu)	

Figures 7-10 Carbon Calculator Results (annual)

Energy reductions		Emission reductions (CO2 equivalents)			CO2 Sequestration	Total CO2 Stored	Above ground biomass
Cooling	Heating	Cooling	Heating	Cooling + Heating	(A value of 0.0 indicates no tree growth)		(dry weight)
kWh/tree	MBtu/tree	(kg/tree)	(kg/tree)	(kg/tree)	(kg/tree)	(kg/tree)	(kg/tree)
65.33	0.165	25.8	8.8	34.7	42.9	1074.3	456.6
kWh/tree	GJ/tree	lb/tree	lb/tree	lb/tree	(lb/tree/year)	(lb/tree)	(lb/tree)
65.33	0.175	57.0	19.4	76.4	94.6	2,368.4	1,006.7

Data Template | CTCC | Output Template

Carbon Calculator- Inputs and Outputs



□ Inputs:

- Choose a climate zone (one of 16 pre-defined zones)
- Tree species of interest
- Tree size (DBH) or age. Tree height can be used in place of DBH for palm species

□ Outputs:

- CO₂ stored in the tree due to its growth over many years
- CO₂ sequestered during the past year

Benefits of Use



- Potential Applications
 - Estimating carbon sequestration benefits your urban forest
 - Projecting the benefits of tree planting projects

What is in Store for the Future?



- The current Carbon Calculator is considered a 'Proof of Concept'
- A new version (web-based) is due to be released soon with greater functionality



Tools to Manage your Urban Forest

Additional Resources

Various other tools



- Urban Forest Map

 - www.urbanforestmap.org

- Urban Tree Foundation

 - www.urbantree.org

- UFEI Website (Cal Poly Foundation)

 - <http://ufeio.org/>

- CAL FIRE Urban Forestry website

 - http://www.fire.ca.gov/resource_mgt/resource_mgt_urbanforestry.php