



## What is a tree worth?

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**How do we  
quantify  
value?**



# Ways to quantify value

- Spiritual contributions
- Economic contributions
- Functional contributions

Engineering

Architectural

Ecosystem

Tree value can be defined as the  
present worth of future benefits.



# Spiritual

- Aesthetic beauty
- Identity
- Hope for future (longevity)
- Mental health
- Physical health

# Aesthetic

- Pattern and form in landscape and streetscape
- Framing
- Background
- Complimenting architectural forms

# Identity

- Neighborhoods defined by specie or species.
- Waypoints defined by specimen trees.
- Meeting points designated by large or unusual tree.
- Historic context (tree with story)

# Healthy Communities

- Lower levels of domestic violence
- Reduced stress
- Decreased need for medication and faster recovery times in hospitals with 'tree views'
- Healing gardens



# Healthy people

- In the Inland Empire, 100 large street trees remove per year:

14 tons of CO<sub>2</sub>

351 pounds of other air pollutants

Catch 223,800 gallons of rainwater

# Economic

- Direct benefits
- Indirect benefits
- Avoided costs
- Difficult to quantify

## Healthy Shade Trees Improve Business

- More frequent shopping trips
- Longer shopping trips
- Willingness to pay more for parking
- 12% increase in average spent on goods

# Trees as a Marketing Tool

- Trees can help create a desired environment.
- Create a corporate image.
- Be used to attract new tenants or customers



## Improved Property Values

- Large shade trees can add 1% to the sales price of a home
- Large specimen trees can add 10% to property value.
- A community with mature shade trees can enjoy higher overall property values.

## Avoided Cost Savings

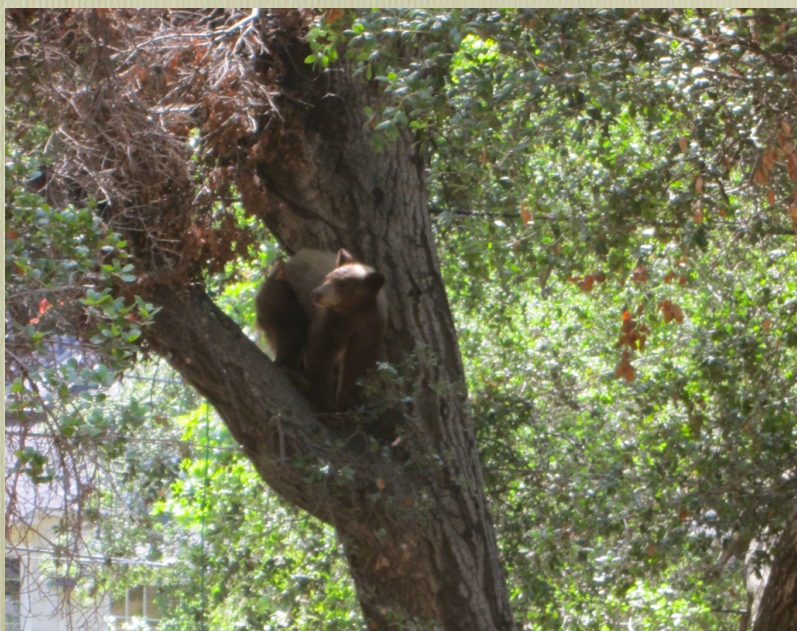
- Stormwater management - filtration/  
interception - reduced flooding
- Lowered peak energy consumption
- Lowered overall energy consumption
- Moderating climate

## Difficult to Quantify

- Wildlife Habitat value
- Neighborhood aesthetic
- Historic significance
- Mitigation for climate change









# Functional

- Engineering

Air conditioning, traffic control, erosion control, glare, acoustic dampening

- Architectural

Screening, privacy, framing views, outdoor rooms

- Ecosystem

Wildlife habitat, stormwater interception, pollution interception



# USDA Benefit Estimates (2011)

One large public tree after 40 years:

Annual Benefits \$97

Annual Costs \$31

Annual Net Benefits \$66



## USDA Estimates Continued

Over 40 years, 100 large public trees in  
Claremont:

Benefits \$338,400

Costs \$125,800

40 year net benefit \$262,600

## i-tree and tree maps

- Encourages cities to look at trees as a living investment.
- Provides a suite of software tools to inventory and measure the dollar value of annual tree benefits across a population of trees in an area.
- Planners can use the information to see the effect populations of trees have on climate.