

# Making the Case

*How to sell the importance of  
green infrastructure!*





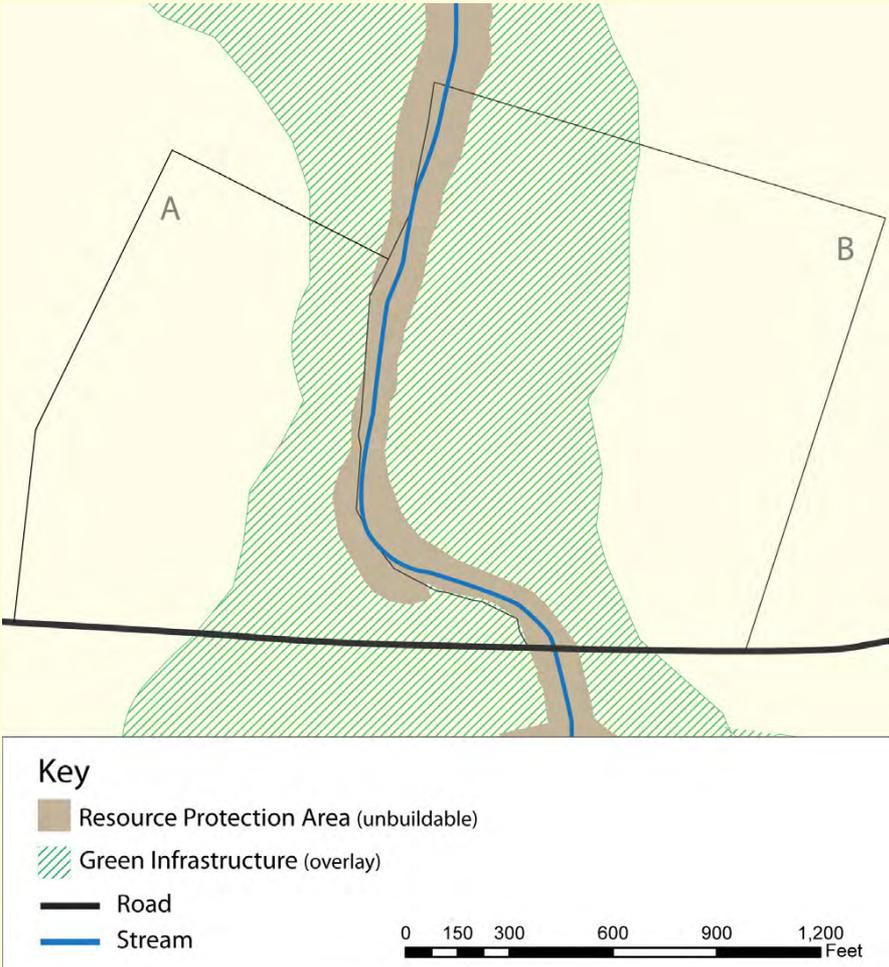
# Better GI Planning Helps Meet or Avoid Regulations

**TMDLs:** Identify areas that may be subject to impairment and protect them to prevent future TMDL's. Use your natural assets maps to indentify areas to restore to mitigate the pollution loadings. Choose practices that will affect runoff such as retain or restore forested stream buffers etc.

**Stormwater Programs:** Prevent new stormwater problems and erosion by identifying sensitive landscapes, steep slopes as well as natural assets to retain on site.

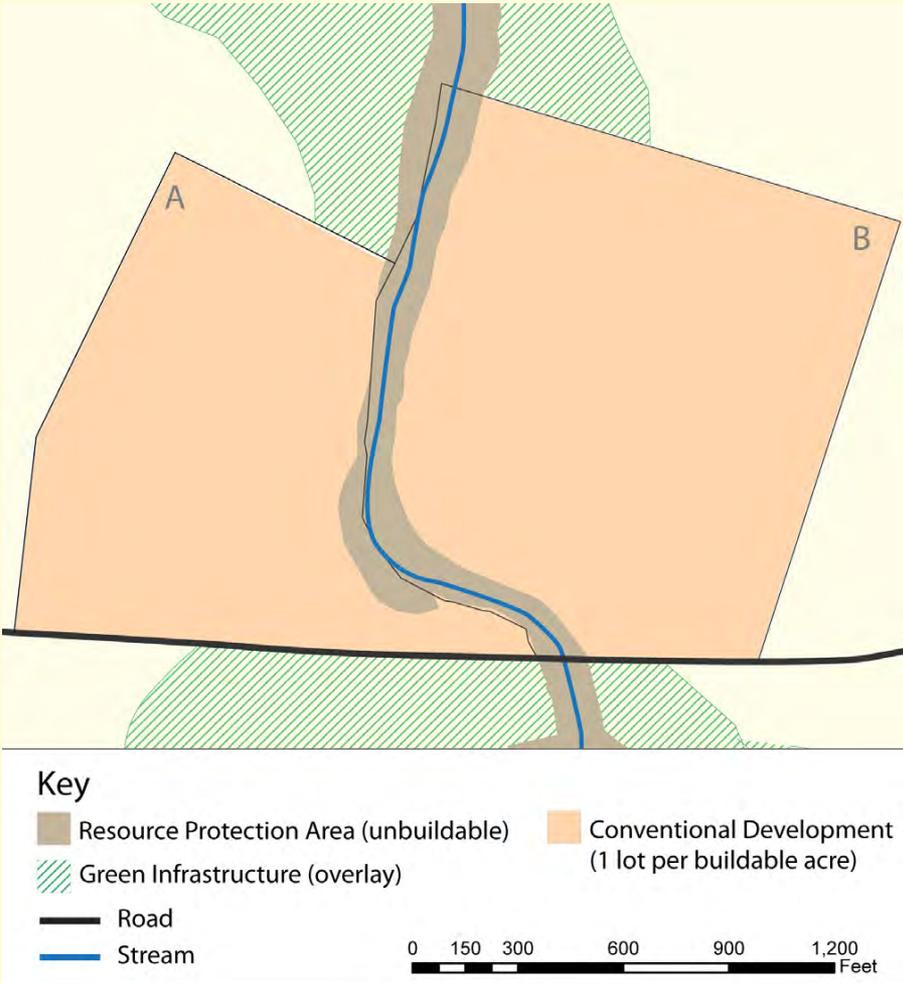
Example Parcel Strategy: strategic conservation = more conservation with same or more development...

Existing riparian buffer



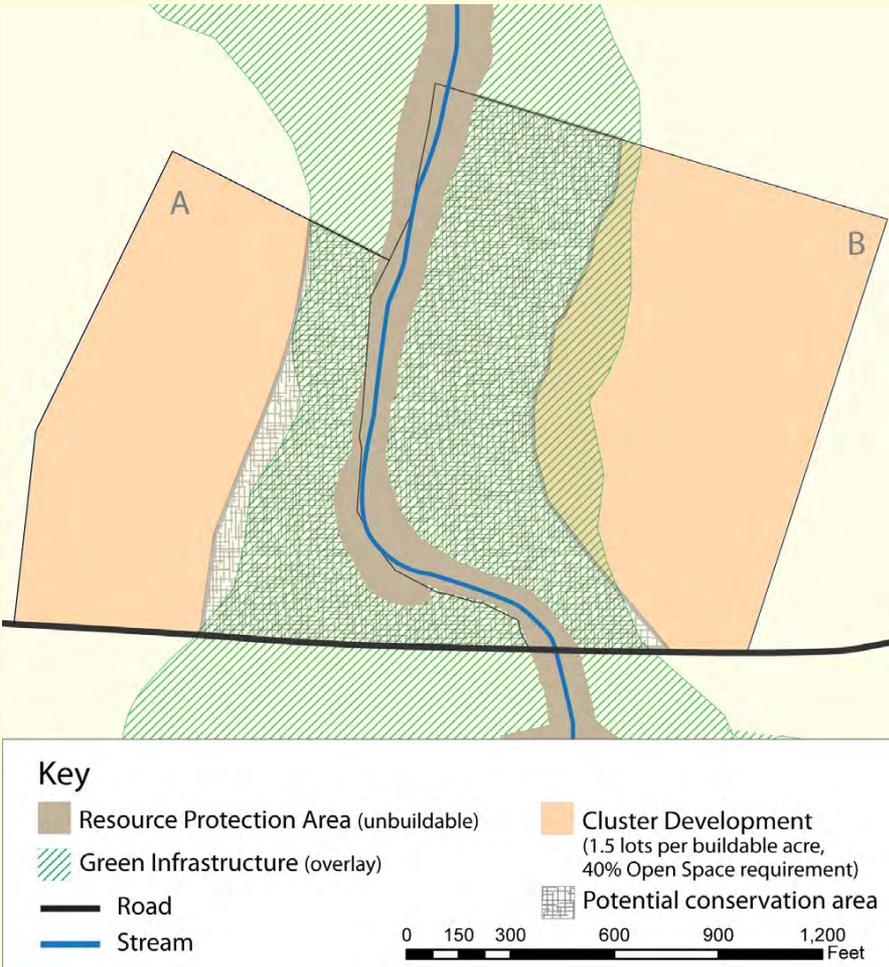
# Parcel Strategy: strategic conservation

## Conventional Development

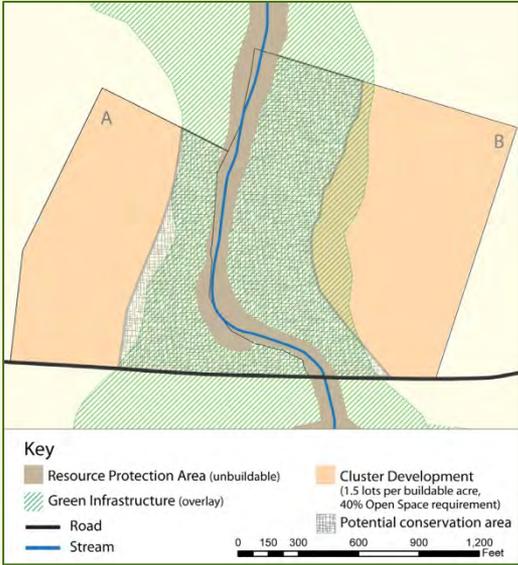
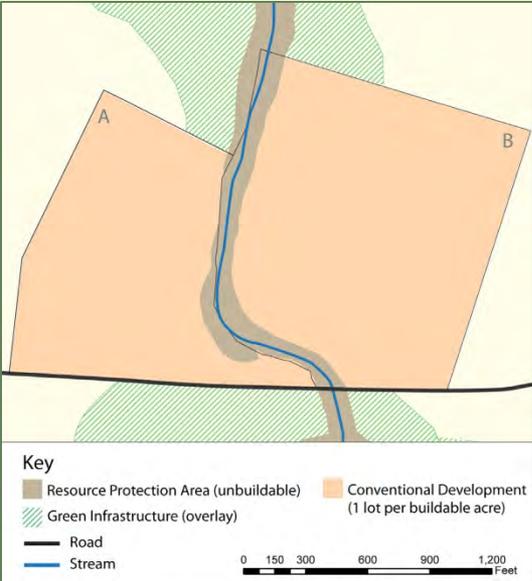


# Parcel Strategy Ex: strategically conserving green infrastructure

Existing riparian buffer preserved by clustering development

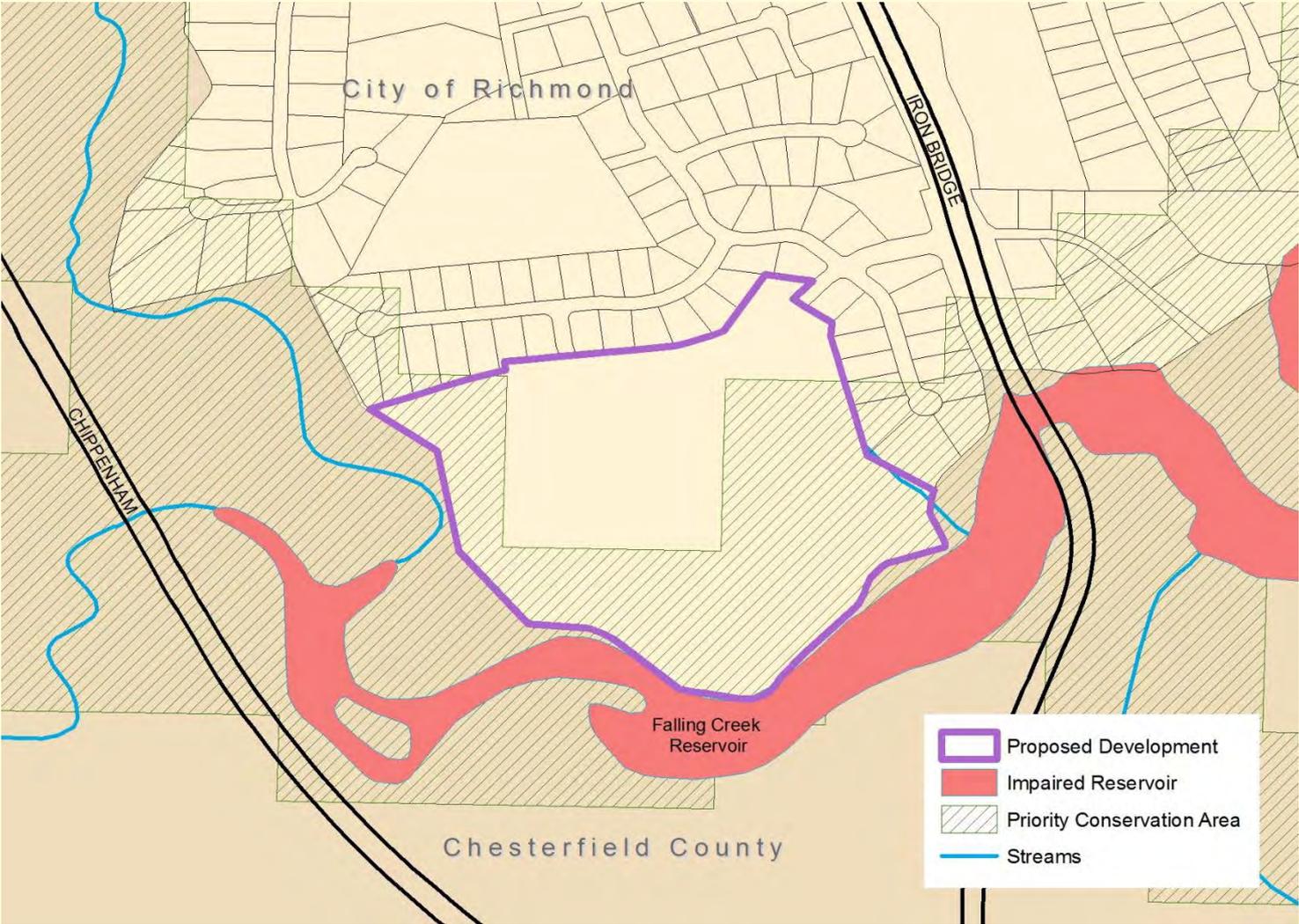


# Parcel Strategy: Comparison



	# of Lots	
Parcel (acres)	Conventional Development (1 lot/acre)	Clustered Development (1.5 lots acre)
A (32)	26	39
B (38)	30	45
Total	56	84

# Site Scale Example



# Scenario 1: Original development plan



Scenario 1. Original development plan

# Scenario 2: Cluster development plan



COMPACTED GRAVEL OR WOODCHIP TRAIL



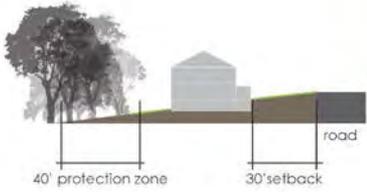
GRAVEL OR WOODCHIP SHOULDER  
PAVED TRAIL  
GRAVEL OR WOODCHIP SHOULDER

**Trail examples.**  
Top: Woodchip, gravel or crusher run walking path  
Bottom: Partially paved walk/bike trail



Scenario 2. Revised cluster development plan

# Scenario 3: Cluster development plan with rear 40' of lots protected



**Lot section examples.**  
Approx. 110' deep lot with rear 40' protected woodland.

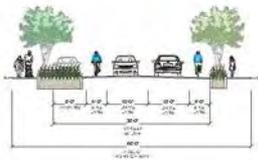
Top: Lot section with required 30' setback from street.  
Bottom: Lot section with alternative setback requirement.



Scenario 3. Revised cluster development plan with rear 40' of lots protected

\* Alternative to 10' trail easement includes modifying parcels boundaries to accommodate trail within common space

# Scenario 4: Cluster development plan with rear 40' of lots protected & LID



**Stormwater Mitigation Strategies**  
Top: Rain garden example  
Middle: Street plantings example  
Bottom: Alternative street section



Scenario 4. Revised cluster development with 40' protected and low impact development (LID) features

\* Alternative to 10' trail easement includes modifying parcels boundaries to accommodate trail within common space

# GREEN INFRASTRUCTURE CENTER



ELEVATION A



ELEVATION B

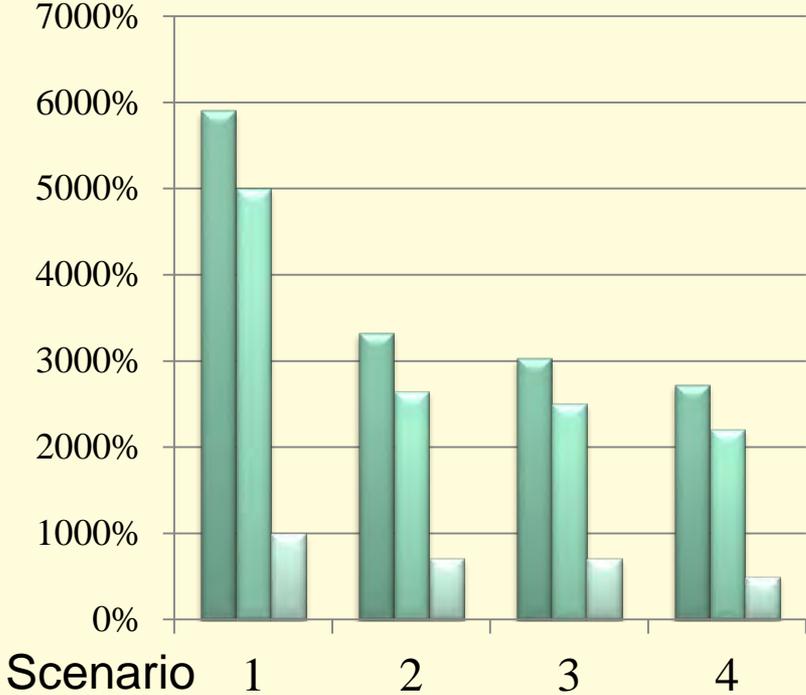


ELEVATION C

	R-2	R-5	
Area in Lots:	30.28 ac.	11.59 ac.	62% reduction
Area in Roads:	4.16 ac.	2.92 ac.	30% reduction
Open Space:	0.0 ac.	19.88 ac.	

# Analysis Results

Scenario	As is	1	2	3	4
nitrogen (lb/yr)	1.5	90	51.4	46.9	42.3
phosphorus (lb/yr)	0.2	10.2	5.5	5.2	4.6
sediment (tons/yr)	0.1	1.1	0.8	0.8	0.6



## % Increased Loading

- nitrogen (lb/yr)
- phosphorus (lb/yr)
- sediment (tons/yr)

### The key results

50% less nitrogen and phosphorus runoff with cluster development!

Developer saves \$20,000 in infrastructure costs!

His homes will sell faster and for a better profit! Here's why...

# Green Assets = Real Estate \$\$\$

\$ Having a park within 1,500 feet of a home increased its sale price between \$845 - \$2,262 (in 2000 dollars). *Economic Benefits of Recreation, Open Space, Recreation Facilities and Walkable Community Design, 2010*

\$ The larger the park, the more significant the property value increase. (*ibid*)

**Key message: Parks = better tax base = \$!**

\$ Large natural forest areas have a greater positive impact on nearby property prices than smaller urban parks or developed parks such as playgrounds, skate parks or golf courses.

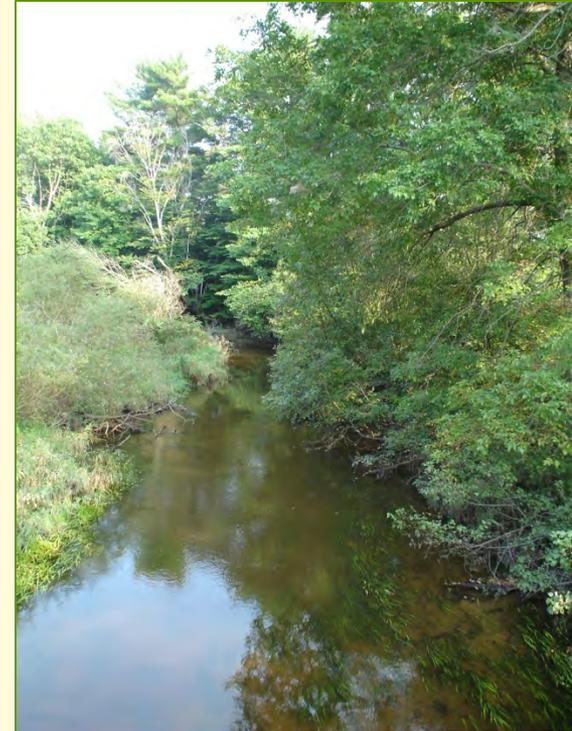
**Bigger intact forests/natural areas = more \$!**



# Trees Save Water Treatment Costs

Forest cover protects surface water sources and aquifer recharge zones and reduces the cost of drinking water treatment. American Water Works Association found a 10% increase in forest cover reduced chemical and treatment costs for drinking water by 20%. (Ernst et al. 2004)

**Key Message: Trees = cheaper water treatment**



# Tree Canopy Values

Trees provide more attractive areas for development, historic districts, commercial areas opportunities for people to interact with nature.

A study by the University of Washington found that people shopped longer and more often in tree-lined retail areas and spent about 12 percent more money.

**Key message: Trees = more tax revenue even in developed commercial districts!**



# Job development

Small companies, especially those that are have well paid and skilled workforce place a strong importance on the “green” of the local environment.  
Crompton Love and Moore, 1997

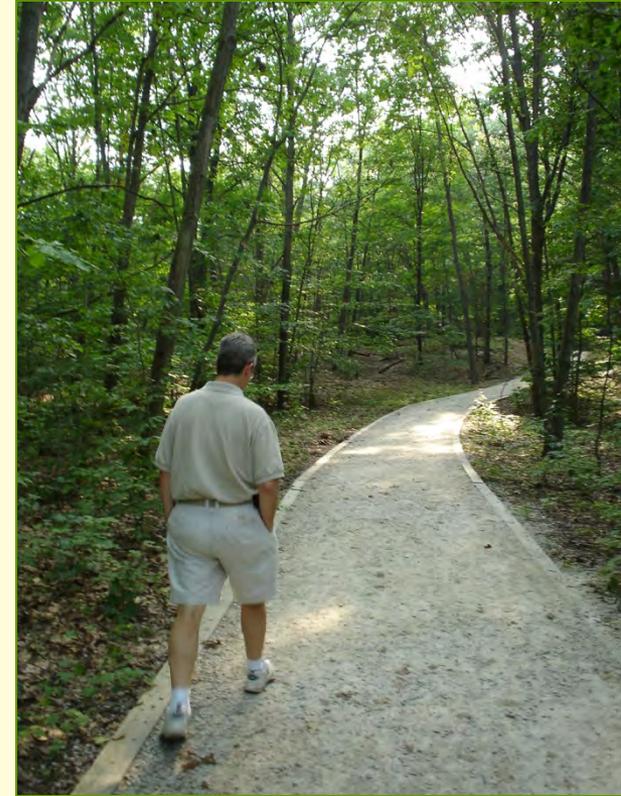
The creative class: artists, media, lawyers, analysts, make up 30 percent of the U.S. workforce and they place a premium on outdoor recreation and access to nature. Florida, 2002

**Key message: Natural assets attract better paid jobs and thus a better tax base = \$**



# Trees: for Health

- ❑ Access to fitness opportunities. (addresses obesity, nature deficit disorders)
- ❑ Clean air – trees absorb pollutants, VOCs, filter runoff, cool the city. (combat asthma)
- ❑ Well being and mental health - -people heal faster when they can see or access green. (hospitals need this for patients, reduces absenteeism of workers)
- ❑ Less crime occurs near trees. (issue especially for downtowns and public housing areas)
- ❑ Employees will exercise if they can access green where they work and on the way to work. (addresses employee health)



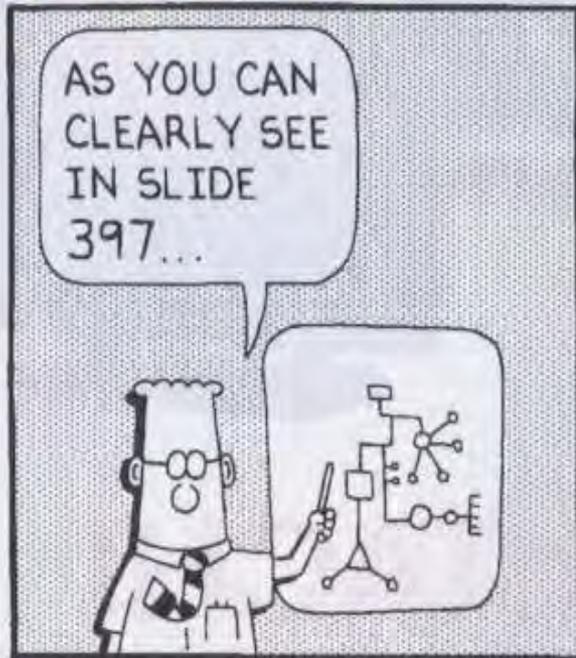
**Key Message: Treed areas =  
healthy safer communities!**

## Three Take Away Points ...

- 1) Need to think at multiple scales (up and down in scales and connections) Today we went from a region to a city to a watershed to a site!
- 2) Need to think about the landscape context including views, animal and people movement, connections and role within a larger network.
- 3) Planning for green infrastructure = a strong economy and more healthful communities!

Hope you've made it this far...

## DILBERT



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