Southern California Water Committee
Stormwater Workshop

Our New Water Paradigm

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President, TreePeople

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TreePeople's Water Research Sponsored by:

BOEING
CALIFORNIA WATER FOUNDATION
S. D. BECHTEL, JR. FOUNDATION
STEPHEN BECHTEL FUND
the Energy Coalition
Generating Capital for Communities Through Energy

Partners

- CalFire
- LA County Public Works
- LA DWP
- LA Sanitation
- LA Mayor Garcetti
- City of Santa Monica
- City of Melbourne, Australia
- City of Adelaide, Australia
- California ReLeaf
- US Forest Service
- LA Unified School District
- Southern CA Edison
- Southern CA Gas
- US EPA
- CSOs: LA City/DWP/LA County
- CROs: LA and Melbourne
- California Water Foundation
- Marisla Foundation
- Roy and Patricia Disney Foundation
- Leonardo di Caprio Foundation
- The Boeing Company
- Walt Disney Company
- Stephen Bechtel Foundation

- Climate Resolve
- Green LA
- LARC
- Council for Watershed Health
- North East Trees
- The River Project
- Green Garden Group
- Permaculture Alliance
- Transition Towns

Colleges and Universities

TreePeople's Mission is to:

Inspire, engage and support the people of Los Angeles to take personal responsibility for the urban environment, making it healthy, fun, safe, sustainable and resilient--and share the process as a model for the world.

Nearly all of our infrastructure systems (water supply, stormwater, waste water, flood protection, power supply and transportation), were designed for a different climate than we now have today…

--John Laird, California Secretary of Natural Resources

CLIMATE IMPACTS

- Infrastructure is under-sized for increased weather extremes
  - Water Shortages: Long Term and Droughts
  - Flooding
  - Pollution
  - Extreme Heat Mortality
- Fire
- Health: Physical and Emotional (chronic, cumulative, dislocation)
- Economic Impacts

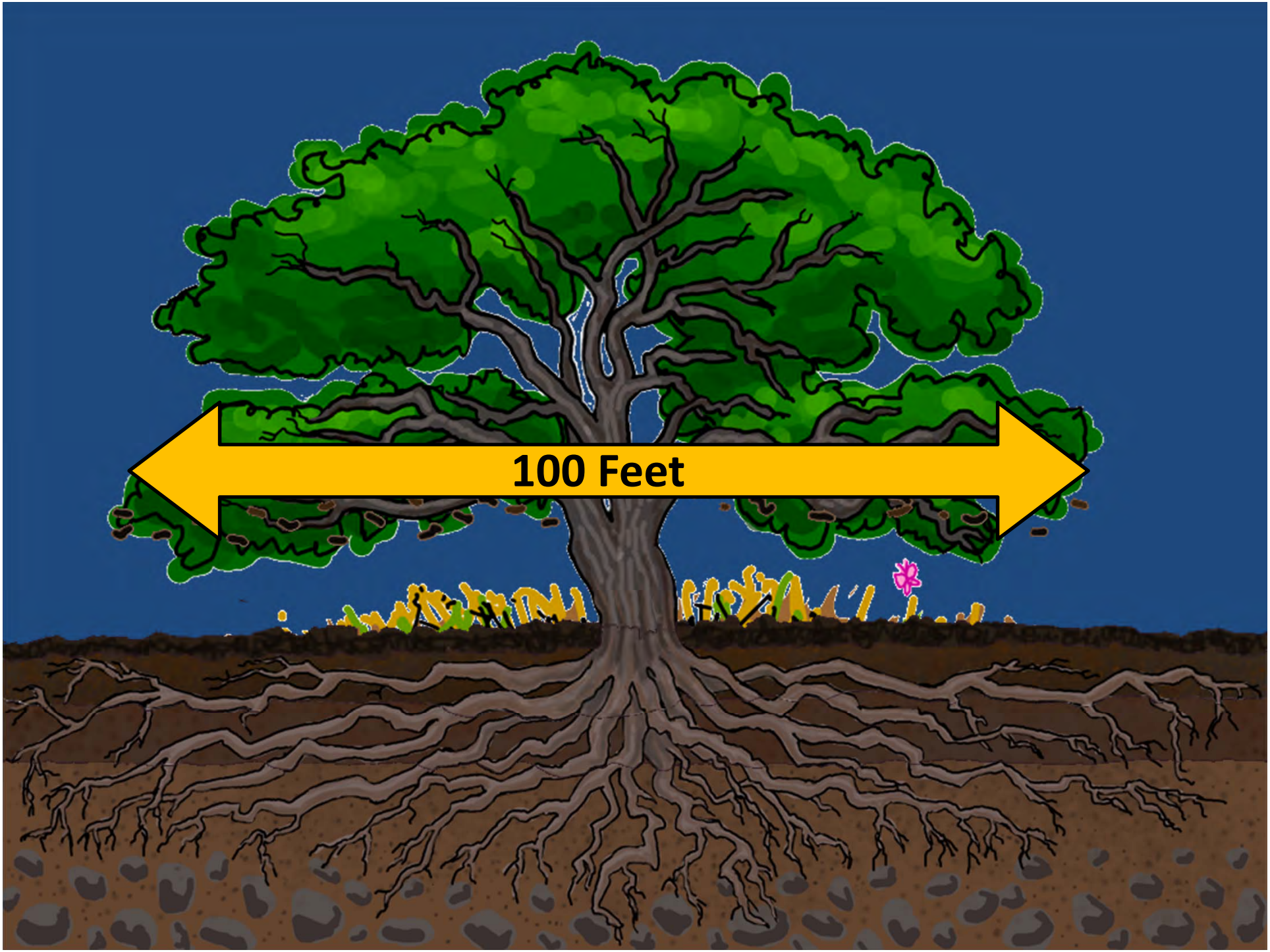
Time for a new integrated paradigm

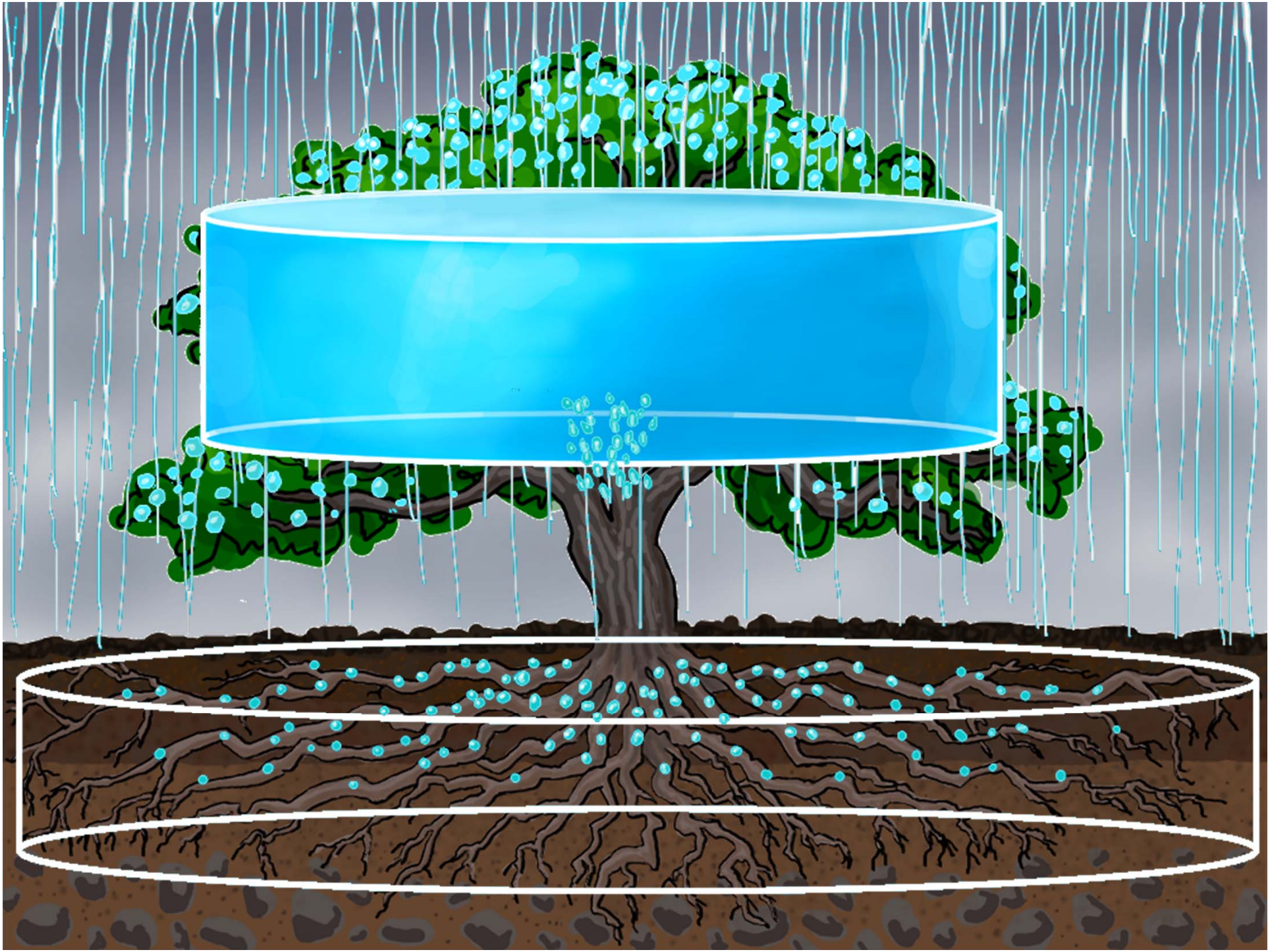
Dis-Integration = Vulnerability

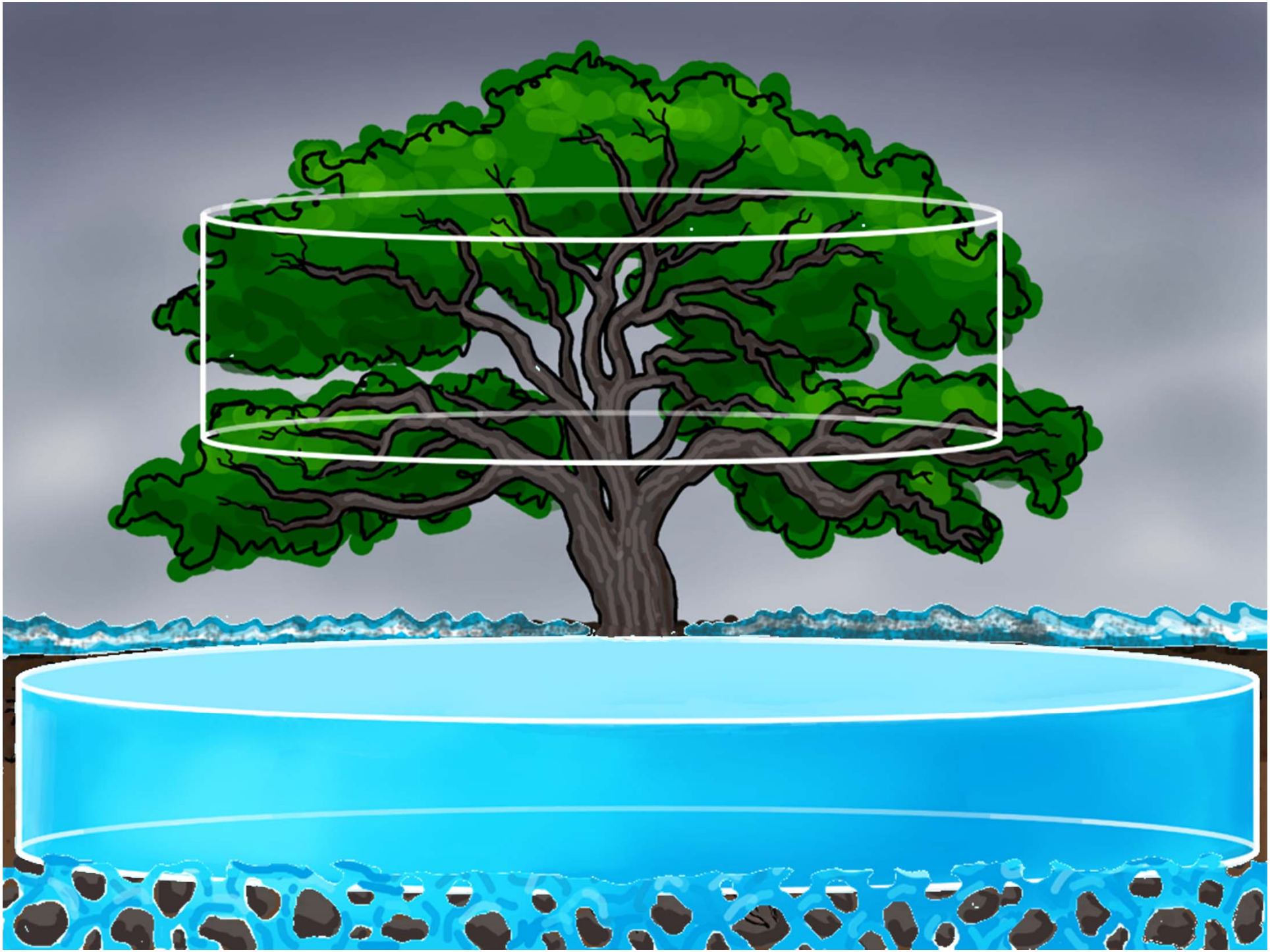
- Miss the whole picture
- Partial and Ineffective solutions
- Insufficient and competing funding
- Public apathy or antipathy

Integrated Management

- System and Ecosystem Management
- We have the tools
  - Emergency Best Practices
  - Mutual Aid Agreement models
  - JPA's and EIFD's
- Public engagement and support


100 Feet



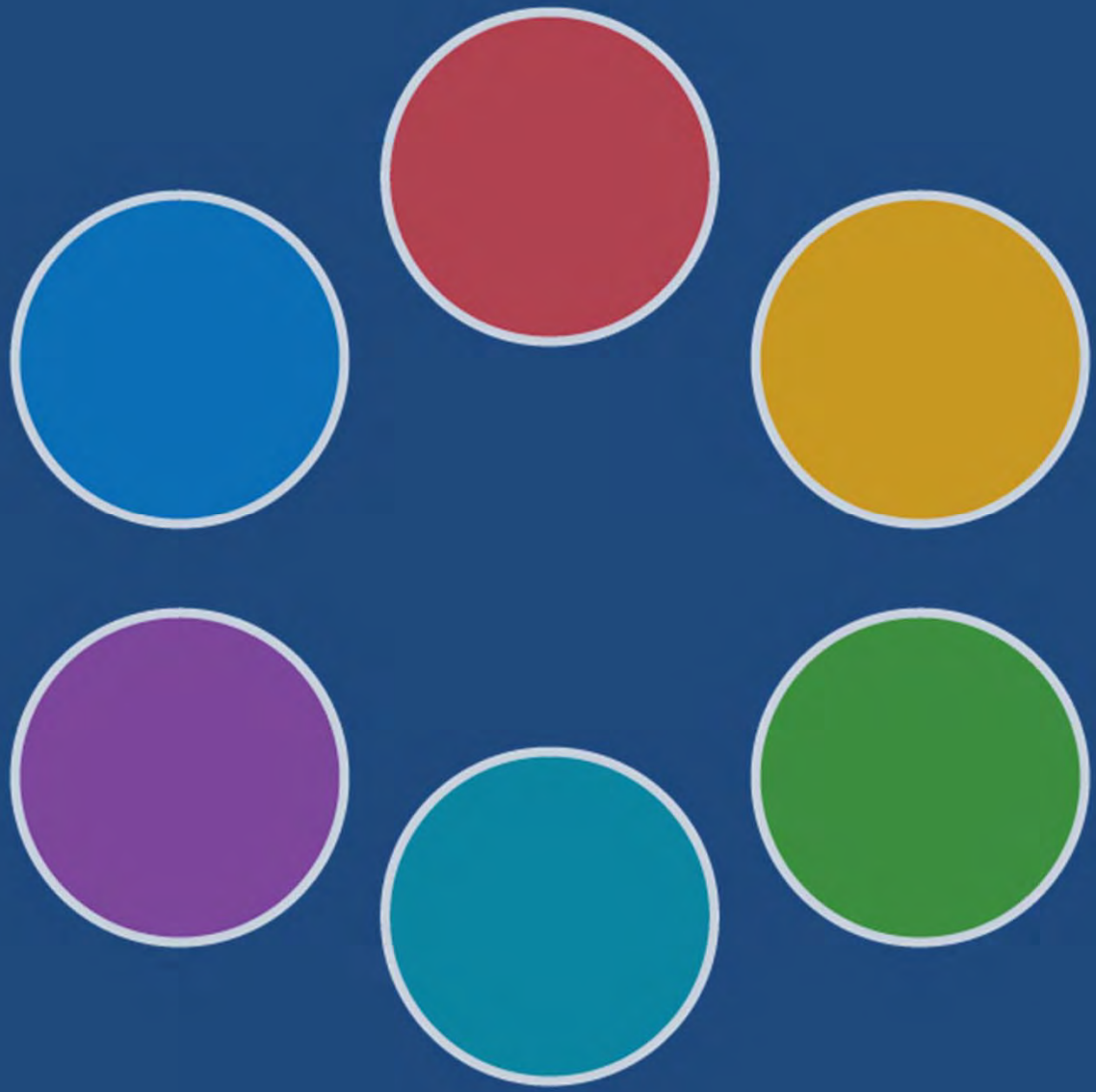


Shifting to Integrated Management

Current approach causes multiple problems.

Los Angeles Today

Dis-integrated approach wastes resources, duplicates efforts and imposes unsustainable practices.



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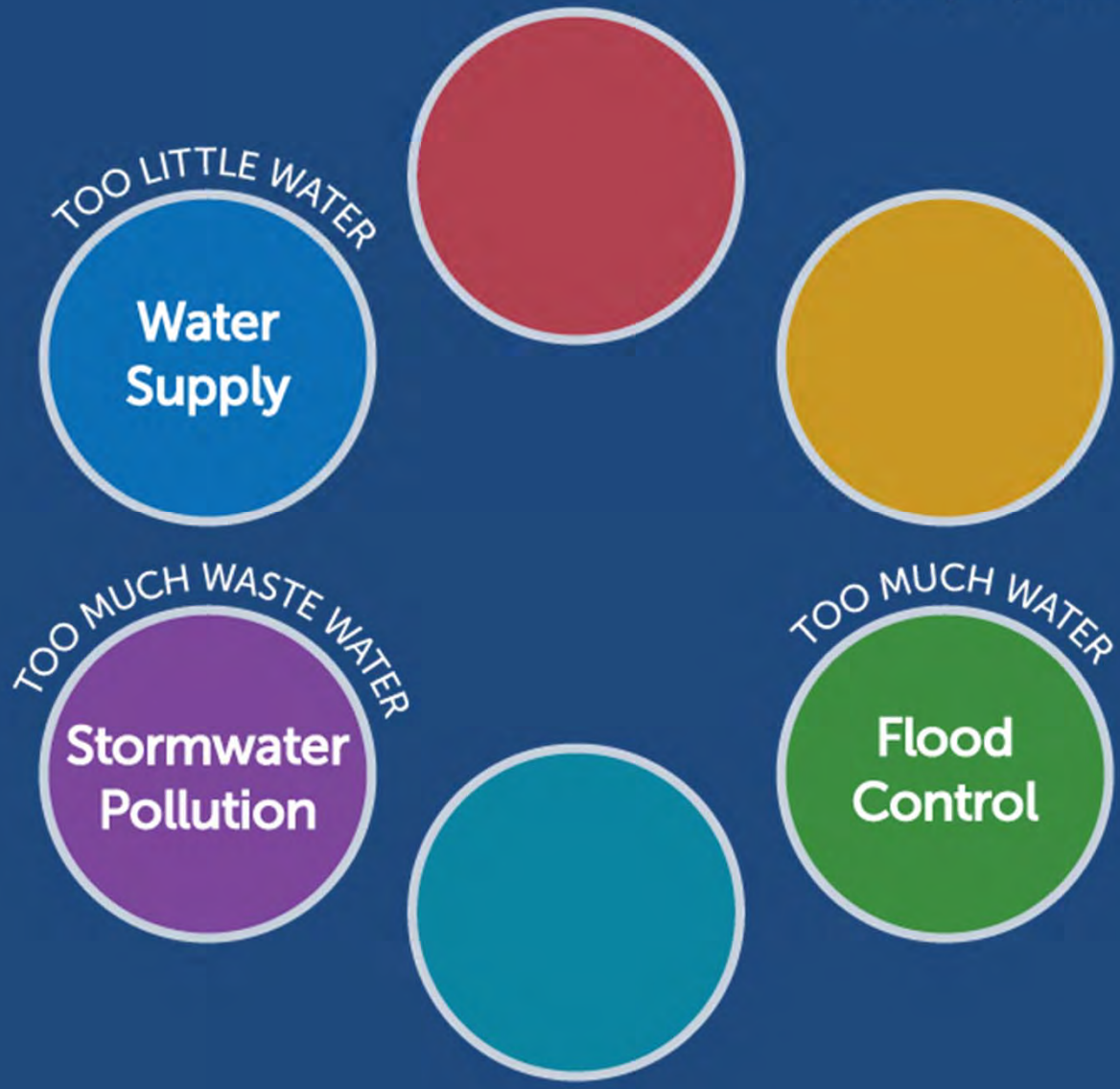

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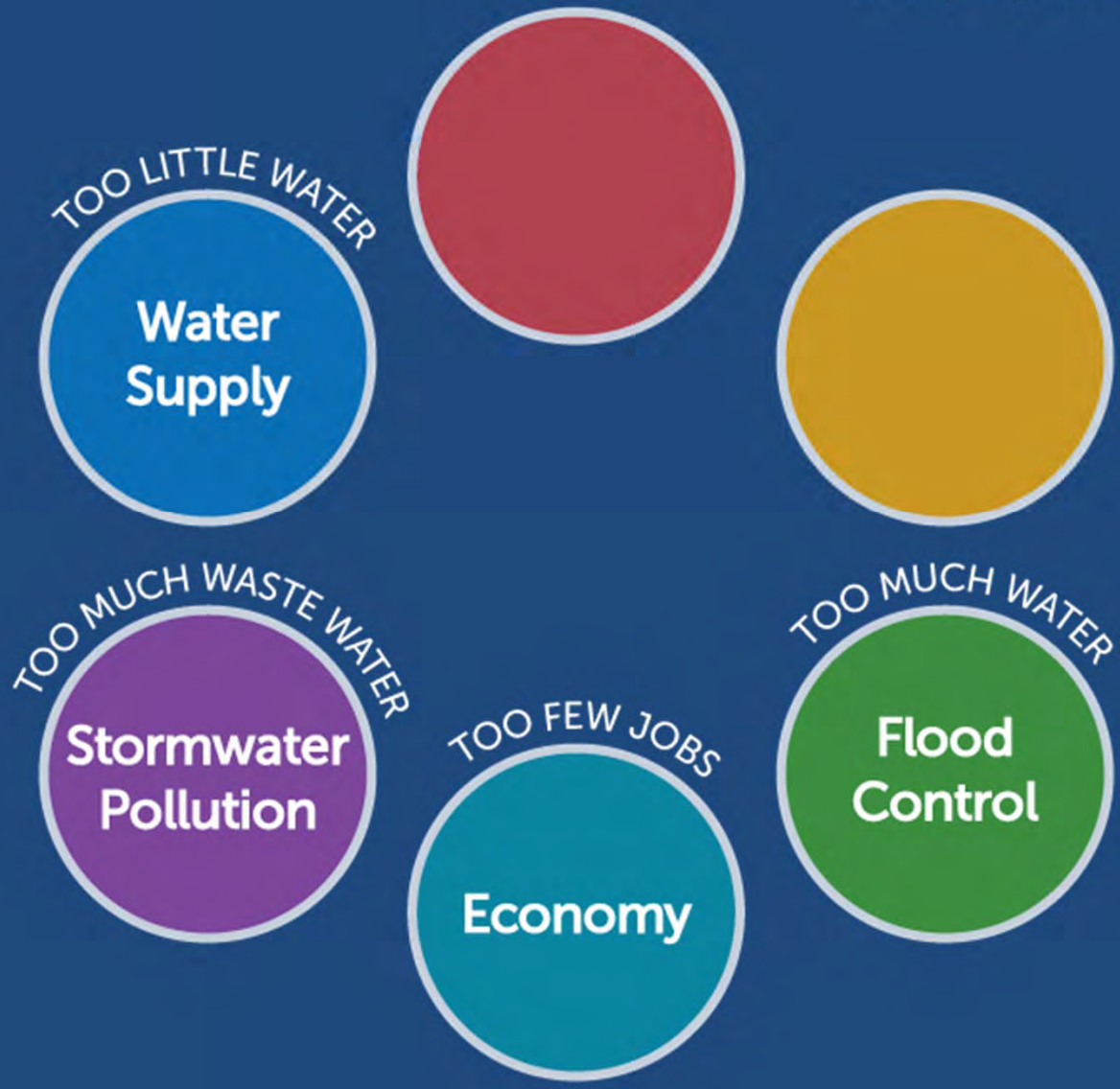

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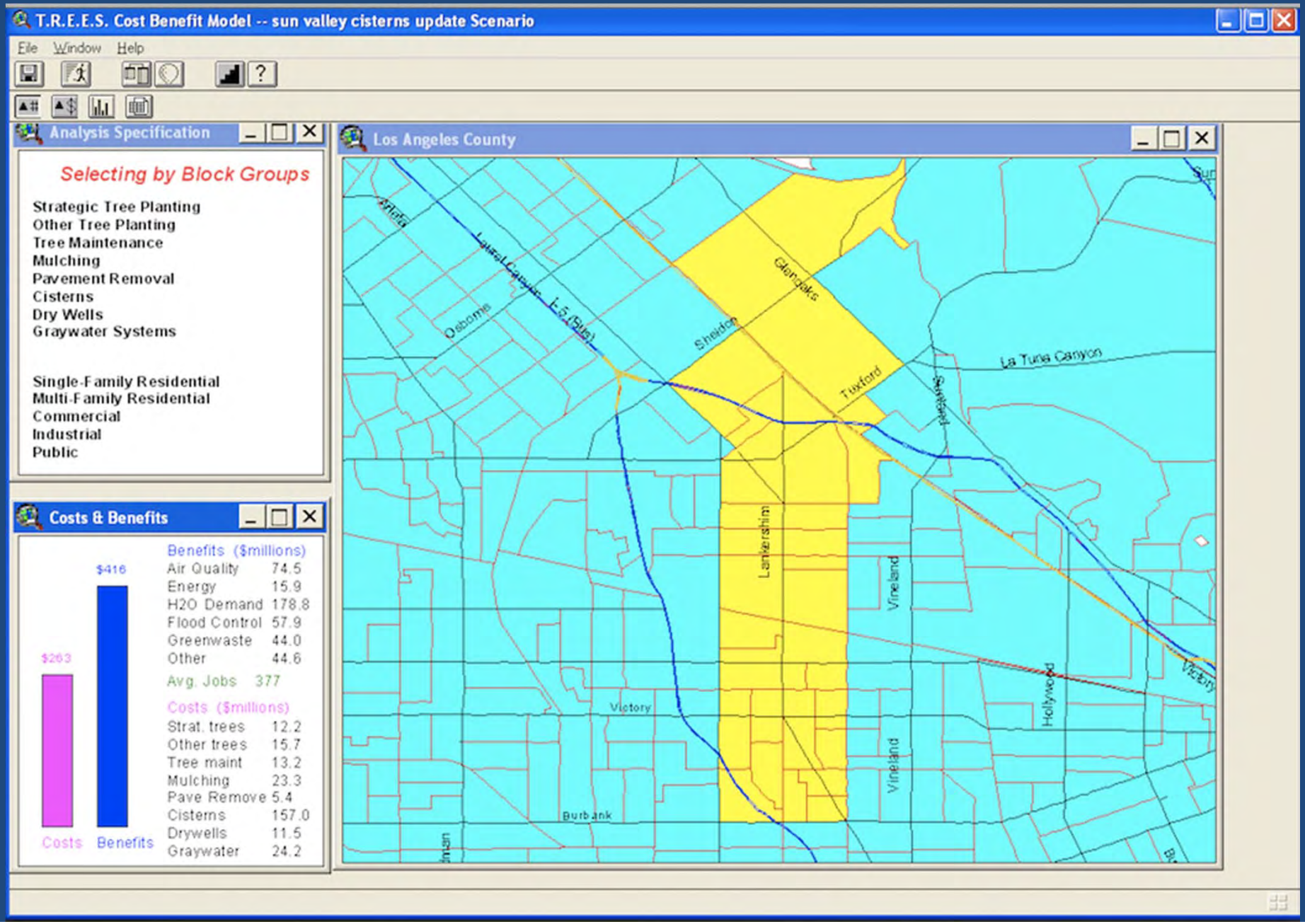
Shifting to Integrated Management

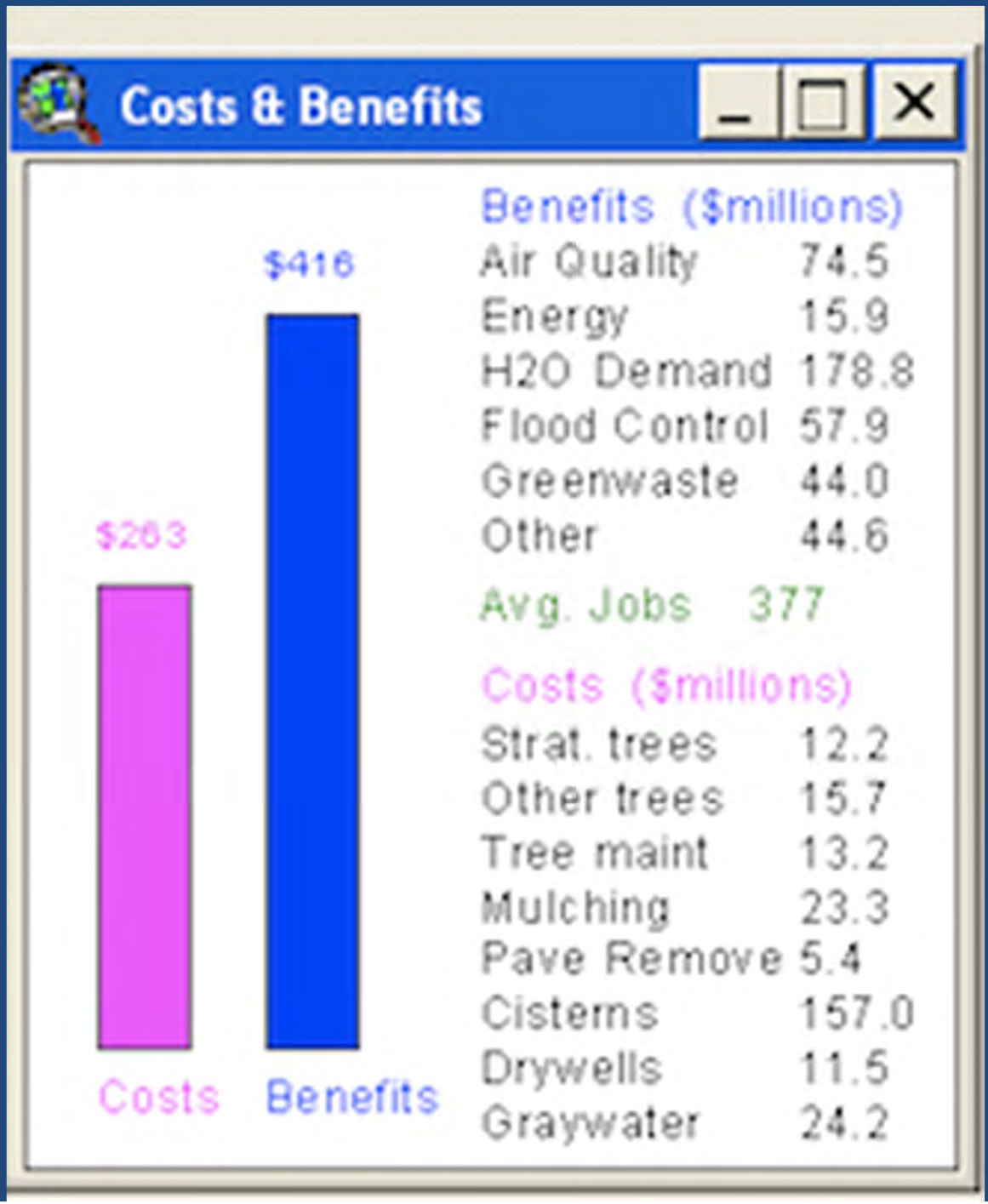
Los Angeles Potential

Integrated approach also creates jobs and liberates funds for emerging green technologies.

An integrated approach creates multiple solutions.

Multi-Purpose Budgets and Projects




Costs & Benefits
$416
$263
Costs
Benefits
Benefits ($millions)
Air Quality 74.5
Energy 15.9
H2O Demand 178.8
Flood Control 57.9
Greenwaste 44.0
Other 44.6
Avg. Jobs 377
Costs ($millions)
Strat. trees 12.2
Other trees 15.7
Tree maint 13.2
Mulching 23.3
Pave Remove 5.4
Cisterns 157.0
Drywells 11.5
Graywater 24.2

Lessons from Australia

Responding to Extreme Climate Threats,
City of Melbourne Made Landscape and Urban Forest
the core organizing principle for
Flood Protection, Water Supply, Heat Mitigation and
Water Pollution Prevention
And they Integrated their Infrastructure
Planning and Funding

Cooling: Melbourne 40% Canopy for 9 degrees cooling

The Greater LA Water Collaborative

Bio-mimicing the Forest: Planning a Hybrid System

Facilitated by

Getting it Started....
The Multi-Agency Collaborative

Scaling a Hybrid System

New Local Supply Paradigm
DATA from UCLA
for City of LA 2040-2050

- Demand Today: 470k af @ 104 gpcd.
- Tomorrow: 360k af @ 80 gpcd.

- Water recycling - 200K AF. The key is hyperion $$$

- Storm water - SW Capture Master Plan - 150K AF.

- Groundwater - 50-100K AF

  careful to not double count with SW and Recycled water, But it is fair to say with maximized pumping from West and Central Basin plus Pump and Treat in the SF Valley.

ONE EXAMPLE OF WHY WE NEED TO DO THIS


LOS ANGELES URBAN COOLING COLABORATIVE
UNIVERSITY OF MIAMI
MILLER SCHOOL
of MEDICINE
Center for Public Health and Disasters
A Research Center of the Fielding School of Public Health
UCLA
FIELDING
SCHOOL OF
PUBLIC HEALTH
CLIMATE
RESOLVE
Global
Cool Cities
Alliance
TREEPEOPLE
California State University
Northridge
Yale School of Forestry
& Environmental Studies

Who is at risk?

- Most at risk
  - The elderly
  - Hispanic communities
  - Black communities
- Mortality increases about 5X from the first to the fifth consecutive day.
- After the fifth day, mortality risk increases 46% in Hispanic communities and 48% in elderly black communities.

Kalkstein, L. et al, *The Impact of Oppressive Weather on Mortality Across Demographic Groups in Los Angeles County and the Potential Impact of a Climate Change*. University of Miami, Nov. 2014.

Los Angeles Urban Cooling Collaborative

- Phase 1: The Climate Science
  - *How many lives can be saved by increasing vegetation and reflectivity?*
- Phase 2: The Social Science
  - *How can communities be empowered to become more resilient to heat?*
- Phase 3: Implementing Change
  - *What policy/program strategies can create the necessary changes?*

“Board of Chiefs” Integration 2.0

Let's take it to the Streets

For More Information:

TREEPEOPLE

www.TreePeople.org

Videos on YouTube:

The Miracle on Elmer Avenue

Capture the Rain and Rebuild the Economy

LAStormcatcher (Greater LA Water Collaborative)


@TreePeopleL

@AndyLipkis