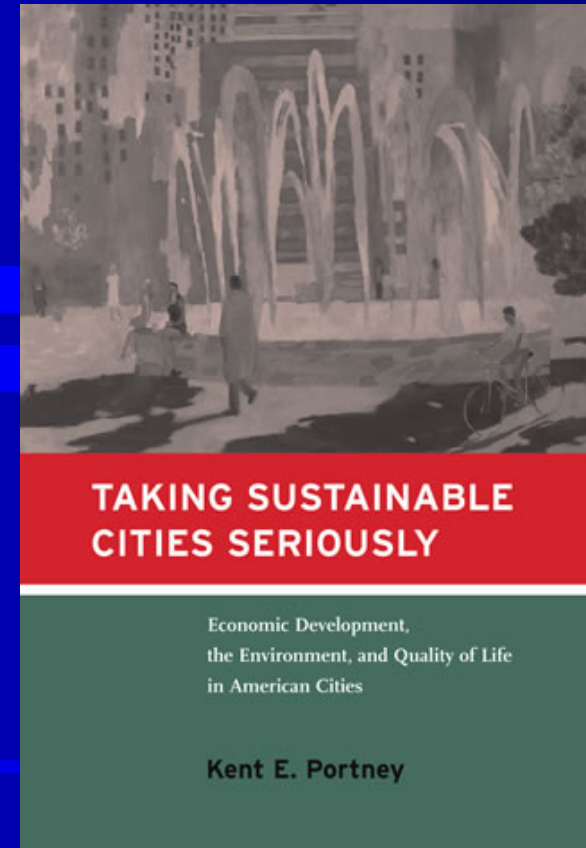


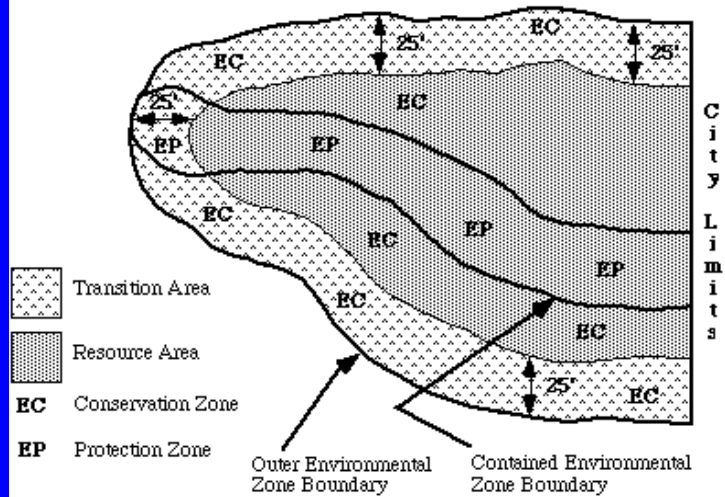
# Taking Sustainable Cities Seriously: *An Update*



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Prepared for Presentation to the Conference on  
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Figure 430-1  
Environmental Zone Subareas



## Environmental Zoning in Seattle



## Brownfield redevelopment in Dallas



Jefferson North End during redevelopment

## Eco-Village Cleveland

## and Pittsburgh



The Abandoned Lectromelt  
Electroplating Plant

## Underground hazardous materials storage tank removal in San Jose



Underground storage tank removal

# The Cities and Programs Studied

Chattanooga, TN  
Jacksonville, FL  
Orlando, FL  
Tampa, FL

Sustainable Chattanooga  
Jacksonville Indicators Project, Jacksonville Community Council  
Sustainable Communities  
The Tampa/Hillsborough County Sustainable Communities  
Demonstration Project

Seattle, WA  
Olympia, WA  
Portland, OR  
Milwaukee, WI  
Santa Monica, CA  
San Francisco, CA  
San Jose, CA

Sustainable Seattle/The Comprehensive Plan  
Sustainable City Indicators/Sustainable Community Roundtable  
The Comprehensive Plan  
Campaign for Sustainable Milwaukee  
Santa Monica Sustainable City Program  
The Sustainability Plan  
Sustainable City Program (Sustainable City Major Strategy –  
San Jose 2020)

Santa Barbara, CA  
Austin, TX

The South Coast Community Indicators Project  
Sustainable Communities Initiative and Sustainability Indicators  
Project of Hayes, Travis, and Williamson Counties

Indianapolis, IN  
Boulder, CO  
Cambridge, MA  
Boston, MA  
Brookline, MA  
Scottsdale, AZ  
Phoenix, AZ  
Tucson, AZ

IndyEcology  
The Sustainability Program  
Sustainable Cambridge, Cambridge Civic Forum  
Sustainable Boston Initiative  
Comprehensive Plan  
Scottsdale Seeks Sustainability  
Comprehensive Plan, Environmental Element  
The Livable Tucson Vision Program

# More Cities and Programs

<b>Brownsville, TX</b>	<b>Eco-Industrial Park</b>
<b>Cleveland, OH</b>	<b>Sustainable Cleveland Partnership, EcoCity Cleveland</b>
<b>New Haven, CT</b>	<b>Vision for a Greater New Haven</b>
<b>Albuquerque</b>	<b>Comprehensive Plan, Sustainable Albuquerque Progress Report, The Green Alliance, Albuquerque's Environmental Story</b>
<b>Anchorage</b>	<b>Anchorage 2020 Comprehensive Plan; Healthy Anchorage Indicators Project</b>
<b>Atlanta</b>	<b>Comprehensive Development Plan</b>
<b>Baltimore</b>	<b>Plan Baltimore</b>
<b>Buffalo</b>	<b>The Comprehensive Plan; Green Gold Initiative</b>
<b>Chicago</b>	<b>Chicago Area Central Plan</b>
<b>Denver</b>	<b>Denver Comprehensive Plan 2000</b>
<b>Kansas City</b>	<b>Metro Kansas City Outlook; The Environmental Management System</b>
<b>Lansing/E. Lansing</b>	<b>Urban Options – Sustainable Lansing</b>
<b>Los Angeles</b>	<b>The General Plan</b>
<b>Minneapolis</b>	<b>The Sustainability Plan</b>
<b>New York</b>	<b>Consolidated Plan 2002; Social and Environmental Indicators Project</b>
<b>Pittsburgh</b>	<b>Sustainable Pittsburgh</b>
<b>Sacramento</b>	<b>Sacramento General Plan</b>
<b>San Diego</b>	<b>Sustainable Communities Program; City of Villages General Plan</b>
<b>St. Louis</b>	<b>Sustainable Neighborhood Program</b>
<b>Washington, D.C.</b>	<b>The Comprehensive Plan; Sustainable Washington Alliance</b>

# The Elements of Taking Sustainable Cities Seriously

## **Sustainable Indicators Project**

- 1. Indicators project active in last five years**
- 2. Indicators progress report in last five years**
- 3. Does indicators project include “action plan” of policies/programs?**

## **"Smart Growth" Activities**

- 4. Eco-industrial park development**
- 5. Cluster or targeted economic development**
- 6. Eco-village project or program**
- 7. Brownfield redevelopment (project or pilot project)**

## **Land Use Planning Programs, Policies, and Zoning**

**8. Zoning used to delineate environmentally sensitive growth areas**

**9. Comprehensive land use plan that includes environmental issues**

**10. Tax incentives for environmentally friendly development**

## **Transportation Planning Programs and Policies**

**11. Operation of public transit (buses and/or trains)**

**12. Limits on downtown parking spaces**

**13. Car pool lanes (diamond or HOV lanes)**

**14. Alternatively fueled city vehicle program**

**15. Bicycle ridership program**

## **Pollution Prevention and Reduction Efforts**

**16. Household solid waste recycling**

**17. Industrial recycling**

**18. Hazardous waste recycling**

**19. Air pollution reduction program (i.e. VOC reduction)**

**20. Recycled product purchasing by city government**

**21. Superfund site remediation**

**22. Asbestos abatement program**

**23. Lead paint abatement program**

## **Energy and Resource Conservation/Efficiency Initiatives**

**24. Green building program**

**25. Renewable energy use by city government**

**26. Energy conservation effort (other than Green building program)**

**27. Alternative energy offered to consumers (solar, wind, biogas, etc.)**

**28. Water conservation program**

## **Organization/Administration/Management/Coordination/Governance**

**29. Single government/nonprofit agency responsible for implementing sustainability**

**30. Part of a citywide comprehensive plan**

**31. Involvement of city/county/metropolitan council**

**32. Involvement of mayor or chief executive officer**

**33. Involvement of the business community (e.g. Chamber of Commerce)**

**34. General public involvement in sustainable cities initiative (public hearings, "visioning" process, neighborhood groups or associations, etc.)**

# Top Twenty-Four Cities' Scores on the "Taking Sustainable Cities Seriously" Index

<b>Seattle</b>	<b>30</b>
<b>Denver</b>	<b>29</b>
<b>Albuquerque</b>	<b>27</b>
<b>Los Angeles</b>	<b>27</b>
<b>Minneapolis</b>	<b>27</b>
<b>Boulder</b>	<b>26</b>
<b>San Jose</b>	<b>26</b>
<b>Scottsdale</b>	<b>26</b>
<b>Chicago</b>	<b>26</b>
<b>Portland</b>	<b>25</b>
<b>Santa Monica</b>	<b>25</b>
<b>San Diego</b>	<b>25</b>

<b>San Francisco</b>	<b>23</b>
<b>Kansas City</b>	<b>22</b>
<b>New York City</b>	<b>21</b>
<b>Sacramento</b>	<b>21</b>
<b>Tampa</b>	<b>19</b>
<b>Chattanooga</b>	<b>18</b>
<b>Tucson</b>	<b>18</b>
<b>Anchorage</b>	<b>18</b>
<b>Washington DC</b>	<b>18</b>
<b>Austin</b>	<b>17</b>
<b>Baltimore</b>	<b>17</b>
<b>Buffalo</b>	<b>17</b>

## Bottom Cities' Scores on the "Taking Sustainable Cities Seriously" Index

<b>Cambridge</b>	<b>15</b>
<b>Jacksonville</b>	<b>15</b>
<b>Phoenix</b>	<b>15</b>
<b>Boston</b>	<b>14</b>
<b>Brookline (MA)</b>	<b>14</b>
<b>Cleveland</b>	<b>14</b>
<b>Atlanta</b>	<b>14</b>
<b>Pittsburgh</b>	<b>14</b>
<b>St. Louis</b>	<b>12</b>

<b>Orlando</b>	<b>11</b>
<b>Santa Barbara</b>	<b>10</b>
<b>Milwaukee</b>	<b>9</b>
<b>Indianapolis</b>	<b>9</b>
<b>New Haven</b>	<b>8</b>
<b>Olympia</b>	<b>8</b>
<b>Brownsville</b>	<b>7</b>
<b>Lansing</b>	<b>7</b>

# Correlations Between the Index of Taking Sustainability Seriously and Demographic Characteristics in Forty-One Cities

<b>Independent Variable</b>	<b>Correlation Coefficient</b>	<b>Significance</b>
<b>Total Population, 2000</b>	<b>.243</b>	<b>.12</b>
<b>Total Population, 1990</b>	<b>.240</b>	<b>.13</b>
<b>Total Population, 1980</b>	<b>.227</b>	<b>.15</b>
<b>Population Change %, 1980 to 1990</b>	<b>.149</b>	<b>.35</b>
<b>Population Change %, 1980 to 2000</b>	<b>.141</b>	<b>.38</b>
<b>Total Land Area (square miles)</b>	<b>.090</b>	<b>.57</b>
<b>Population Density (Population per sq mile)</b>	<b>.145</b>	<b>.36</b>

# Correlations Between the Index of Taking Sustainability Seriously and Local Resource Characteristics in Forty-One Cities

Independent Variable	Correlation Coefficient	Significance
<b>Median Family Income, 1990</b>	.251	.11
<b>Poverty Rate, 1990</b>	-.285	.07
<b>Average Unemployment Rate, 1994-99</b>	-.168	.29
<b>Median House Value, 1990</b>	.249	.11
<b>Total City Government Spending, 1990</b>	.113	.48
<b>Per Capita Government Spending, 1990</b>	-.144	.51

# Correlations Between the Index of Taking Sustainability Seriously and Population and Employment Characteristics in Forty-One Cities

<b>Independent Variable</b>	<b>Correlation Coefficient</b>	<b>Significance</b>
<b>Percent African American, 2000</b>	<b>-.292</b>	<b>.06</b>
<b>Percent African American, 1990</b>	<b>-.236</b>	<b>.13</b>
<b>Percent Hispanic, 2000</b>	<b>.017</b>	<b>.91</b>
<b>Percent Hispanic, 1990</b>	<b>.002</b>	<b>.99</b>
<b>Percent Under 18 Years Old, 1990</b>	<b>-.321</b>	<b>.04</b>
<b>Percent Over 65 Years Old, 1990</b>	<b>-.170</b>	<b>.29</b>
<b>Median Age of the Population, 1990</b>	<b>.468</b>	<b>.00</b>
<b>Percent High School Graduates , 1990</b>	<b>.351</b>	<b>.02</b>
<b>Percent Employed in Manufacturing, 2000</b>	<b>-.369</b>	<b>.01</b>
<b>Percent Employed in Service Sector, 1990</b>	<b>-.007</b>	<b>.96</b>

## Correlations Between the Index of Taking Sustainability Seriously and Measures of Environmental Predisposition in Forty-One Cities

<b>Independent Variable</b>	<b>Correlation Coefficient</b>	<b>Significance</b>
<b>Percent Driving Alone to Work, 1990</b>	<b>-.019</b>	<b>.90</b>
<b>Percent of Commuters Using Public Transportation, 1990</b>	<b>.080</b>	<b>.62</b>
<b>Total Government Spending on Environment, 1997</b>	<b>.256</b>	<b>.11</b>
<b>Per Capita Spending on Environment, 1997</b>	<b>.331</b>	<b>.03</b>
<b>Location on the West Coast (CA, OR, WA)</b>	<b>.265</b>	<b>.09</b>
<b>Avg % Democratic Pres Vote, 1996-00 +</b>	<b>.004</b>	<b>.98</b>
<b>Percent Christian church membership</b>	<b>-.499</b>	<b>.00</b>

+ Based on data for 26 of 41 cities

# OLS Regression Results Showing Correlates of the Taking Sustainability Seriously Index

	$\beta$	SE $\beta$	b	T	Significance
Percent African American, 2000	-.0071	.074	-.194	-.967	.340
Median Age, 1990	1.074	.466	.396	2.303	.028
Percent Employed in Manufacturing, 2000	-.519	.456	-.223	-1.139	.262
Percent High School Graduates, 1990	.0020	.141	.029	0.144	.886
Location on the West Coast	-1.133	2.906	-.067	-0.390	.699
Constant	-7.672	20.94	----	-0.372	.712

Multiple R      .586      R Square      .344      Adjusted R Square      .247

### Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	5	624.29	124.85
Residual	34	1191.21	35.04

F = 3.56      Significance of F = .01

# Alternative OLS Regression Results Showing Correlates of the Taking Sustainability Seriously Index

	$\beta$	SE $\beta$	b	T	Significance
<b>Median Age, 1990</b>	<b>.661</b>	<b>.403</b>	<b>.247</b>	<b>1.641</b>	<b>.110</b>
<b>Percent Employed in Manufacturing, 2000</b>	<b>-.825</b>	<b>.402</b>	<b>-.361</b>	<b>-2.051</b>	<b>.048</b>
<b>Poverty Rate, 1990</b>	<b>.213</b>	<b>.179</b>	<b>.235</b>	<b>1.190</b>	<b>.242</b>
<b>Percent Christian</b>	<b>-.871</b>	<b>.376</b>	<b>-.392</b>	<b>-2.315</b>	<b>.027</b>
<b>Constant</b>	<b>- 64.597</b>	<b>30.73</b>	<b>----</b>	<b>2.102</b>	<b>.043</b>

**Multiple R**    .625    **R Square**    .391    **Adjusted R Square**    .320

### Analysis of Variance

	DF	Sum of Squares	Mean Square
<b>Regression</b>	4	667.98	166.99
<b>Residual</b>	34	1039.76	305.58

**F = 5.46**    **Significance of F = .00**

# Plot of Average % Democratic Vote and the Index of Sustainability

