

# Upstate Update

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Upstate Forever's Monthly Bulletin on  
Important Issues and Events in the Upstate

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## HAPPY EARTH DAY!

Our Earth Day message this year addresses the notion that environmental protection and economic progress are mutually incompatible. As the following examples prove, this is not true—we *can* have it both ways.

### 1. Regulations Mean More Profits

“We work in markets throughout the United States and are more profitable in communities that have zoning and strong development standards. The reason is that regulations create high quality places that attract businesses, workers and consumers. We also find a strong correlation between regulations and higher per capita income.”

George Dean Johnson, Jr.  
Chairman, Johnson Development Associates, Inc.  
Founder, Extended Stay America, Inc.  
Member, South Carolina Business Hall of Fame  
Former President, SC Chamber of Commerce

### 2. Good Planning Means Reduced Service and Infrastructure Costs

|               |   |
|---------------|---|
| \$15 billion  | Difference in infrastructure costs (roads, water, sewer and utilities) between “sprawl scenario” for accommodating the next 1 million people in the Salt Lake region and the well planned scenario for the same number of people <sup>1</sup> |
| \$1.1 billion | Annual savings in service and infrastructure costs by planning for growth in 11-county region in California <sup>2</sup>  |
| \$34,500      | Savings in infrastructure and service costs <i>per house</i> from well planned development versus low density, non-contiguous development <sup>3</sup>  |
| 40-60%        | Savings in infrastructure costs by directing growth to areas where infrastructure already exists and modestly increasing density <sup>4</sup>   |

1 Calthorpe and Fulton, *The Regional City* (2001), pp. 130-133  
2 Benfield, Raimi and Chen, *Once There Were Greenfields* (1999), p. 102  
3 *Id.*, p. 98  
4 *Id.*, p. 115

Promoting sensible growth and protecting special places in the Upstate

### 3. Conservation Design Means Reduced Expenses and Greater Profits

|          |  |
|----------|--|
| 50%      | Amount a conservation design for subdivision (clustered homes with ample green space) can reduce infrastructure costs <sup>5</sup>                     |
| \$8,500  | How much more developer has to pay <i>per lot</i> for conventional design versus conservation design <sup>6</sup>                                      |
| \$17,100 | How much more a home in a conservation subdivision increased in value over comparable home in conventional development after twenty years <sup>7</sup> |
| 30-58%   | Annual savings on air conditioning bills if a home is well-shaded by trees <sup>8</sup>  |

### 4. Protecting Trees Means Huge Savings for Air and Water Quality Programs

|               |   |
|---------------|---|
| \$1.9 billion | Annual value of Mecklenburg County's tree cover in reducing stormwater runoff <sup>9</sup>    |
| \$31,250      | Soil erosion-related costs prevented by <i>one tree</i> over a 50 year lifetime <sup>10</sup> |
| \$419 million | Annual value of Portland, Oregon's tree cover in removing air pollutants <sup>11</sup>        |
| 18            | Number of people for whom one acre of trees will provide sufficient oxygen <sup>12</sup>      |
| 120 - 240     | Number of pounds of air pollutants absorbed each year by one mature tree <sup>13</sup>        |

### 5. Green Buildings Mean More Productive Workers and Students

|       |  |
|-------|--|
| 6-16% | Increase in productivity of employees who work in green buildings <sup>14</sup>  |
| 26%   | Progress on reading tests by students in classrooms with natural daylighting versus students with little or no natural daylighting <sup>15</sup> |

5 Charleston Harbor Project, The Belle Hall Plantation Charrette (1994), p. 11

6 Rocky Mountain Institute, Green Development (1998), p. 89

7 Green Development, p. 88

8 Southern Center for Urban Forestry Research & Information, "Urban and Community Forestry: Improving Our Quality of Life," RWU 4901 (2004), p.8; American Forests, "The Case for Greener Cities" (Autumn 1999)

9 Nash, "Dollars in the Dirt," Region Focus (Federal Reserve Bank of Richmond, Winter 2004)

10 U.S. Department of Agriculture, Forest Service Pamphlet #R1-92-100, cited in "Benefits of Trees in Urban Areas," Colorado Tree Coalition

11 American Forests, "Regional Ecosystem Analysis for the Willamette/Lower Columbia Region of Northwestern Oregon and Southwestern Washington State: Calculating the Value of Nature" (October 2001), p. 6

12 U.S. EPA and Pima County Department of Environmental Quality, "Air Info Now," <http://www.airinfonow.org/html/faq.html#Q19>

13 University of Washington, College of Forest Resources, "Urban Forest Values: Economic Benefits of Trees in Cities" (1998), [http://www.cfr.washington.edu/news\\_pubs/fact%20sheets/fact\\_sheets/29-UrbEconBen.pdf](http://www.cfr.washington.edu/news_pubs/fact%20sheets/fact_sheets/29-UrbEconBen.pdf)

14 Hawken, A. Lovins and L.H. Lovins, Natural Capitalism (1999), p. 89

15 Heschong, "Daylighting and Human Performance," ASHRAE Journal (American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc., June 2002)

## 6. Green Buildings Mean Reduced Operating and Energy Costs

|                     |   |
|---------------------|---|
| \$60-80,000         | Annual savings in energy and water costs at the University of South Carolina's new LEED certified West Quad dormitory <sup>16</sup> |
| \$2 per square foot | Planning, design, and construction cost savings of the West Quad over the cost of a conventional dormitory complex <sup>17</sup>    |
| \$2.9 million       | Annual savings in energy costs at the 538,000 square foot "green" bank headquarters in Amsterdam <sup>18</sup>                      |
| 10 times            | Payback on investment in green features over 20 years <sup>19</sup>   |

## 7. Protecting Watersheds Means Reduced Treatment Costs for Drinking Water

|               |   |
|---------------|---|
| \$1.5 billion | Estimated cost of protecting critical lands in the watersheds of New York City's water supply reservoirs <sup>20</sup>  |
| \$6-8 billion | Estimated cost of building a filtration plant for New York City's water supply if those watershed lands were developed instead of protected <sup>21</sup>                             |
| \$250,000     | Annual savings in water treatment costs realized by the City of Gastonia, NC, after switching its water supply to a reservoir in a watershed protected from development <sup>22</sup> |
| \$37          | Average cost of treating a million gallons of drinking water from a watershed with at least 60 percent natural forest cover <sup>23</sup>   |
| \$115         | Average cost of treating a million gallons of drinking water from a watershed with less than 10 percent natural forest cover <sup>24</sup>  |

## 8. Reuse and Recycling Reduce Disposal Costs

|              |   |
|--------------|---|
| 3.6 billion  | Annual U.S. market value of recycled and recovered materials <sup>25</sup>  |
| \$37 billion | Annual payroll in recycling and reuse industry <sup>26</sup>  |
| 50%          | Reduction in number of garbage pick-ups in Mesa, Arizona as the result of curbside recycling <sup>27</sup>                        |
| \$19         | Reduction in net annual cost of solid waste services per household in Madison, Wisconsin as the result of recycling <sup>28</sup> |

16 Tibbetts, "Building Green: A New Path," *Coastal Heritage* (Winter 2005-6), p. 6

17 Id.

18 *Natural Capitalism*, p. 82-83

19 Tibbetts, p. 10

20 Stapleton, *Protecting the Source: How Land Conservation Safeguards Drinking Water* (Trust for Public Land 1997)

21 Id.

22 Trust for Public Land, "Safeguarding a Pristine Reservoir" (1999), [http://www.tpl.org/tier3\\_print.cfm?folder\\_id=745&content\\_item\\_id=919&mod\\_type=1](http://www.tpl.org/tier3_print.cfm?folder_id=745&content_item_id=919&mod_type=1)

23 Ernst, *Protecting the Source: Land Conservation and the Future of America's Drinking Water* (Trust for Public Land and America Water Works Association, 2004), p.22

24 Id.

25 U.S. EPA, *Puzzled About Recycling's Value?* (1998), p. 4-5

26 National Recycling Coalition, *U.S. Recycling Information Study* (July 2001), p. ES-2

27 *Puzzled About Recycling's Value?*, p. 2

28 Id.

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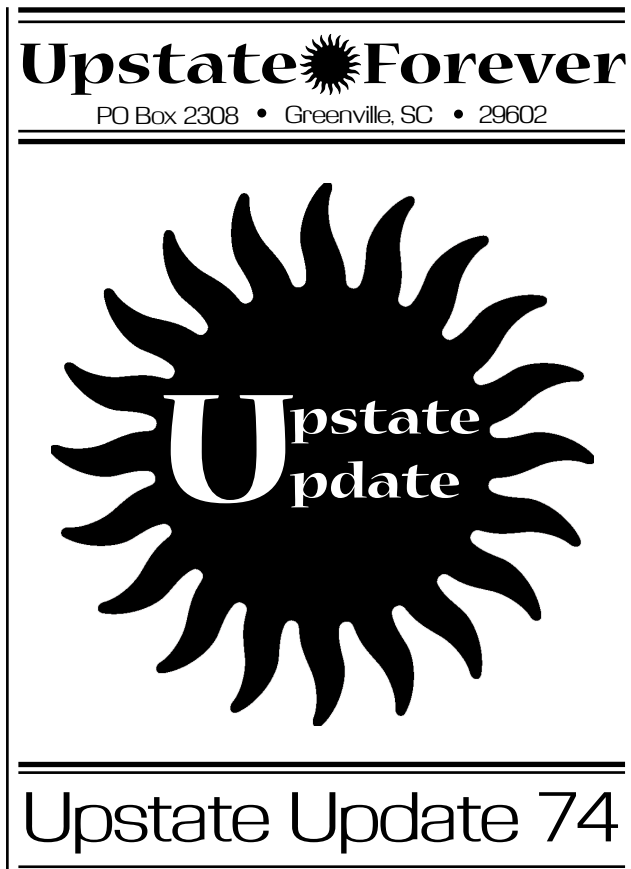
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*And for the Global Perspective...*

\$33 trillion

Annual value of services provided by the Earth's ecosystems<sup>29</sup>

29 Costanza et al, "The Value of the World's Ecosystem Services and Natural Capital," *Nature* (May 1997)



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