

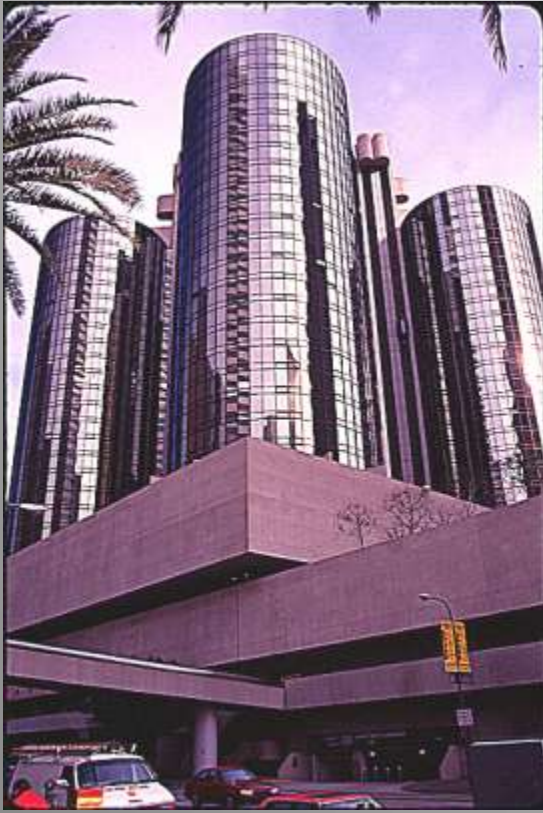
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# **Sustainability, nature and the urban community**

# Decline of community in U.S.

- Loss of pedestrian scale
  - Increase use of technology (computer, internet, cell phone, etc)
  - Artificiality and urban space: theme-park-ization of American cities
- 
- DISCONNECT FROM NATURE
  - LOSS OF SENSE OF PLACE

# Loss of sense of place/disconnect from nature



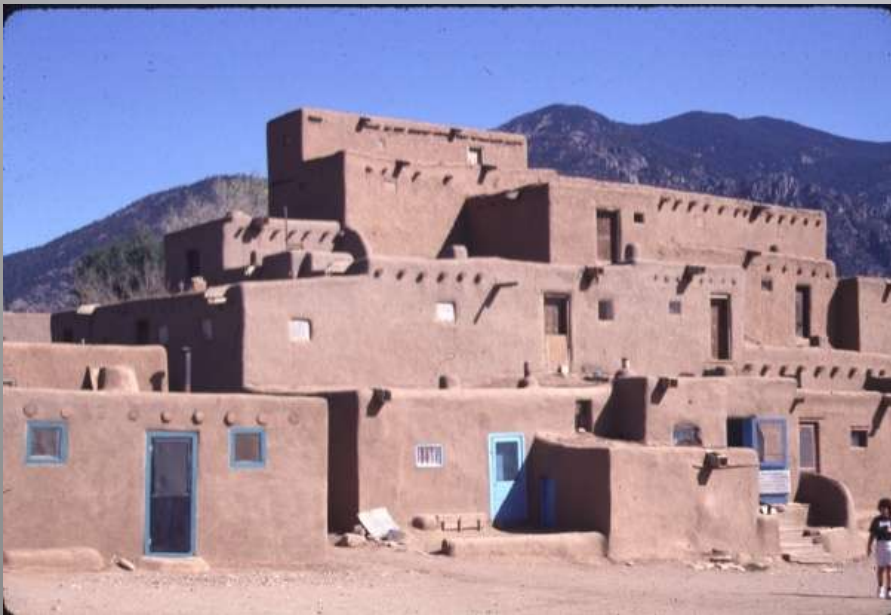
-- connection to history, culture, NATURE

-- places defined by the surrounding ecology (mountains, lakes, rivers, canyons, etc.)



# “Cradle to cradle” vs. ‘cradle to grave’--

- Emphasis on local material, local geography, “eco-efficiency”
- Local flora/fauna implies different kinds of landscaping
- Consider natural energy flows: wind towers, solar, etc.



Taos pueblo, New Mexico

# Natural capitalism



- Economic development is mediated by natural capital
- Loss of natural capital = wasteful patterns of consumption + population growth + badly designed businesses (that pollute, etc.)

# Bio-mimicry

Reducing or eliminating waste; greening industry

a) Wasteful activity: pollution, acid rain, greenhouse gases

b) “free goods” that should be protected: water, clean air, virgin forests, veins of minerals



Urban production/economic activity must be designed to act more like (to mimic) the natural environment



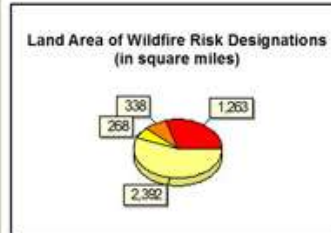
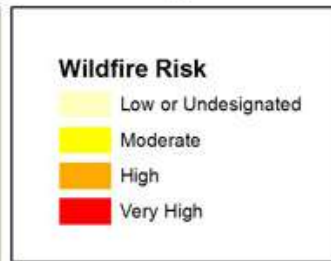
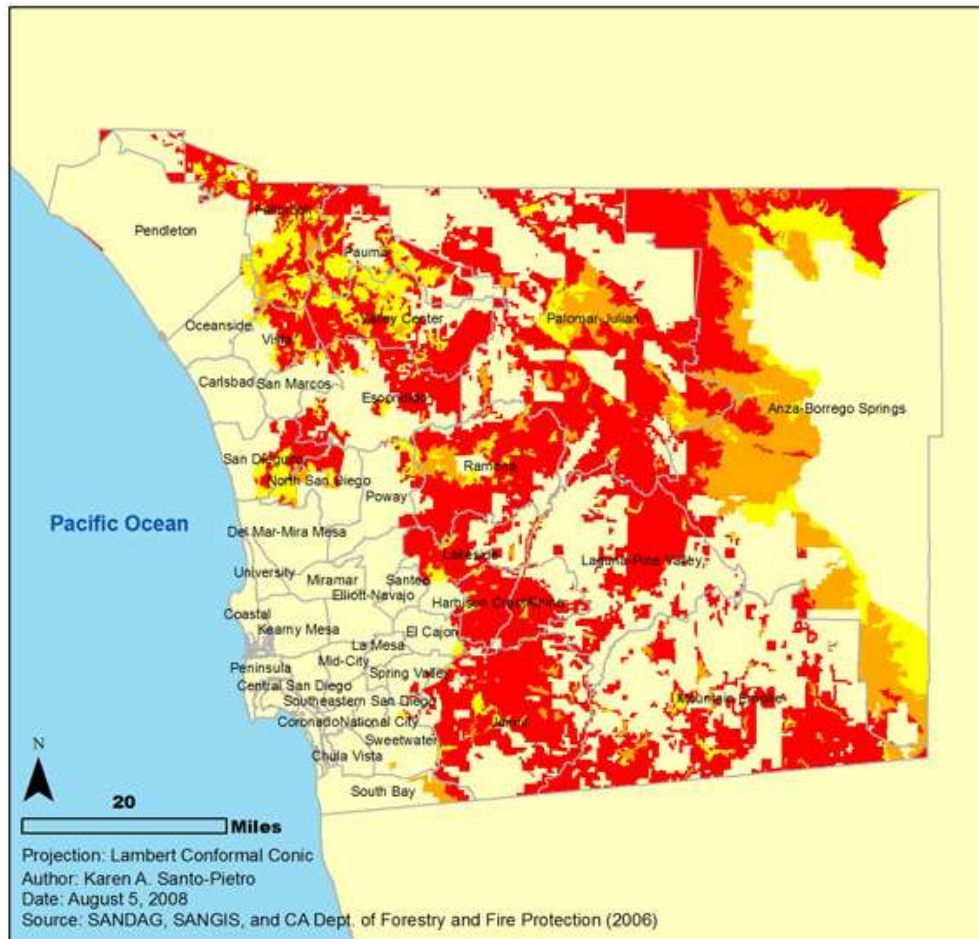
# The City and Nature

Nature is ubiquitous and should inform our design of cities



# Wildfires in San Diego region: inattention to the “ecology of wildfire”

## An Assessment of Wildfire Risk in San Diego County



- Areas With Highest Risk**
1. Alpine
  2. Anza-Borrego Springs
  3. Escondido
  4. Fallbrook
  5. Harbison Crest
  6. Jamul
  7. Laguna-Pine Valley
  8. Lakeside
  9. Mountain Empire
  10. Palomar-Julian
  11. Ramona
  12. Valley Center
  13. Vista



# Unsustainable growth pattern?



- Suburban development in wildland urban interface (WUI)
- Building on the edges of cliffs and steep slopes
- Building along canyons which become heat funnels during fires
- Destroying existing vegetation like citrus trees which actually retard fires
- Lack of “defensible space” around urban areas

# ORGANIC ARCHITECTURE



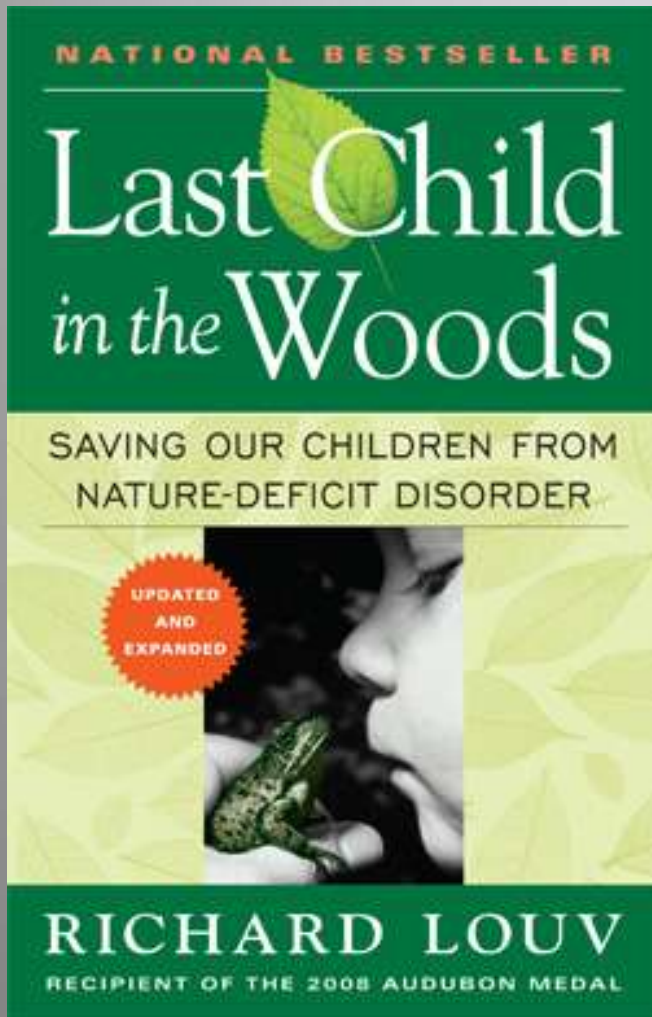
“What we must know about organic architecture is not only found in books. It is necessary to have recourse to Nature with a capital N, in order to get an education. Necessary to learn from trees, flowers, shells– objects which contain truths of form following function... if we dig deep enough we arrive at secrets of form... that would make of a tree a building and of the building a tree.”

FRANK LLOYD WRIGHT

# Arcosanti (Arizona) as organic architecture: community, density, complexity



# Nature and mental health



“Nature deficit disorder”– idea that children exposed to nature are healthier

In general, humans living in cities still need to be connected to the environment



# Nature and slow urbanism

1. Reminds us of our natural origins
2. Subconsciously slows us down,
3. Contrast with the machines that dominate our lives (computer, cell phone, car, etc.)

SLOW URBANISM: an idea that cities where people are slowing down may be more sustainable



# CEQA: California Environmental Quality Act

- Passed 1970, environmental protection patterned after U.S. National Environmental Policy Act (NEPA), 1969
- Unlike zoning, planning which are generic models (same everywhere), CEQA treats each property, each case as UNIQUE– very important modern approach to land use planning/ connected to ecosystems

# Environmental Impact Report (EIR)

- Primary land use planning tool emerging out of CEQA
- Size of project dictates need for EIR
- Significant environmental impact must be determined: impact on habitat (fish, wildlife, plant life, etc.)

# Protection of natural resource zones in California

- Before the 1970's, planning was mainly about urban development;
- since CEQA, more attention to natural environment
- Many examples in California: bays, coast, lakes, rivers, air basins, etc.





# Specific examples

- San Francisco Bay– Bay Conservation and Development Commission (BCDC), 100 ft. protective zone around bay, 1965
- California coast: 1972 Coastal Act, creates California Coastal Commission, appoints board through Governor and Legislature, Coastal Commission review major development along coast
- Lake Tahoe: Tahoe Regional Planning Agency (TRPA), 1960's, oversee land use permits in Tahoe basin, fragile ecosystem
- Sacramento-San Joaquin Delta, 1992 Delta Protection Commission, planning agency to protect basin
- recent movements to protect Mojave desert, Salton Sea, etc.

# Community ecological audit

- Energy/water conservation
- Recycling
- Solar energy
- Landscaping
- Urban agriculture
- Open space: access/ incorporation into community
- Trees/shade vs. air conditioning
- Urban design/walkability?

# Ecological site plan



- Existing zoning: Single use vs. mixed use
- how can design plan enhance pedestrian friendly streets?
- Orientation of buildings to conserve energy?
- Restoration of natural landscape
- Location/access to walkways, open space, plazas, mini-parks
- Affordable housing
- Sustainable employment (local resource use)
- Reduce automobile use?