



Why are Oaks important?

**Presented by
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August 2012**



The Santa Monica Mountains Watersheds Coordinator Program is funded by a Proposition 84 grant from the California Department of Conservation and via support from the Cities of Agoura Hills and Westlake Village, the California Department of State Parks, the California Association of Conservation Districts, Ozzie Silna, the National Park Service, the Natural Resources Conservation Service and the Resource Conservation District of the Santa Monica Mountains.

Photographs and images courtesy of:

Rosi Dagit

John Evarts, Cachuma Press "Oaks of California"

Los Angeles Public Library

Los Angeles County Regional Planning

Tom Scott

Daryl Koutnik

Christy Cuba

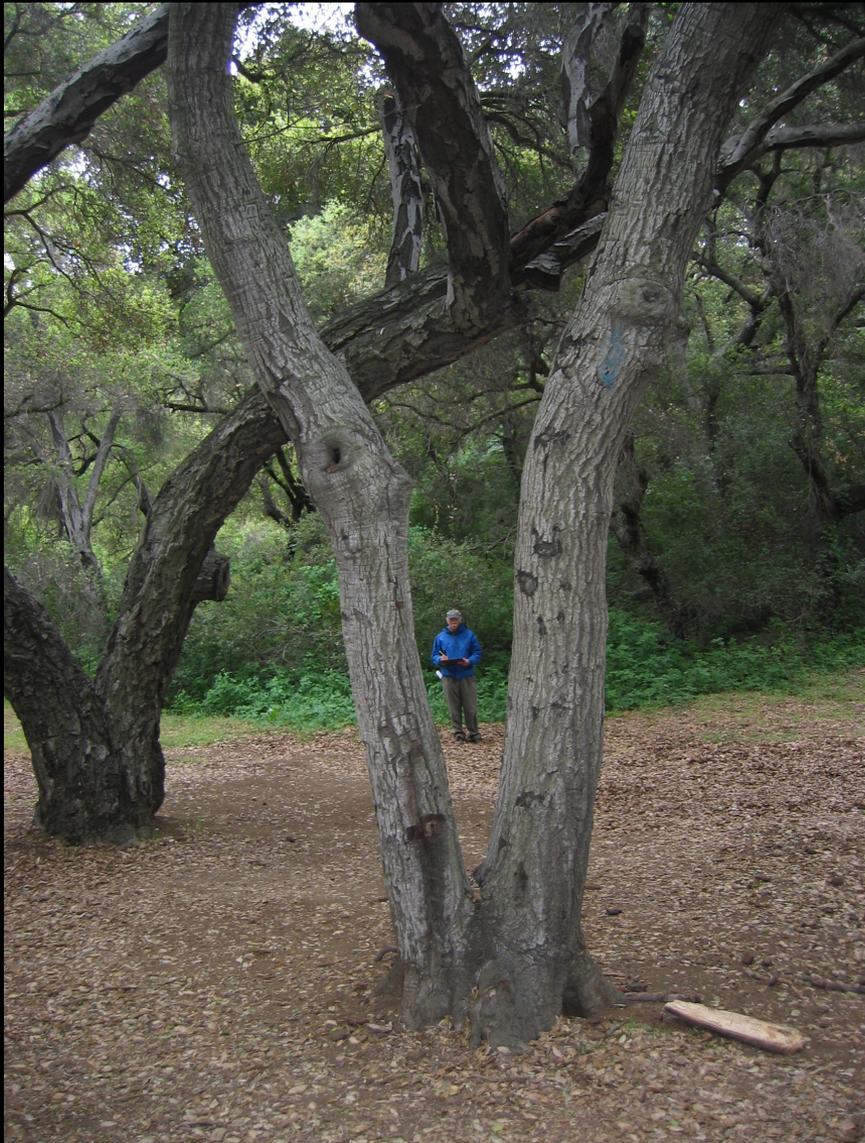
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Oaks have adapted to their climate and ecosystem for over 45 million years

Oaks and humans have a long interdependent relationship

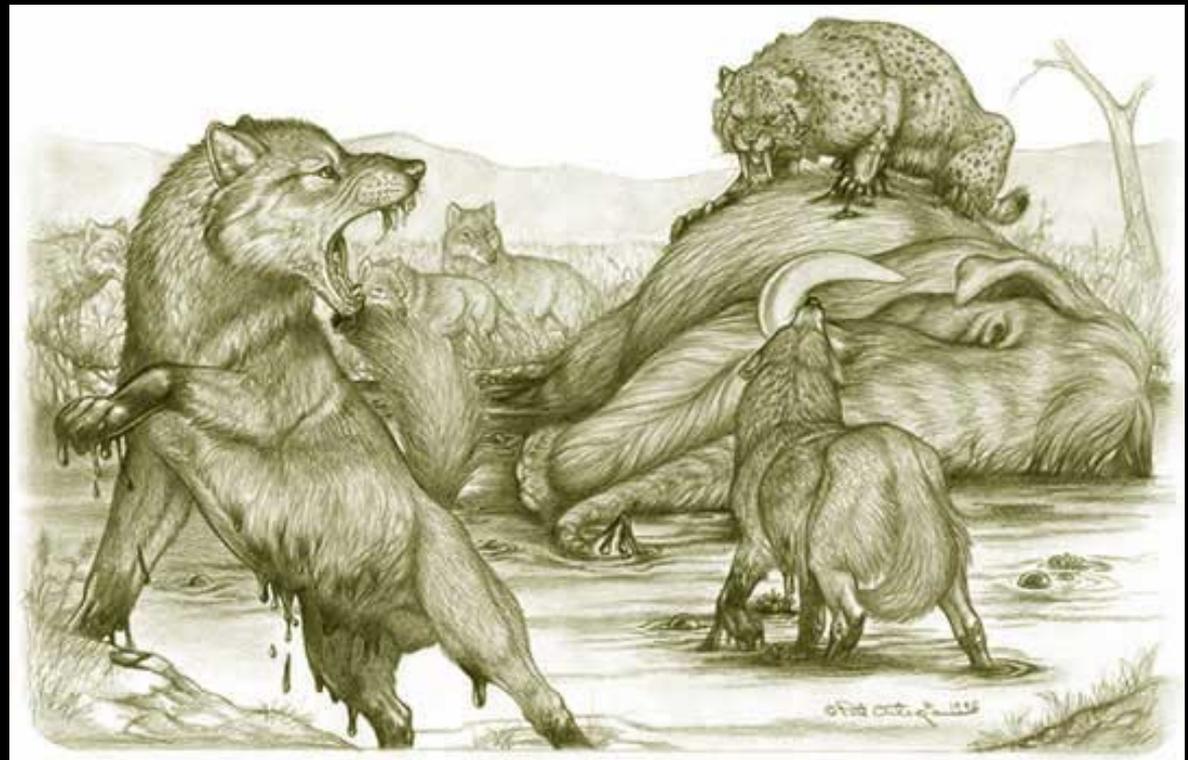


La Brea
Tar Pits
10-40,000 years
ago

Climate wetter

Plant communities:

- Deep canyons oaks
- Chaparral
- Riparian corridors
- Coastal Sage Scrub



Settlements located near water and oaks





Much of California inhabited
since at least 7,000 BC

Oaks a major food resource

~140 pounds acorns per tree

700-1,000 pounds per person
per year consumed



Oak woodlands actively managed by
Native Americans for maximum acorn production



Individual trees were passed down through families
Oaks provided food, medicine, shelter and more





Today
people still seek
out ways to live
among the oaks

Oaks are Keystone species



Oak woodlands provide many kinds of habitats



Mixed ages of trees, distribution and clumping across the landscape
Variety of successional stages related to disturbances, vertical structure available

Complex ecosystem with many species, including humans



More people = more houses = more fragmentation



Ordinances protect aging individual trees, not communities



Oak value complicated to assess

- Benefits on ecological level
- Benefits on economic level
- Benefits on cultural/societal level

What is a single oak tree worth?



- Depends on species?
- Size?
- Location?
- Condition of the tree?

“Peace Oak” Cahuenga Pass

Shaded Gen. Pico surrendering to John Fremont 12 January, 1847



Intact Woodland



Existing in “wild” state

Ecological functions and services intact

May have some invasive grasses and forbs but also native understory

Highest level of protection

Moderately Degraded Woodland



- Most common condition in LA County
- Some ecosystem functions and services still present
- Some native plant and animal associated species still present
- Provides connectivity
- Natural regeneration possible

Severely Degraded Woodland



- Site conditions drastically altered
- Natural regeneration not possible
- Soil and hydrology significantly altered
- Limited wildlife use
- Few ecosystem functions and services remain

How do we estimate the value of oaks lost to insects and diseases?

Sudden Oak Death estimate \$7.5 million for removal alone (Kovacs et al 2011)



How do we calculate the value of oak woodlands?



Total Oak Woodland Value =
Use Value + Non-use Value + Ecosystem Function Values

Use Value



Real estate values
higher for
properties
within or near
oak woodlands

Individual Tree
value based on
CTLA methods

Recreational uses



Would this home be worth as much
if the mature oaks were gone?

Home value 7-30% higher when oaks present



Non-Use Value

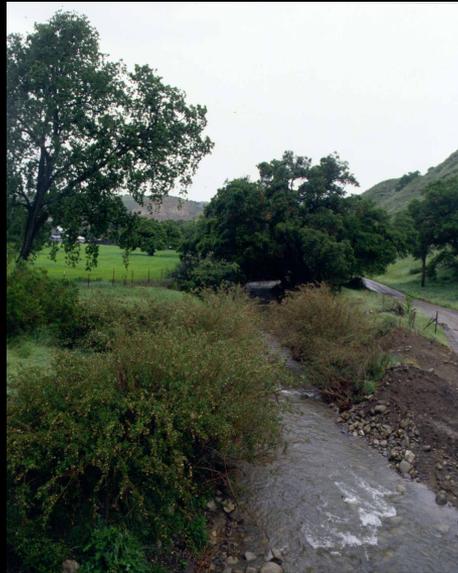
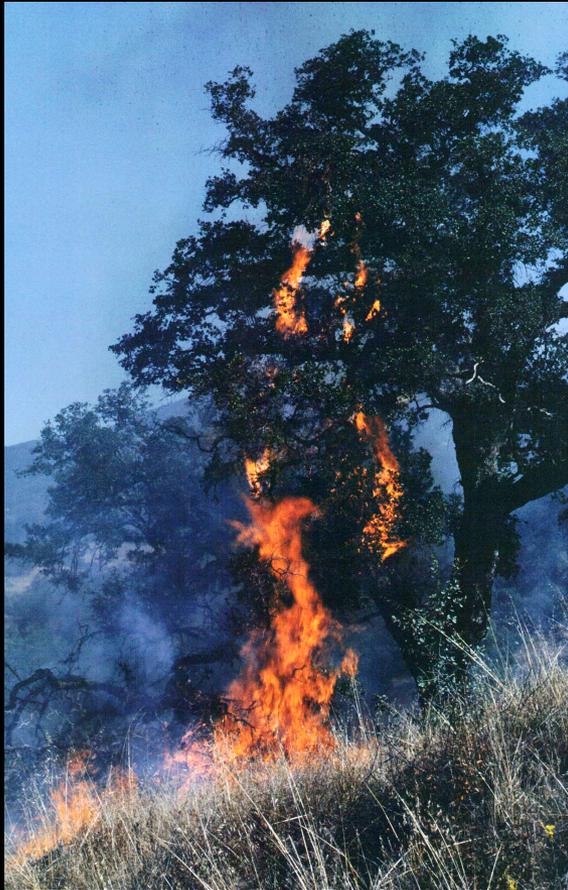


- Recreational opportunities provided by oak woodlands
- Willingness-to-pay for protecting oak woodlands
- Travel costs to get to oak woodlands

How do we value oaks on public lands?



Oak woodlands play a major role in mitigating effects of fire, flood, erosion, air pollution





How can we more accurately estimate the value oaks provide for:

- Temperature moderation
- Groundwater recharge
- Stormwater runoff control
- Water Pollution reduction
- Air pollution reduction
- Carbon sequestration

How can we provide a clear, fair strategy for identifying the benefits of oak woodlands vs. the costs of losing them?





**How are we doing?
Are we protecting
and preserving our oaks?**

Mapping is critical!



Fragmentation is a real concern
and current maps don't tell us the whole story

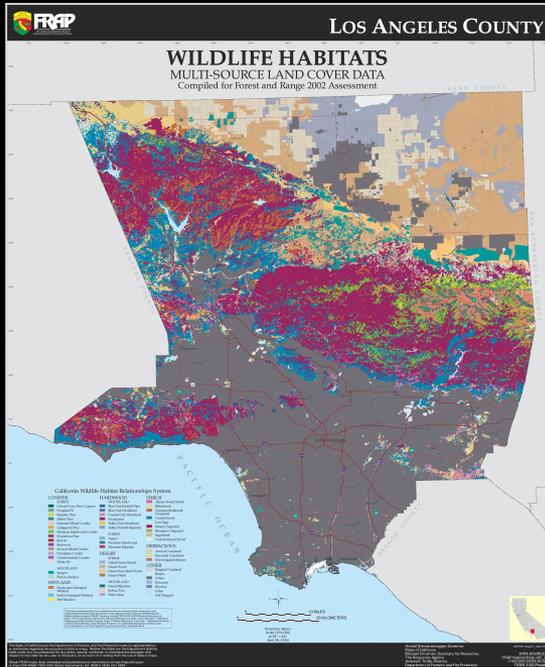


Baseline maps needed
Follow up critical

Better information on regeneration patterns needed



Need to look at these issues from several spatial levels - landscape, watershed, parcel, tree



Our challenge: to reconnect people and oak woodlands



Citizen monitoring really helps!



www.gsob.org



People create landscapes that reflect their morality, humanity and culture, and these landscapes then in turn, determine our fate.

Sam Broder 1991