An
Introduction to Urban Forestry
at
UC San Diego

A Presentation Of

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Acknowledgments

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Davis
*

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*
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Bethesda, Maryland
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Wilmington, Delaware
*

City of North Vancouver, BC
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Sierra South Region Office
Riverside

Urban Forestry @ UCSD

Forestry Reality Equation:

Quality of Life

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Quality of Urban Forest on Campus

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Quality of Trees on Campus

Keystone Prep -

* Forge partnerships

- Facilities Management with Campus Physical Planning Office,
Park C'ttee, C/CPC, FD&C, Med Ctrs, Hsg & Dining Svcs, Sports Facilities

** Build enduring bridges

- to Faculty, Students, and Staff thru appropriate/adequate
promo publications and Community Forestry programs/discussions

*** Strengthen the campus/community fabric

- recognize Campus/Community opinion leaders, identify/cultivate
potential donors; encourage participation; establish a wide volunteer base

Quality of Life

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Quality of Urban Forest on Campus

Vital Prizes:

1. A Campus that is safe, and a desirable place to work, learn, and live

2. Preserved ecological heritage
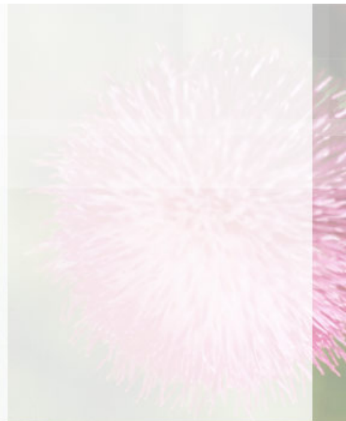
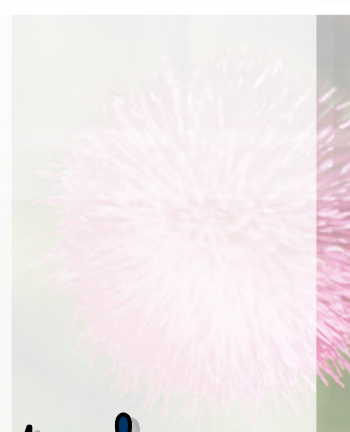# Quality of Trees

Factors:
* Proper location
* Good branch structure
* Abundant foliage
* Good vigor
* Healthy roots
* Pest- and disease-free
* Desirable appearance

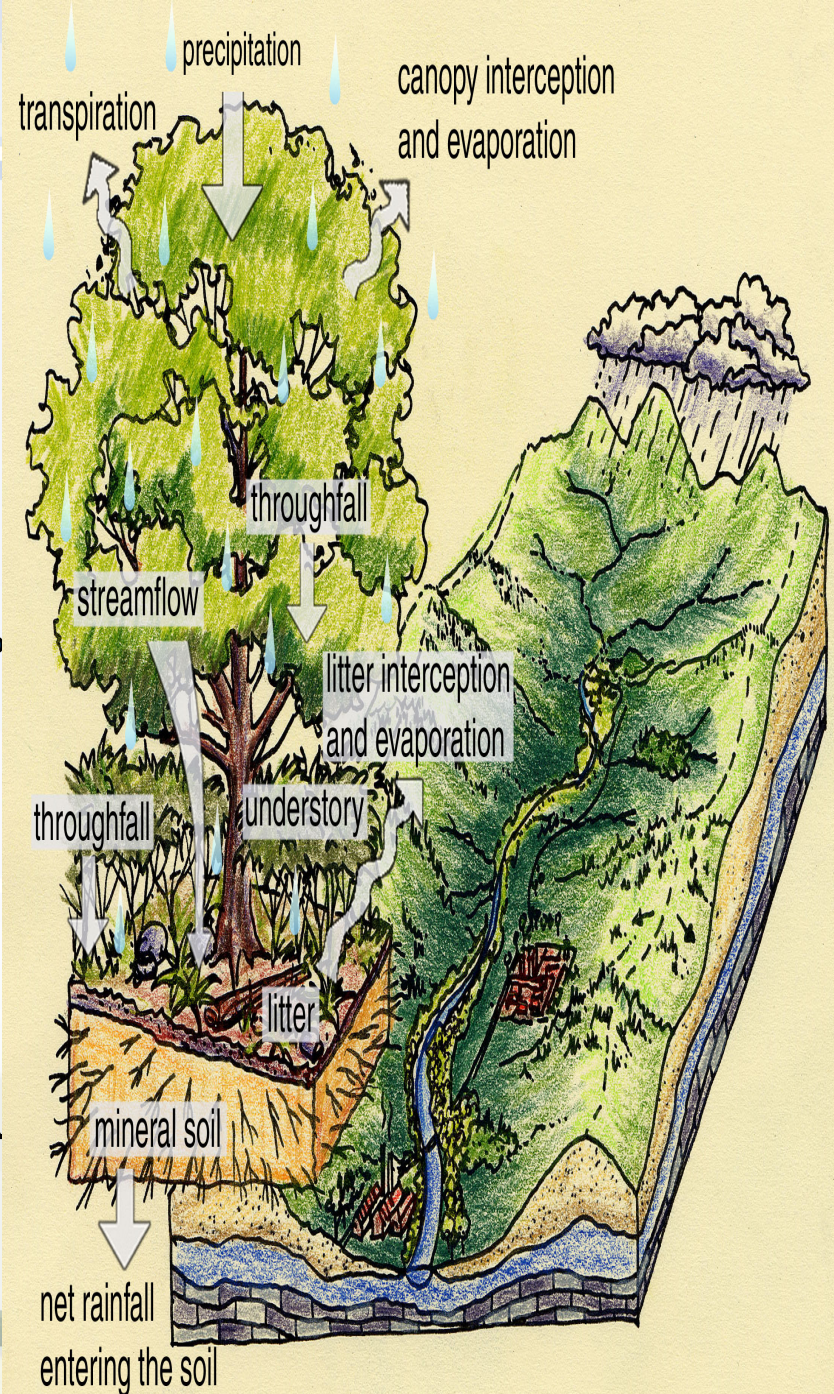## Quality Trees Stand For Safety!

Trees Enhance The Environment

100 mature trees catch about
100,000 gallons of rainwater per year...

= Less stormwater runoff

= Less $$ spent on stormwater control

= Reduced soil erosion and water pollution

= Cleaner stormwater discharges

precipitation

transpiration

canopy interception and evaporation

throughfall

streamflow

litter interception and evaporation

throughfall

understory

litter

mineral soil

net rainfall entering the soil

Trees Are Important To Human Health

* 100 trees remove 5 tons of CO_2 per year

* 100 trees remove about 1000 lbs of pollutants per year including:

400 lbs of ozone

300 lbs of particulates

CO2 and other heat-trapping gases
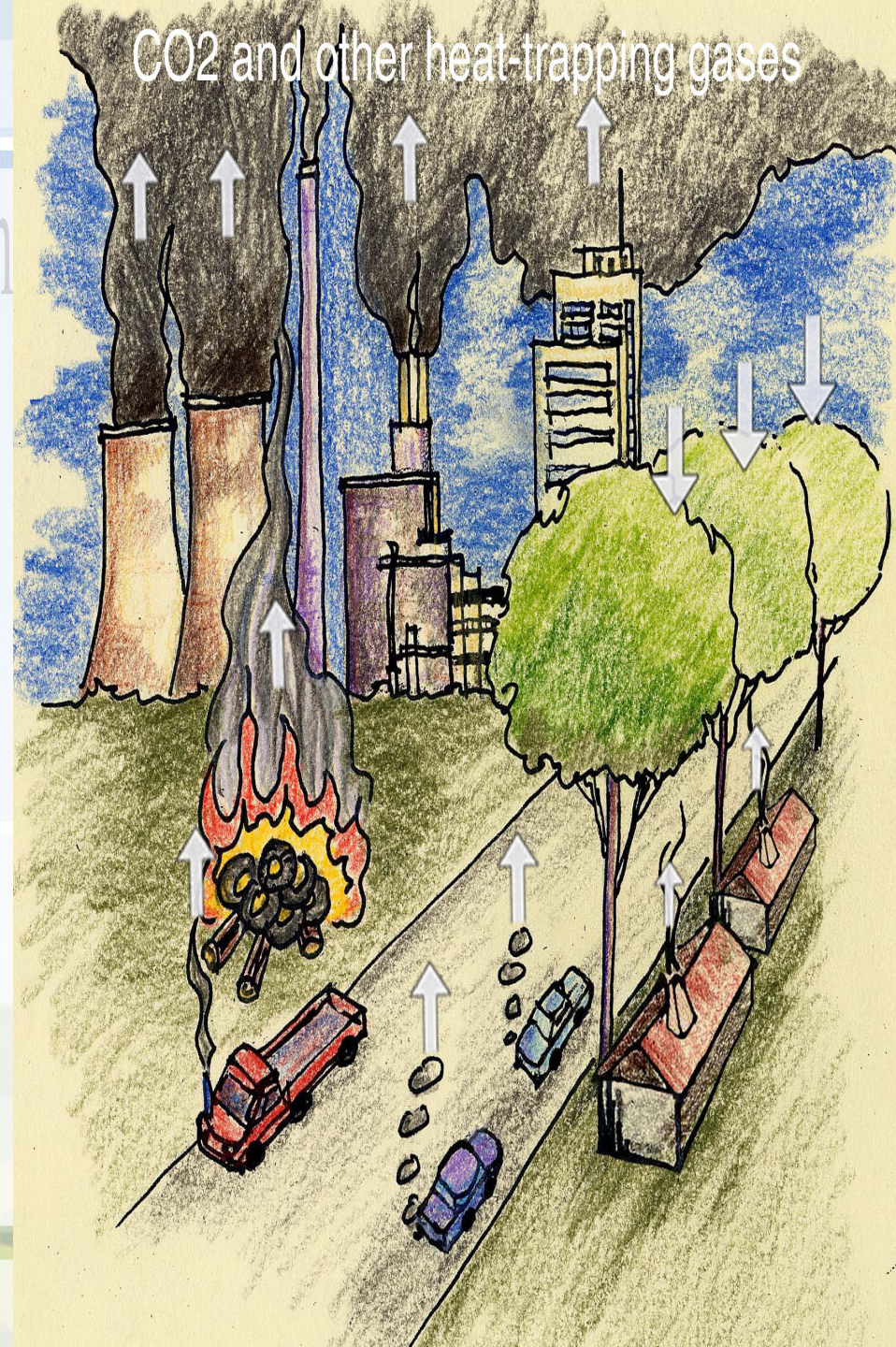
Trees Are Vital To Community Health

A tree-filled Campus means:

* Less violence and vandalism

* Safer and more sociable ambience

* Reduced stress

* Decreased need for medication

* Speedy recovery from ill-health

Source: Human-Environment Research Laboratory, University of Illinois, Urbana-Champaign

Use of Right Trees
in Right Places:
* Saves up to 30% of annual
   air condition costs
* Makes parking lots 3 degrees
   cooler in summer months
* Interior of parked cars
   is 30 degrees cooler
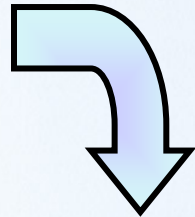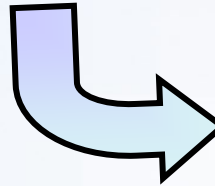* Saves 10-25% of winter
   heating costs

Trees Pay Us Back!

Costs = $35,000

Planting - Pruning
Removal/Disposal
Irrigation
Sidewalk Repair
Litter Removal
Legal - Admin

100 Trees Over 40 Years

Benefits = $279,000

Energy Conservation
Air Quality Improvement
Runoff Control
Real Estate Value Increase
Infrastructure Protection

Pay Off: $244,000

Source - CUFR, UC Davis

Challenges

Threats

* Poor tree care
* Inadequate space
* Improper irrigation
* Land Development
* Pests and diseases

Results

* Tree failure
* Danger to lives
* Damage to property
* Litigation
* Loss of benefits

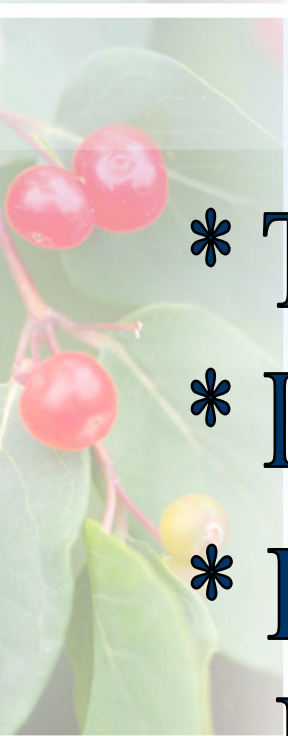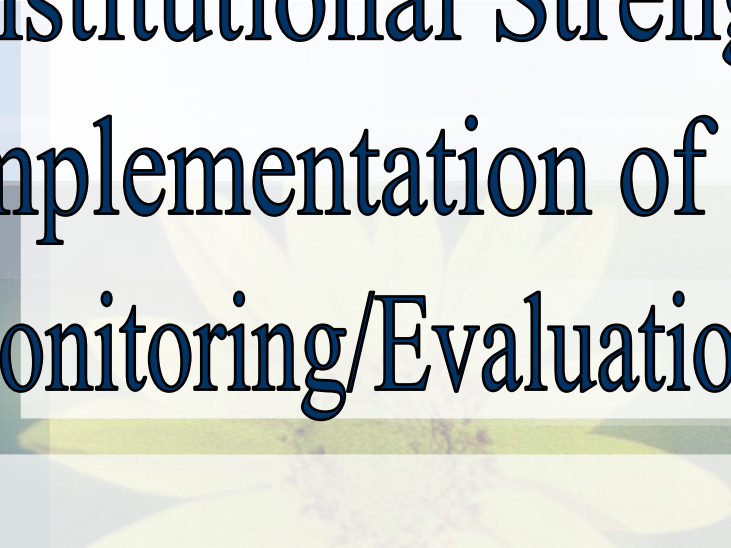### Threats To Trees Are Threats To Human Lives

Antidote To Threats

Formulation
&
Implementation
of a
Sound
Urban Forest Management
Plan

Tools of Sustainable Forest Management

* Tree Inventory

* Institution of a Forest Mgt Policy

* Departmental Capacity Building/ Institutional Strengthening

* Implementation of Forest Mgt Plan

* Monitoring/Evaluation of Forest Mgt Plan

Reasons for a Forest Mgt Plan

A Forest Mgt Plan will supply answers to such questions as:

1. What do we have?

2. What do we want?

3. What do we need?

4. How do we get what we want?

1. What do we have?

* Species of trees on Campus

* Location of trees by species and function

* Condition of Campus trees
  - age gradations
  - stand history and current health status
  - tree hazard determination
  - need for tree removal
  - need for stand restocking
  - present canopy density
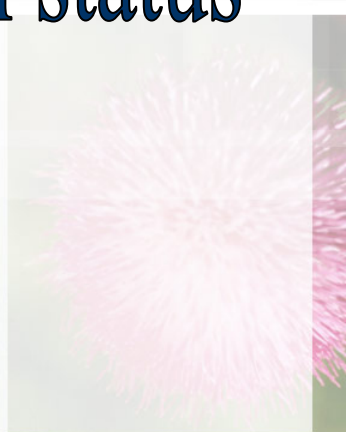
2. What do we want?

* Improved safety of faculty, students, staff, and visitors on campus

* Sustainability
    - forest regeneration (natural/artificial)
    - forest fire prevention & mgt planning
    - species diversity (outside of Groves)
    - target canopy coverage
    - tree use/care best mgt practices

3. What do we need?

Determine
- true value of trees to health and well-being
- necessity for increased investment in mgt
- up-front integrated urban forestry planning
- synergy of green and gray infrastructure
- degree of integration of sustainable forestry practices

- cost-effective tree-value quantification tools & application

4. How do we get what we want?

* Goal-setting

  - short-term goals (5-10 yrs)
  - long-term goals (10-50 yrs)

* Set standards

* Formulate policies

* Implement Urban Forest Mgt Plan

Summary

1. What we do want:
   - a truly Safe and Beautiful Campus

2. What we need:
   - a workable Urban Forest Mgt Plan

3. The Benefits really stack up!
   - reduced liability
   - value-added/enhanced safety
   - increased aesthetics
   - secured environmental sustainability