Transforming Communities: Turning the Tide on Polluted Runoff

Health Benefits of Nature Close to Home

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Living Architecture
‘nature close to home’
linked to active living network
neighborhood social cohesion

environmental education & social learning
WHO Health Definition

A state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity (1946)
Social Determinants
Finding that study . . . . . .
Green Cities: Good Health
www.greenhealth.washington.edu

Sponsors:
USDA Forest Service,
(U&CF Program + Pacific NW Research)
University of Washington
NGO partners

Thanks!
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Research Reviews & Summaries
Local Economics

Trees in cities are not grown and managed for products that can be bought and sold on markets, but they do provide many intangible services and functions. This article serves two purposes. First, it introduces valuation methods that are used to convert intangible benefits to dollar sums.\(^1\),\(^2\) Then, it shows how nonmarket valuations can support local decision-making.

Fast Facts

- The presence of larger trees in yards and as street trees can add from 3% to 15% to home values throughout neighborhoods.
- Averaging the market effect of street trees on all house values across Portland, Oregon yields a total value of $1.35 billion, potentially increasing annual property tax revenues $15.3 million.\(^9\)
- A study found 7% higher rental rates for commercial offices having high quality landscapes.\(^3,4\)
- Shoppers claim that they will spend 9% to 12% more for goods and services in central business districts having high quality tree canopy.\(^3,4\)
- Shoppers indicate that they will travel greater distance and a longer time to visit a district having high quality trees, and spend more time there once they arrive.\(^3,4\)
Outside Our Doors
The benefits of cities where people and nature thrive.

design: milepost

co-author: US Forest Service

co-author & printing: The Nature Conservancy
Evidence-based ‘Story’

Health across the Human Life Cyle
‘Cradle to Grave’
Urban Forests and Newborns

the natural environment may affect pregnancy outcomes . . .

10% increase in tree-canopy cover within 50m of a house

= lower number of low weight births
(1.42 per 1000 births)

Donovan et al., Health & Place 2011;
Hystad et al., Env Health Perspectives 2014
Hygiene Hypothesis

- presence of soil bacteria in body, *Mycobacterium vaccae* = increased seratonin
- boost immune function
- may alleviate depression (dirt or Prozac?)

Lowry et al. 2007. Neuroscience
Eat Dirt!
CDC moderate activity recommendations

parks, active living, active transit
Shinrin yoku (forest bathing)

- walking
- relaxing
- workers
- retirees
- networked system
- 52 bases in Japan
Green Streets for Walkability

evidence of lower frustration and higher meditation when moving into the greener streets

Aspinall et al. 2013. The Urban Brain: Analysing Outdoor Physical Activity with Mobile EEG. British Journal of Sports Medicine
Elders: horticulture for mobility & social connections
Alzheimer’s Disease & Dementia
Provide wander gardens & horticulture therapy

- 10.5% reduction in amount of medications used in dementia facility
- 30% fewer falls, accompanied by a reduction in fall severity

Detweiler et al. 2009. *American Journal of Alzheimer’s Disease and Other Dementias*

[Tim Lynch Associates](www.rph.org/eden.html)
Summary

- nearly 40 years of evidence about nature and human health
- nature is necessary!
- evidence to story: cradle to grave
- co-design for co-benefits
www.naturewithin.info