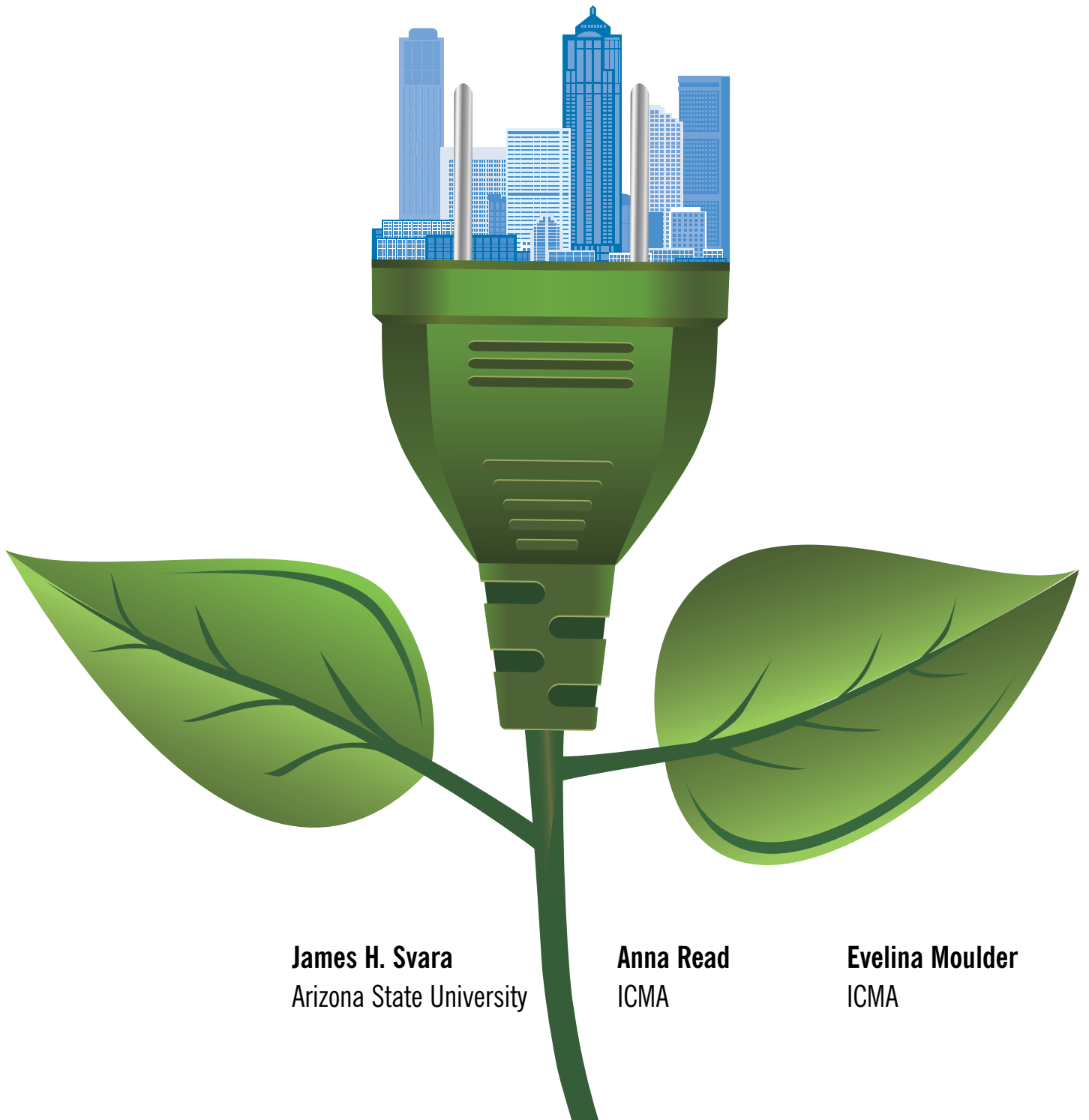




IBM Center for
The Business of Government

Conserving Energy and
the Environment Series

Breaking New Ground: Promoting Environmental and Energy Programs in Local Government



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Foreword

On behalf of the IBM Center for The Business of Government, we are pleased to present this report, *Breaking New Ground: Promoting Environmental and Energy Programs in Local Government*, by James H. Svara, Anna Read, and Evelina Moulder.

This report presents findings from an International City/County Management Association (ICMA) survey that was sent to over 8,000 local governments across the nation. The survey asked questions regarding sustainability initiatives that have been undertaken by local governments. Over 2,000 local governments responded to the survey. The survey was developed by ICMA's Center for Sustainable Communities, the Center for Urban Innovation at Arizona State University, the Arizona State University's Global Institute of Sustainability, and the Alliance for Innovation.

In brief, the survey found that a large majority of the localities responding to the survey were at an "early stage" of adopting sustainability initiatives. While over 80% of localities reported initiatives in the area of recycling, transportation, and building energy use, adoption rates were much lower for other sustainability initiatives such as alternative energy generation and workplace alternatives.

In addition to the survey results, the report presents case studies of eight local governments across the nation that are considered leaders in sustainability initiatives. The case studies go beyond the survey results to discuss how each community linked their sustainability initiatives to broader community goals. The report concludes with seven action steps that local governments can take in developing a long-term, integrated approach to environmental, economic, and social sustainability.

This report serves as an excellent companion study to a recent IBM report, *A Guide for Local Government Executives on Energy Efficiency and Sustainability*, by Nathan Francis and Richard C. Feiock. That report set forth six strategies that local government decision-makers and administrators can take to develop new sustainability programs or refine existing programs.



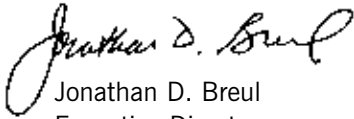
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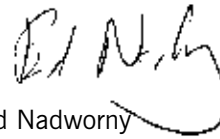
Ed Nadworny

Both the Francis-Feiock and the Svava-Read-Moulder reports come to similar conclusions: local government is still at the very earliest stages of adopting comprehensive sustainability programs in the areas of environment and energy. In this report, Svava, Read, and Moulder conclude, "Sustainability may be the 'issue of our age' but most local governments are still at a relatively early stage of addressing it. Most communities are taking some action, but the number and range of activities remain limited ... Based on past experience with the spread of other local government innovations, most cities and counties will significantly increase sustainability activity in the future."

We trust that this report will be helpful to local government decision-makers and executives across the nation as they continue to work toward improved energy efficiency and sustainability.



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Executive Summary

Sustainability may be “the issue of our age” but most local governments are still at a relatively early stage of addressing it. Most communities are taking some action, but the number and range of activities remain limited. Yet one government in six is setting the pace by pursuing extensive activities within a framework of goals and plans and with the discipline that comes from measuring results. Based on past experience with the spread of other local government innovations, most cities and counties will significantly increase sustainability activity in the future.

The report’s findings and action steps are based on analysis of the ICMA Local Government Sustainability Policies and Programs Survey of 2010, which examined the actions local government officials have taken so far to address the sustainability challenge, including citizen engagement that advances shared goals and changes behavior. Over 100 specific sustainability actions were measured by the survey, and these can be grouped into 12 major activity areas.

More than four governments in five engage in some type of recycling (90%), transportation improvements (82%), and reducing building energy use (81%). On the other hand, fewer than two in five have sought to reduce energy use by altering work schedules or processes (36%) and less than a quarter support any form of alternative energy generation (23%). When working toward the full range of possible actions is considered, the average rate of adoption is only 18%. Furthermore, there are limits in the extent to which sustainability activities are integrated into coordinated strategies for action. Only three in 10 local governments have adopted a resolution stating policy goals, and only one in five have adopted a plan with specific targets or benchmarks.

City and county governments are active at similar levels, although there is some difference in their sustainability priorities. Cities, more likely to be water service providers, have a higher rating for sustainability action related to water quality and conservation. Counties, which provide more social services, are more likely to offer socially inclusive services such as programs for the elderly, children, and the homeless. Counties that cover a larger geographic area and include more land devoted to forests and farming are more likely to be involved in land conservation and use of development rights to promote sustainability goals.

In general, several characteristics of local entities increase the likelihood that they will do more to advance sustainability. Local governments with larger populations do more than smaller governments. Local governments in the western region—California in particular—are more active than those in the rest of the country, where there is essentially the same rate of sustainability adoption. Cities and counties that use the council-manager form of government are more active than local governments with elected executives.

These generalizations aside, each individual community decides on its level of activity and how it will organize its sustainability campaign. Case studies of governments illustrate that

integrated approaches are effective, regardless of region and size of localities. Key insights can be gained from both survey results and our case study portraits of Anacortes, Washington; Buncombe County, North Carolina; Grand Rapids, Michigan; Jackson, Wyoming and Teton County, Wyoming; Palo Alto, California; San Antonio, Texas; Sarasota County, Florida; Washoe County, Nevada; and Weston, Wisconsin.

Based on the survey results and case study analysis, recommended action steps for local governments include:

- Obtaining a formal commitment from the governing board that includes goals, targets, and broad but flexible strategies that can change as progress is made
- Developing an engagement process to broaden community outreach, educate the public, and show individuals what they can do in their own lives to promote sustainability
- Appointing a citizens' committee to engage the community, expand citizen suggestions for action, and organize community activities
- Developing partnerships with key institutional, private sector, and nonprofit actors in the community and with other local governments
- Making changes to break down silos and encourage coordinated action inside the governmental organization
- Measuring performance to assess the sustainability effort
- Reporting to citizens on progress as part of a clearly branded sustainability effort that highlights shared commitments and shows how well they are being met

In the localities studied, governments put policy goals into action and lead by example. They offer citizens visible examples of the positive difference that can be made by close analysis of how the community lives and how organizations operate. Governments can learn from each other when innovative new approaches are being adopted. The case studies demonstrate how broad, integrated campaigns can offer examples of how to incorporate the principles and practices of sustainability.

Introduction

Building a sustainable community requires contributions from all levels of government, all sectors of the economy, and all of the citizenry. Because local governments provide services that affect the allocation and use of resources—from transportation and solid waste collection to zoning and land use—they are uniquely positioned to promote sustainability through policy and program initiatives. The ICMA Local Government Sustainability Policies and Programs Survey of 2010 represents a major effort to examine actions taken by elected officials and administrators to address the sustainability challenge and to better understand how these localities work with citizens as partners to advance shared goals and change behavior.¹

This report presents the general patterns of sustainability adoption in areas including environmental protection, reduced energy use and greenhouse gas emissions, and others. Eight active local governments are examined in more depth to clarify what goes into a comprehensive strategy and what it can accomplish. The local governments selected represent a range of population sizes and geographic locations. The report describes how progress can be measured and reported, and includes observations based on the survey results, case studies, and anecdotal information, highlighting what other governments can do to expand their sustainability efforts.

The level of support for sustainability varies widely across local governments and even, to a lesser extent, in the case study communities described in this report. Whereas strong public backing can drive an ambitious program that is justified in terms of the full range of sustainability concerns, weak public opinion or focus on a narrow range of priorities present a dilemma for local government. Some of the arguments made to support sustainability are contested concepts, and it is likely that in some places local government regulations for residents or businesses will be countered by advocates of small, non-intrusive government.

To reach the widest audience with non-controversial information, several case study governments examined for this report stress saving resources and reducing costs as the primary justification for their sustainability programs. City Manager Michael Willis, who moved from a high-commitment city in Australia to a low-commitment city in England, decided that the local government “could offer a positive example and not just empty proselytizing” when the public is lukewarm about taking on sustainability.² The appropriate approach, he concluded, was “to work from the inside out, rather than the outside in ...” It is significant that several of the most active case study communities examined still emphasize the message of leading by

1. The survey was developed with the input of ICMA's Center for Sustainability Communities, the Center for Urban Innovation at Arizona State University (ASU), ASU's Global Institute of Sustainability (ASU GIOS), The Alliance for Innovation, and others. Survey distribution was conducted through a collaboration of ICMA, ASU GIOS, and the Sustainable Cities Network, a multi-jurisdictional partnership. The survey was provided in a print format because the local government response rate is both higher and more scientifically representative than the response rate from an electronic survey. Approximately 12 percent of the responding governments chose to submit the form electronically.

2. Michael Willis, “Advancing sustainability: what happens if there isn't an appetite for it?” *PM Magazine* 91 (July 2009): 23-24.

Definition of Sustainability

Sustainability is the ability of communities to consistently thrive over time. Sustainability involves making decisions to improve a community today without sacrificing its future. Sustainable communities are resilient. When unexpected calamities happen—an economic collapse, a natural disaster, or terrorist attack—sustainable communities bounce back.

The term sustainability is most often associated with the environment. In this context, sustainability focuses on stewardship of natural resources: air, water, land, and the materials they produce. The underlying concept is to use only that which is essential, conserving and restoring resources for use in perpetuity. Of particular focus is energy: its availability, cost, consumption, and multiple impacts on the environment.

Increasingly, however, sustainability is considered in the context of a “triple bottom line”—three dimensions necessary for society to flourish in the near and long term: the environment (as noted above), the economy, and social equity. This broader concept of sustainability provides a comprehensive, integrated framework for building great communities.

Ron Carlee, ICMA Executive in Residence/Chief Operating Officer

example. They are being true to their convictions by changing their own actions and walking the talk. Furthermore, these communities offer residents visible examples of the positive difference that can be made by examining how we live and how we operate our organizations.

The sustainability actions of local governments, limited and fledgling in many places and broad and ambitious among the early innovators, share a common purpose—to make changes now that will enhance the quality of life for future generations.

Survey Methodology

The survey was developed with the input of ICMA's Center for Sustainable Communities, the Center for Urban Innovation, Arizona State University's Global Institute of Sustainability (ASU GIOS), the Alliance for Innovation, and others.

Survey distribution was conducted through a collaboration of ICMA, ASU GIOS, and the Sustainable Cities Network, a multi-jurisdictional partnership. The survey was provided in a print format because response rate is both higher and more scientifically representative than for an electronic survey. The survey was sent to 8,569 local governments. The survey response rate is 25.4%, with 2,176 local governments responding. The survey and results are presented in Appendix A.

Survey Findings

The 109 specific sustainability actions covered in the survey are grouped into 12 major activity areas. Table 1 shows the percentage of governments using one or more of the activities for each area.

Finding One: There is considerable variation in the extent to which sustainability actions are implemented by local governments. More than 80 percent of local governments report recycling (90 percent), improving transportation (81.7 percent), and reducing building energy use (80.6 percent). In contrast, efforts to reduce energy use by altering work schedules or processes have been adopted by less than two governments in five (36.2 percent), and less than one-fourth of the governments surveyed (23.4 percent) employ any form of alternative energy generation.

Table 1: Sustainability Activities Undertaken by Local Governments

Major activity area	Governments reporting one or more activities (%)
Recycling	90.0
Transportation improvements	81.7
Reducing building energy use	80.6
Energy use in transportation and exterior lighting	71.5
Local production and green purchasing	68.2
Water quality	61.6
Building and land use regulations	57.9
Social inclusion	57.6
Greenhouse gas reduction and air quality	52.0
Land conservation and development rights	43.7
Workplace alternatives to reduce commuting (transportation alternatives)	36.2
Alternative energy generation	23.4

Note: Percentages are based on 2,176 total respondents.

Most governments are not pursuing the full range of measured sustainability activities. The percentage of governments adopting activities in all 12 areas is only 18.1 percent. Thus, most governments are doing some things to advance sustainability, but they are not doing a great deal, nor are they developing comprehensive programs.³

The impact of type of local government, geography, and population on the implementation of sustainability initiatives is described in Appendix B.

3. For complete results, see James H. Svava, "The early stage of local government action to promote sustainability," *The Municipal Year Book 2011*. Washington, DC: ICMA, 2011.

Finding Two: Sustainability initiatives should be targeted to community needs. The survey results suggest, and conversations with local officials confirm, that no single approach to sustainability is right for every community, even when the government is actively committed. Framing the issues initially requires sensitivity to the concerns and motivators of a specific area. A community with a broad range of sustainability-related priorities to tackle may be motivated to address the issue of climate change and develop a broad action plan that covers fuel-efficient transportation, water conservation, reductions in greenhouse gases, and a “buy local” campaign. Other communities with lower or more limited priorities may focus on one or two energy conservation practices, such as retrofitting government buildings with energy-efficient heating and cooling systems. These are not right or wrong decisions, but they reflect “more” or “less” approaches that shape both level and breadth of activity. Officials in local governments must assess the specific choices they make from the sustainability agenda, but they also should evaluate whether the attitudes and resolve of the community need to be the focus of discussion to broaden the commitment to change.

Communities need not start with a clean slate in developing a sustainability program. They can build on existing work. The question is whether the steps they are taking to promote sustainability are simply a relabeling of established activities, or represent a new commitment to expand activities and take a more integrated and long-view approach as problems and opportunities are incrementally attacked. The right approach is the one that builds on important local priorities, captures the attention of a community, and thus produces outcomes that make a difference.

In some localities, citizens and elected officials push the local government to do more, whereas in others the interest of the public is limited. The 2010 survey results show that local governments with the council-manager form of government are generally doing more to promote sustainability than cities and counties with other forms of local government are. Professional managers demonstrate a more consistent recognition of the importance of sustainability. These managers have linked their traditional commitment to advancing the long-term interests of the community as a whole to current sustainability strategies.

The International City/County Management Association (ICMA) has stated that “sustainability is the issue of our age,” and leading practitioners have encouraged their colleagues to be responsive to community sentiments while developing awareness of the importance of sustainability to the future well-being of the community.⁴ Starting at the level that reflects the community’s interest and commitment, city and county managers must facilitate education and conversation about the most appropriate approach for the community to build consensus and momentum for action.

Finding Three: Goal setting and progress measurement are important for all communities.

It is likely that a commitment in the form of a resolution by the governing board, stating policy goals, and the adoption of a plan with specific targets, will contribute to expanded action. In the survey, only three in 10 local governments report having set goals, and only one in five report having set targets. The overall responses in this survey demonstrate two opposing tendencies:

- Most local governments are interested in issues related to sustainability and are becoming more active, but
- A majority of localities have not organized the effort in a coordinated way and are implementing only a portion of the possible sustainability actions.⁵

4. For example, see Randall Reid, “The moral imperative of sustainability,” *PM Magazine* 91, no. 4 (May 2009): 27-31; Rick Cole, “Smart growth: the opportunity for managers to lead,” *PM Magazine* (September 2007).

5. Using a method of measurement that appears to be closer to the percentage of governments using one or more activities in Table 1, a

This pattern of response is understandable, given the relatively short time that most local governments have been considering how to get involved in sustainability efforts. Although sustainability is not a new issue, the public discussion to date has predominately focused on the role of the national and state governments. Only recently has the responsibility of local governments become a major issue.⁶ Local officials are beginning to expand their involvement in sustainability, but the level of activity is still limited.

Local governments generally have put in place only part of a comprehensive approach to measuring progress. Focused measures in selected areas are widespread. More than three-fifths of local governments surveyed by ICMA have conducted energy audits in buildings that would provide the basis for measuring reduction in energy usage, but fewer than one in five have established broad targets for their sustainability plans. Some governments also measure the baseline greenhouse gas emissions for government operations (14.4 percent) or for the community as a whole (8.9 percent).⁷ Combining all the elements is relatively uncommon. Of responding governments, 18.5 percent (403 governments) set targets. These governments can be broken down into the following categories:

- Set targets only: 10.3 percent (225)
- Set targets and measure baseline government emissions: 2.6 percent (57)
- Set targets and measure baseline community emissions: 0.3 percent (6)
- Set targets and measure baseline government and community emissions: 5.3 percent (115)

Of responding governments, 7.1 percent (153) conducted baseline studies only.

- Baseline government emissions study: 3.7 percent (81)
- Baseline community emissions study: 0.6 percent (12)
- Baseline government and community emissions study: 2.8 percent (60)

Finding Four: A few local governments are leading sustainability initiatives. The diffusion-of-innovations theory posits that adoption of a new approach usually follows a bell-shaped curve, with most governments grouped around the mean level of adoption and smaller numbers leading or lagging in their embrace of the practice.⁸ This pattern has been found in the adoption of reforms to reinvent government and in information technology innovations.⁹ In contrast, adoption rates of sustainability practices included in the ICMA survey are more likely to be rated “below average” as indicated in Figure 1, which shows the percentage of governments in each category of adoption.

As shown in Figure 1, the number of local governments at the low end of the spectrum is slightly lower than that found in a normal distribution. This finding confirms that many governments have at least begun to get involved in sustainability. It is also noteworthy that the pioneers and early adopters in the high category reflect the normal proportion. This means that the expected number of governments are out front and setting an example for others.

report from the National Association of Counties entitled *2010 County Sustainability Strategies* published in September 2010 concludes that “the national picture of county sustainability efforts looks very positive.”

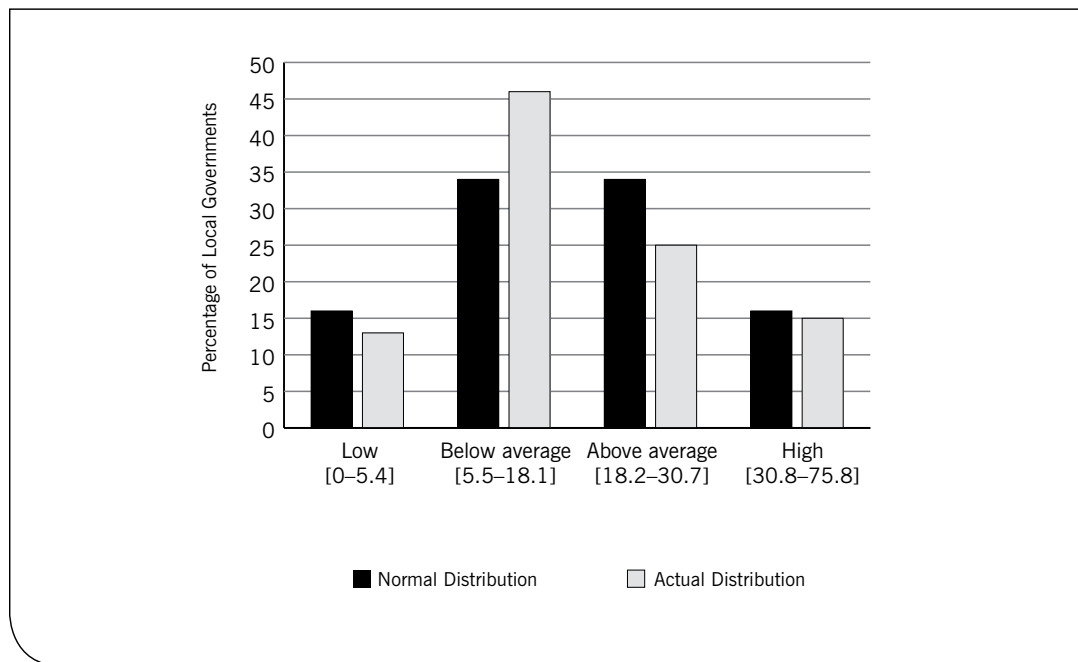
6. David Konisky, 2011. “Public preferences for environmental policy responsibility,” *Publius: The Journal of Federalism* 41 (1): 76-100.

7. Among ICLEI members, 54 percent have set targets, 74 percent have conducted a government baseline emissions study, and 53 percent have conducted a community baseline emissions study.

8. Everett Rogers, *The Diffusion of Innovation*. 5th Ed. New York: Free Press, 2003.

9. Kimberly Nelson and James H. Svara, “Form of Government Still Matters: Fostering Innovation in U.S. Municipal Governments,” *American Review of Public Administration* 41 (forthcoming, 2011).

Figure 1: Distribution of Overall Adoption Rating (0–100%) Compared to Normal Distribution in the Diffusion of Innovation

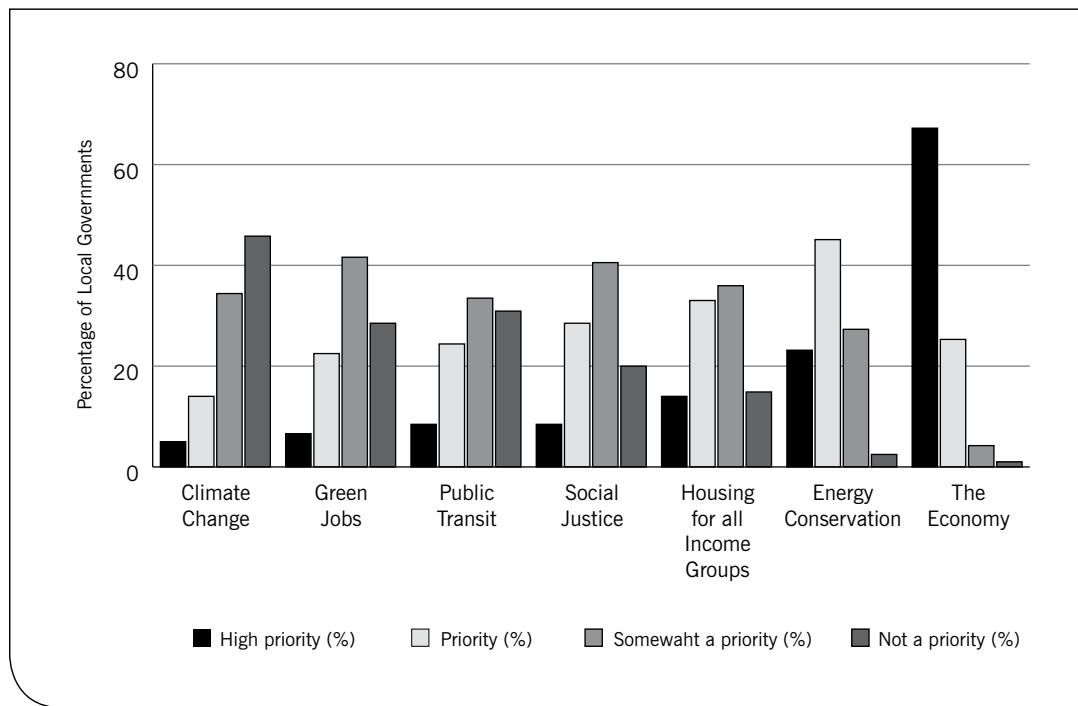


Note: The overall adoption rating, which is based on the average level of adoption across the 12 activity areas, is 18%. The activity areas contain different numbers of specific indicators. For this reason, it is misleading to use the raw count of the number of activities from the total list of 109 as the summary measure of adopting sustainability actions. For example, there are 15 ways to reduce building energy use and 12 ways to promote recycling, compared with five actions each for water quality and alternative energy generation. Local governments that focused on areas with more indicators would have a relatively high activity rating even if they ignored other activity areas. For comparison, the average number of activities adopted is 22.9 and the median is 20.0. The overall adoption rating is 18.1 and the median is 15.3.

The striking departure from other forms of innovation is in the distribution around the average level of adoption. Almost half of the governments—more than normal—are in the below-average category, and fewer than normal are in the above-average group. These characteristics indicate that local governments are not adopting sustainability practices at the same rate at which they may have adopted other innovations. At the same time, this represents great potential for positive future movement. Past experience indicates that there will be a substantially greater impact on advancing sustainability when the average level of involvement rises higher and more governments move into the above-average category of adopters.

Finding Five: Policy priorities matter to sustainability initiatives. The overall level of commitment and the activity areas emphasized reflect the kind of policy priorities found in a community. Officials and citizens may give differing levels of priority to a number of policy issues that are related to sustainability. As indicated in Figure 2, most local governments—almost seven in 10—assign a very high priority to their economy, and most of the remainder make it a high priority. Almost two-thirds to half of governments consider energy conservation and the environment a high or very high priority. The proportion drops to less than half that assign at least a high priority to housing for all, social justice, public transit, or green jobs. Climate change is a high priority in only one local government in five.

Figure 2: Local Government Priorities by Policy Area



A community's policy priorities are related to its activity in specific sustainability areas. Communities placing a higher priority on the economy have only modest sustainability activity. For all the other policy areas, however, greater emphasis goes along with more extensive sustainability actions. In particular, green jobs and climate change, which are the least common high-priority areas, have the strongest association with action. Local governments that assign a very high priority to green jobs or climate change have an overall activity adoption rate of more than 30 percent. Local governments for which these are a low priority have an adoption rate of less than 15 percent.

Case Studies in Local Government Sustainability Initiatives

Many local governments stand out for their broad-ranging programs, and eight are examined in detail in this report.¹⁰ These highly active governments demonstrate that a government of any size and in any region can be a leader in sustainability. An activity index was developed to select the eight exemplary governments. There are 240 local governments out of the 2,176 studied with an activity score of 35 or higher. The eight local governments selected for case studies are among the 240 and were chosen based on population size and geographic location to ensure broad representation.

Case studies go beyond the survey results to show the coordination that links activities to broad community goals. These local governments:

- Give higher priority to sustainability
- Organize their activities in a future-oriented, coordinated way
- Engage in more and a wider range of activities

What we can learn from these governments to narrow the sustainability gap between them and most other governments?

Anacortes, Washington: If It's Not Cost-Effective, It's Not Sustainable

Anacortes, Washington, is an island community of 17,000 residents on the Fidalgo Bay. Sustainability has long been an interest of Anacortes's mayor, Dean Maxwell, and many of the city's residents. The city has implemented a resource conservation policy and a resource conservation plan, convened a sustainability committee, and completed a climate protection plan. The focus has been on sustainability as an economic measure that improves environmental outcomes.

"I always tell everyone that if it is not cost-effective, it is not sustainable," says

Anacortes At-A-Glance



- **Population (2010):** 15,778
- **Square Miles (2000):** 11.8
- **Reports Published:**
 - Annual reports on progress in meeting sustainability goals
- **Measures Used:**
 - Seven resource conservation audits completed; city tracks energy use at each facility and gives reports showing energy reductions to facility staff every six months. Baseline studies conducted and performance indicators tracked to show progress relative to forecasts on reductions in carbon dioxide emissions from city operations and avoided energy costs.

10. The data in the "At-a-glance" boxes is from <http://quickfacts.census.gov/qfd/states/37/37021.html>

Maxwell. “For me, [sustainability] is using the technology that’s out there today to save you costs over the long run. The end benefit is that you can pass those savings along to the community and use that money elsewhere.”

Through its sustainability efforts, the city has realized significant savings. The net avoided costs for electricity and natural gas resulting from increases in energy efficiency and conservation measures for FY 2009 and FY 2010 totaled \$49,576.

Major Initiatives

Conservation efforts. Anacortes has focused on improving the efficiency of the city’s internal operations, both by investing in new, energy-saving technologies and by promoting conservation and efficiency measures. The city has replaced vehicles in its fleet with more energy-efficient models, including a hybrid and a zero-emission, all-electric vehicle. The city has performed lighting retrofits on a number of facilities, installing more efficient lighting and timers that automatically turn off lights when someone leaves a room.

In 2003, the City Hall boiler was replaced, and computer control software has been installed to manage temperatures throughout the building. The city is now considering installing solar shades and double cellular shades to prevent heat gain in the summer and heat loss in the winter, as well as retrofitting bathroom fixtures with low-flow models that conserve water.

Anacortes has also emphasized solid waste management and recycling. The city has one of the first commingled recycling programs in the state of Washington, and currently about 45 percent of residential solid waste is recycled. The city has launched a public outreach and education campaign to promote recycling practices. As part of this outreach, the Solid Waste Division Manager performs evaluations for businesses interested in reducing their solid waste rates.

Anacortes’s solid waste goes to the Roosevelt Regional Landfill, which has four methane-recovery generators producing 10 megawatts of electrical power a day, enough to power more than 6,000 homes. Perhaps most impressively, after evaluating fuel usage at its wastewater treatment plant and solid waste incinerator, the city was able to reduce fuel usage from 150 gallons of fuel a day to two gallons of fuel a day for the same process.

Program Implementation

Education. To continue to increase efficiency and conserve resources, the city leadership is working to educate staff on the benefits of investing in sustainability. Posters in break rooms highlight conservation and efficiency measures that have been successful and areas that require improvement. “They understand these are real dollars, and in a tough economy this can mean the difference between having to furlough someone or not,” Maxwell says of the city’s staff. The city has also encouraged staff to submit conservation ideas, and a number of the city’s energy efficiency measures were proposed by staff.

Measurement and information sharing. Anacortes has been actively measuring outcomes and expanding community-wide sustainability initiatives, as well as advancing sustainability on the regional level. The city completed seven resource conservation audits. The city tracks energy use at each facility and gives reports showing energy reductions to facility staff every six months. In 2000 and 2005, Anacortes performed baseline emissions inventories for the community and for city facilities and operations. In 2006, the city completed ICLEI’s Climate Protection planning process, which includes forecasting and setting emissions-reduction goals. Since then, the city has tracked performance indicators related to these forecasts on an annual basis. In this time period, carbon dioxide emissions from city operations have decreased from 4,200 tons per year to 3,600 tons per year.

On the regional level, Anacortes has worked with the Skagit Council of Governments (COG), the regional council for eight cities and Skagit County. After seeing the amount of savings Anacortes was realizing through sustainability measures, a number of communities in the region started implementing sustainability initiatives. The Skagit COG has since hired a conservation manager to work with the communities to improve efficiency and conservation efforts.

Observations

- Anacortes has a broad sustainability strategy, which is focused on improving the city's internal operations. This enables the city to develop plans to increase efficiency across departments where the most benefit will be realized.
- The partnership with the Council of Governments has broadened the scope of sustainability initiatives.

More information

Greenhouse Gas Inventory and Proposed Climate Action Plan:

www.cityofanacortes.org/Documents/ICLEI_Report.pdf

Buncombe County, North Carolina: Growing Greener Together

Buncombe County, North Carolina, adopted its first sustainability plan in November 2009. The county had been improving energy efficiency and reducing energy consumption (while minimizing budgetary impact) since the mid-1990s.

Major Initiatives

Buncombe Green Initiative. In 2010, Buncombe County took its sustainability programs to the community with an initiative called Buncombe Green. The Initiative, with its slogan “growing greener together,” emphasized recycling (the county recycles 199,000 pounds of paper, aluminum, glass, plastic, and cardboard every month), reuse, and energy-efficiency measures such as compact fluorescent lights and solar panels. To help raise awareness of the initiative, residents were asked to submit pictures of what they were doing to go green and to share tips on green practices. The county also gave awards to businesses that had made significant progress toward becoming greener.

“Buncombe Green was something to get everyone involved. We focused on saving time, money, and/or the environment,” says Kathy Hughes, Buncombe County’s Clerk to the Board and public relations director of Buncombe Green. “We need to be fiscal stewards, and if it can save time and money, then it can probably save the environment.”

GrowBC campaign. Continuing on the theme of Buncombe Green, the county launched the GrowBC marketing campaign in January 2011. With its broader focus on a greener, healthier, kinder, safer, and smarter community, GrowBC—which is intended to be a multi-year campaign—

Buncombe County At-A-Glance



- **Population (2010):** 238,318
- **Square Miles (2000):** 655.99
- **Report Published:**
 - Energy Use and Carbon Emissions Report
- **Measure Used:**
 - County data on change in energy use and cost, carbon footprint, and water consumption dating back to 2005.

builds on the momentum of Buncombe Green and centers on what Hughes calls “the county’s core issues.” Each month focuses on one of these five core issues, which includes tips on how to be a greener, healthier, kinder, smarter, or safer community, along with information about what the county departments do to help the community achieve these goals.

Program Implementation

A plan for county operations: energy use and carbon emissions. A formalized operations plan was the next step toward minimizing the county’s energy consumption and carbon footprint while maintaining the level of service provided to its citizens. In September 2010, the county released the Energy Use and Carbon Emissions Report, which looks at county data on energy use, carbon footprint, and water consumption dating back to 2005. The report also establishes benchmarks against which to measure future progress.

Sustainability plan. Buncombe County has begun to undertake a community-wide sustainability plan. The county hired a consulting and engineering firm, which had developed the sustainability plan for the city of Asheville, to guide them through the planning process. “We want to take our plan and, really building on what the city started, come up with a sustainability plan for all the citizens,” says Jon Creighton, Buncombe County’s assistant county manager and director of planning and development. “The bottom line [of sustainability] is saving the taxpayers money.”

Funding. Buncombe County does not have a budget for sustainability programs. “We’ve gotten very creative in how we fund things,” says Brad Ellington, the county’s parking facilities manager. The county has aggressively pursued grant programs. It received three Energy Efficiency and Conservation Block Grants (EECBG) and rebate programs. The county has also partnered with the local utility through the Energy Efficiency for Business and Demand Response programs. The Energy Efficiency for Business program provides rebates for installing more energy-efficient systems, and the Demand Response Program provides energy bill credits if the county turns on a generator at the detention center to help offset the utility’s peak load. Between May and December 2010, the county received \$30,000 of bill credits from the Demand Response program. The bulk of this money, as well as the money from rebates, is captured in the Energy Savings Reinvestment Fund.

The Energy Savings Reinvestment Fund was established by the county to fund efficiency projects. The idea, which first came from a comment on North Carolina’s GreenGov listserv, has since also been adopted by Asheville—the Buncombe County seat—which modeled its reinvestment fund after the county’s. In addition to the savings from the Demand Response programs and rebate programs, 75 percent of the savings realized from energy efficiency retrofits and upgrades go into the fund. This money is then reinvested in energy efficiency and sustainability efforts. While the fund is relatively new, Buncombe County has already used it to close the gap in funding on one of the EECBG projects and to complete a solar installation on a county building.

Observations

- The county designed a sustainability program that involved everyone in the community in ways that were non-threatening and fun.
- The county made clear the relationship between saving the environment and saving time and money.
- The county demonstrated its commitment to partnership with the community by reporting its activities.

More information

Buncombe County's Sustainability Plan:

<http://buncombecounty.org/common/general/BuncombeCountySustainabilityPlan.pdf>

Energy Use and Carbon Emissions Report:

<http://buncombecounty.org/common/general/EnergyReport.pdf>

Buncombe Green:

<http://buncombecounty.org/Staying-Connected/Campaigns/BuncombeGreen.aspx>

Grand Rapids, Michigan: Community Sustainability Partnership

Grand Rapids is Michigan's second most populous city and is located on the banks of the Grand River in west central Michigan. The city of nearly 200,000 residents is just 30 miles from Lake Michigan and the national forests of the Great Lakes region. Grand Rapids is also notable for having the first piece of public art funded by the National Endowment for the Arts—Alexander Calder's *La Grande Vitesse*—installed in 1968. The city has extended the tradition of the arts through ArtPrize, the world's largest art competition decided by public vote, which had more than 1,700 entrants in 2010. ArtPrize demonstrates Grand Rapids' commitment to innovative ideas—something that has established the city as a center for innovation at both the regional and state levels. Innovation and proximity to nature have greatly influenced Grand Rapids' approach to sustainability.

Grand Rapids At-A-Glance



- **Population (2010):**
188,040
- **Square Miles (2000):**
44
- **Reports Published:**
 - Various reports and the Transparency and Accountability Gateway
- **Measures Used:**
 - Continuous reporting of progress toward meeting goals. Score card showing progress on 39 outcomes and more than 160 indicators

Initial sustainability efforts, launched in 2005, were led by Mayor George Heartwell and supported by the Community Sustainability Partnership (CSP). CSP is a partnership between the City of Grand Rapids, Grand Rapids Public Schools, Grand Valley State University, Grand Rapids Community College, and Aquinas College. "Since it was founded, CSP has been providing valuable resource-sharing tools for its members and constantly moving the region forward in sustainability," Mayor Heartwell says of the partnership.

Grand Rapids' approach to sustainability has received national awards and international recognition. The city was recognized as a member of the U.S. Environmental Protection Agency's Green Power Leadership Club for its renewable energy efforts. In 2010, Grand Rapids was selected by ICLEI USA—Local Governments for Sustainability to be one of eight Inaugural Adaptation Communities, climate-resilient communities that will receive online tools, technical support, and other climate adaptation resources. In 2007, the city was recognized along with the Community Sustainability Partnership by the United Nations University as the first Regional Center of Expertise in Education for Sustainable Development. In 2010, Grand Rapids was named the most sustainable mid-size community by the U.S. Chamber of Commerce and Siemens Corporation.

Major Initiatives

Energy management. Energy management is one of the sustainability areas where Grand Rapids stands out. In the original iteration of its sustainability plan, the city set a goal of increasing renewable energy consumption to 20 percent by 2008. This target was reached in 2007, so the city revised the target upward to 30 percent by 2013 and 100 percent by 2020. The original target was attained through reductions in energy consumption and increases in energy efficiency. To reach the 100 percent renewables goal, the city is evaluating a portfolio of renewable energy technologies and opportunities for on-site power generation, such as wind turbines, large-scale solar projects on municipal buildings, and investment in geothermal energy for fire stations and a water filtration plant.

LEED certification. LEED certification, an internationally recognized green building certification, is another area in which Grand Rapids has made impressive progress in the last few years. While all new municipal buildings and major renovations of more than 10,000 square feet are required to meet LEED certification standards, no policies mandate green building for residential or commercial properties. Instead, Grand Rapids has decided to lead by example. The city advocates for green building as a means of fiscal responsibility and energy efficiency, provides incentives for developers, and offers educational material on green building. The city's efforts have fostered a culture of green building, and Grand Rapids now has the most LEED-certified buildings per capita for mid-size cities in the country and the fifth highest overall total.¹¹

Partnerships. Since 2006, Grand Rapids has expanded the local partnerships supporting its sustainability efforts. The Community Sustainability Partnership has grown from its five founding members to nearly 200 local businesses, nonprofits, educational institutions, and government agencies. The city has built strong partnerships, working with local universities to provide interns for the Office of Energy and Sustainability and to expand the city's research capacity. "Grand Rapids' commitment to partnership extends into all areas of sustainability, including diversity, economic development projects, public-private, public-educational institutions, and public-nonprofit activities," says Eric DeLong, deputy city manager.

Program Implementation

Sustainability planning process. Grand Rapids created its first sustainability plan by following the triple bottom line approach, which gives equal weight to environmental, economic, and social concerns. The city identified key strategic areas on which to focus its sustainability efforts. Officials began to examine sustainability planning in the context of budgeting and fiscal planning. Sustainability goals and targets informed the city's budget and provided the basis for internal goals and targets, such as employee performance measures.

Measurement and information sharing. Grand Rapids has been rigorous in its measurement and tracking of sustainability goals, viewing this as key to transforming city operations. "Transforming is a matter of continuing to provide good quality services for our residents, neighborhoods, and businesses," says Greg Sundstrom, city manager. "We can continue to expect positive outcomes if we commit to improving how we deliver services."

In 2008 the city measured the plan's success through the Community Triple Bottom Line Indicator Report, which used 34 indicators to assess progress toward sustainability goals and targets. Following this report, a new sustainability plan was adopted in 2010 for FYs 2011–2015. In addition, the city has created strategies and plans that address other elements of sustainability, including the 2009 Energy Efficiency and Conservation Strategy—

11. www.gvsu.edu/sustainablegr/index.cfm

which includes a greenhouse gas emissions inventory, and Green Grand Rapids, a city-wide green-infrastructure master planning process. The city makes information about sustainability initiatives available on its Transparency and Accountability Gateway. The public can monitor the progress being made by both the city and the community toward meeting sustainability goals.

“We believe in transparency and openness and in sharing of information of our progress in sustainability. There is a big interest in learning about our sustainability efforts from our community as well as from outside,” says Haris Alibašić, director of the Office of Energy and Sustainability. “It’s part of the ingrained philosophy of our organization to be transparent and open and to continuously seek improvements. It’s just the way we do business.”

Observations

- Grand Rapids has continuously been involved in community partnerships for sustainability, which strengthen and broaden the scope of its programs.
- The city measures progress toward sustainability goals and provides community members with a way to track progress, thus engaging them in the effort.

More information


Office of Energy and Sustainability: <http://grcity.us> or <http://sustainablegr.com>

City Score Card sustainability targets: http://mygrcity.us/departments/executive/TransformationRoadmap/tag/score_card/Pages/CityScoreCardSustainabilityPlan.aspx

Sustainability progress and recognition: www.gvsu.edu

Jackson, Wyoming and Teton County, Wyoming: The 10x10 Energy Efficiency Initiative

The Town of Jackson and Teton County have a long history of working collaboratively. The town—which is the only incorporated municipality in Teton County—and the county share several departments and services. They jointly run the local transportation system, the Southern Teton Area Rapid Transit (START) bus system, and they have a joint parks and recreation department and dispatch, fire, and EMS services. The town and county have collaborated on holistic sustainability efforts, which include energy management, transportation, recycling and solid waste management, and renewable energy.

Town of Jackson At-A-Glance 

- **Population (2010):** 9,577
- **Square Miles (2000):** 2.85

Teton County At-A-Glance

- **Population (2010):** 21,294
- **Square Miles (2000):** 4,007.76
- **Reports Published:**
 - Energy use reduction reports from Jackson and Teton County
- **Measures Used:**
 - Baseline measured in 2006. Reduction of fossil fuel and electricity use in local government operations tracked to determine whether a 10-percent reduction is being achieved through communications, facilities energy use, renewable energy generation, fuels and fleet, and green building codes.

Major Initiatives

Energy conservation. In early May 2007, the town council and county commissioners adopted the 10x10 Energy Efficiency Initiative, which established a goal of reducing fossil fuel and electricity use in local government operations to 10 percent below 2006 baseline levels by December 2010. To reach the 10x10 goal, the town and county collaborated on some projects and worked independently on others. Teton County retrofitted lighting systems in 26 county buildings and made major insulation upgrades in four county buildings. The county also made improvements to HVAC systems and energy controls. Jackson also made energy efficiency upgrades to town facilities, and the town and county worked together to improve the efficiency of their fleets.

The town and county completed LEED-certified buildings—a LEED Silver restroom in the town and a LEED Gold daycare facility (with geothermal heating) in the county—and installed 197 solar panels on a library.

The town has invested heavily in solar energy, with 988 solar panels on town facilities, the largest number of any jurisdiction in Wyoming. Together, the town and county have 250 kilowatts of solar capacity. The majority of this—192.5 kilowatts, or 846 panels—is located at the town's wastewater treatment plant. Jackson is in the process of making energy upgrades to the wastewater treatment plant to gain efficiencies. The plant, which is an aerated lagoon system, consumes about 21 percent of the electricity used by town and county operations, and upgrades are expected to save the town between \$85,000 and \$120,000 per year in electrical costs.

Jackson and Teton County are on target to meet or exceed the 10x10 goal. Lighting retrofits from county buildings alone have resulted in a savings of 460,000 kilowatts per year, or about \$25,000 in energy costs annually. Between the 2006 baseline and November 2010, all town and county departments reduced gasoline consumption by 35 percent (31,000 gallons/year), diesel consumption by five percent (2,000 gallons/year), and natural gas consumption by six percent.

Through changes to vehicle purchase policies and fleet operations, and with employee orientations on maximizing fuel efficiency through route choice, many of the town and county's larger departments have seen dramatic drops in fuel usage. The Jackson police department has reduced fuel usage by 53 percent, while the public works department reduced fuel consumption by 44 percent. The parks and recreation and fire and EMS departments also made impressive reductions in fuel consumption: 29 percent and 19 percent, respectively.

The town and county also worked collaboratively on new energy codes for buildings, which include goals for new building design and code compliance. For example, if someone wants to build a large home (a common occurrence in a resort community), the homeowner is given the option of including energy efficiency upgrades and renewable energy features, such as solar panels, or paying an energy mitigation penalty fee. If the homeowner opts to pay the fee, the money goes into a county mitigation fund that is spent on public energy-conservation efforts.

Partnership with Lower Valley Energy. Jackson and Teton County have also partnered with the local energy provider, Lower Valley Energy. In October 2009, the town, county, and Lower Valley Energy signed a joint resolution, kicking off the Jackson Hole Energy Sustainability Project (JHESP).¹² The goal of the JHESP is to turn Jackson Hole into a leader in energy efficiency and innovation, as well as a model for local sustainability efforts. In August 2010, Jackson and Teton County voters approved \$3.79 million in a Special Purpose Excise Tax, which will be used to fund energy efficiency retrofits and renewable energy generation. "This is unique.... It's one of

12. Jackson Hole is the region. The town and the county are in the Jackson Hole Valley.

the first examples in the nation of a town, a county, and a utility working together cooperatively to reduce energy use,” says Roxanne Robinson, Jackson’s assistant town manager.

“As with any community in America, you have your current environment and you have the future environment,” says Larry Pardee, Jackson’s director of public works, of the way Jackson and Teton County look at sustainability. “Our comprehensive plan will guide that future growth, and hopefully our new codes will be the best practices out there, guiding more efficient development. But we still have our current environment, and that comes down to all that basic stuff ... weather stripping, insulation, lighting retrofits, turning the lights off.”

Program Implementation

Town and county planning together. In November 2006, Jackson’s mayor signed the U.S. Conference of Mayors Climate Protection Agreement, which provided the impetus for the town and county to join forces. The town council and county commissioners both expressed an interest in pursuing environmental sustainability goals, and they appointed an Energy Efficiency Advisory Board (EEAB) in March 2007 to reach the 10X10 goal.

Sustainability efforts were divided into five key areas: baseline data, communications, facilities energy use, fuels and fleet, and green building codes. Staff then formed action teams to create goals, recommendations, and action plans for each of these five focus areas and hired an energy affairs coordinator, a position that was split 50-50 across town and county operations.

Funding. Much of the funding for energy efficiency upgrades and retrofits came through state and federal grants, including the State of Wyoming’s Consensus Block Grant program, a one-time grant program for capital improvement projects determined by consensus between counties and their municipalities. The town and county both received EECBG funding, much of which was used to make energy upgrades to outdoor lighting systems. The town pursued grant funding, and both the town and county actively pursued incentive rebates from Lower Valley Energy. Teton County’s lighting upgrades resulted in a \$73,000 rebate, while the town of Jackson’s lighting upgrades resulted in a \$13,000 rebate. If the targets on the wastewater treatment plant are met, the town will receive about \$400,000 in rebates from Lower Valley Energy.

Observation

- The collaboration between the county and the town created synergy and the possibility of accomplishing more together than either local government could alone.

More information

10x10 Energy Efficiency Initiative:
www.tetonwyo.org/AgencyHome.asp

Energy Sustainability Project, Jackson Hole:
www.tetonwyo.org/AgencyHome.asp

Palo Alto, California: Lay Off Energy, Not Services

It is natural that Palo Alto, California—which draws its name from El Palo Alto (the tall tree), a large redwood in one of the local parks—would value the environment and work to protect it. The city has adopted a comprehensive set of sustainability measures that focuses on protecting the environment and the San Francisco Bay watershed, preserving open space and the urban tree canopy, and encouraging residents to do their part.

Major Initiatives

Climate protection planning. While Palo Alto has undertaken initiatives to protect the environment, preserve open spaces, and engage residents, the city's climate protection planning program stands out for its scope and measurable success.

In 2006, the city council convened a green ribbon task force—a group of local stakeholders—to report on areas in which the city could improve its environmental performance. The task force met with city staff and returned to the council with 250 recommendations.

In 2007, a group of four city staff—the energy risk manager, two staff from public works, and a financial analyst—were appointed to comb through the recommendations made by the task force and determine what steps could be taken to reduce greenhouse gas emissions. The group conducted an inventory of city operations as well as a community-wide inventory of greenhouse gas emissions. The city decided it would be best to lead by example, first tackling city operations and then expanding these efforts to the community as a whole. The city set reduction goals for city operations of five percent below 2005 levels by 2009 and 12 percent below 2005 levels by 2012. These goals were then broken down into specific reduction targets for each of the city's 13 departments.


Once the goals were set, the city began looking for ways to reduce emissions. Each department director signed a pledge to reduce emissions, and each department was tasked with creating its own plan to reduce emissions resulting from its internal operations. “By approaching the goal from an organizational culture standpoint first, we were able to receive the buy-in from employees, departments, and facilities. By doing this at the front end, we found that greater change could be achieved in the long run,” Pam Antil, Assistant City Manager, says of this approach. “Employees need to know why we're asking them to do things differently. This is not a one-time thing; we're making changes that have permeated into the culture of the organization.”

Program Implementation

Measuring and communicating energy use. In 2009, the city adopted an environmental and energy management software package to facilitate data collection and monitoring. All data points (the city now has more than 250,000) collected from the 2005 baseline year on were entered into the system, and the software tracks real-time usage from all 600 of the meters at

Palo Alto At-A-Glance

- **Population (2010):**
64,403
- **Square Miles (2000):**
23
- **Reports Published:**
 - Variety of websites and reports, including annual report of the results of climate protection efforts to the city council and to the public every April on Earth Day
- **Measures Used:**
 - Environmental and energy management software, called See-It; reporting system for presenting goals, measures, and progress in meeting targets in dashboard format



city operations and facilities and the nearly 600 vehicles in the city fleet. The software can analyze energy use and emissions for specific facilities as well as on a departmental basis, combining multiple and shared facilities.

This software allows the city to more easily forecast emissions, track improvements and reductions, and analyze results. It also facilitates information sharing on city operations with the public, something the city does through a system called See-It.¹³ See-It provides graphic representations of data on the city's sustainability initiatives.

The city reports the results of its climate protection efforts to the city council and the public every April, on Earth Day. In 2010, city staff presented the 2009 data, which showed an 11-percent reduction over 2005 levels (an equivalent of \$620,000 in savings in calendar year 2009). The city council decided that 12 percent by 2012 was, as a result, no longer a stretch goal, and revised it upward to 20 percent over 2005 levels by 2012.

As the city works to reach this ambitious new goal, the focus is moving from departmental operations to facilities. "The departmental approach was good in driving momentum and cultural change," says Karl Van Orsdol, the city's energy risk manager, "but now we are finding more of the focus is on facilities. The big emitting facilities are usually managed by one department, and these large emitters often have the greatest opportunity to reduce emissions." The city hired a full-time sustainability coordinator to manage ongoing efforts and to begin expanding the climate protection program to the community.

Cost savings. Palo Alto's climate protection efforts have had an unforeseen benefit. As the economy took a downward turn, the significant savings from sustainability efforts have helped support the city's "lay off energy, not services" ethos. Assistant City Manager Antil credits the city's proactive approach to climate protection planning with helping Palo Alto weather the recession as well as it has. "When we started out, we were solely focused on greenhouse gases. When the economy turned down, this system allowed us to pivot very quickly from greenhouse gases to focusing on saving dollars," Antil says.

Staffing. The city hired a full-time sustainability coordinator to manage ongoing efforts and to begin expanding the climate protection program to the community.

Observations

- By convening a group of stakeholders to serve on a task force to develop recommendations for climate protection, the city council demonstrated its commitment to reducing greenhouse gas emissions.
- The city uses environmental and energy management software to collect and analyze data, which facilitates information sharing and demonstrates cost savings.

More information

Mayor's Green Ribbon Task Force on Climate Protection:

www.cityofpaloalto.org/knowzone/agendas/grtf.asp

City of Palo Alto See-It: www.cityofpaloalto.org/depts/cou/see_it.asp

13. For product information, see www.visiblestrategies.com/products.html.

San Antonio, Texas: Mission Verde

San Antonio—the seventh largest city in the country—has taken a comprehensive approach to sustainability. In 2008, the city manager created an Office of Environmental Policy to develop environmental policies, programs, and regulations and to sustain quality of life and economic growth. Concurrently, the mayor and city council expressed interest in creating a more environmentally friendly and sustainable city. To address sustainability issues and create a long-term vision of a sustainable San Antonio, the Office of Environmental Policy created Mission Verde, a plan to guide both sustainability and energy efficiency efforts within city operations and the community. The plan was formally adopted on February 4, 2010.

San Antonio At-A-Glance

- **Population (2010):**
1,327,407
- **Square Miles (2000):**
6,342.27
- **Reports Published:**
 - Variety of websites and reports, including annual update
- **Measures Used:**
 - Annual update report contains information about goals, programs, plans, accomplishments, and results, such as jobs created, energy use reduced, and cost savings



Major Initiatives

Energy efficiency. As San Antonio worked on the Mission Verde plan, American Recovery and Reinvestment Act (ARRA) funds became available. The city ultimately received \$37 million in direct federal assistance and pass-through funding from the state of Texas. One of the biggest projects undertaken with this funding has been weatherization of low-income homes. The city received \$12 million from the Department of Energy's Weatherization Assistance Program, in cooperation with CPS Energy—the largest municipal utility in the county—and launched the Casa Verde weatherization assistance program. Households with median incomes at or below 200 percent of the federal poverty level are eligible for free weatherization assistance, including replacement of windows, water heaters, and other inefficient systems. Through the program, the city will weatherize 1,400 single and multi-family homes.

San Antonio and CPS Energy have collaborated on several other ARRA-funded initiatives related to energy efficiency and renewable energy. For example, the city has a tree rebate program allowing residents to purchase up to three trees at a local nursery and plant them to shade air conditioning units. Residents then receive a \$150 rebate on their electricity bill and see improved efficiency in the operation of their air conditioning systems.

San Antonio, one of the Department of Energy's 25 Solar America Cities, has invested ARRA funds in renewable energy, primarily solar. The city completed a 235-kilowatt installation on the airport parking garage. The airport installation is expected to create 13 local jobs and save the airport up to \$20,000 per year in energy costs.

The city also started a solar/water harvesting project in partnership with Bexar County. The project, which was funded with \$80,000 in EECBG funding and is expected to save \$50,000 a year, involved designing and installing a water capture system with solar-powered pumps to irrigate a 5.4-acre garden. San Antonio is now working on developing a 48-kilowatt solar array demonstration project (expected to be completed in summer 2011) at a community center on the west side of the city, which will serve as cover for a parking area.

Transportation. In addition to energy efficiency and renewable energy, the Mission Verde plan identified transportation as a priority area in which to focus sustainability efforts. San Antonio is the only major city in the United States without a light rail or commuter rail system. Cars are currently the primary mode of transportation, and the city has begun actively pursuing alternatives, particularly biking.

The city now has nearly 200 miles of bike lanes, and the city council passed the Safe Passing Ordinance in February 2010, which requires drivers to keep a passing buffer of three to six feet (for cars and commercial vehicles, respectively) between their vehicles and “vulnerable road users,” including bicyclists. In addition to promoting biking as a means of transportation, the city has adopted a Bicycle Master Plan, which guides the development of bicycle infrastructure. The city is poised to further expand its bicycle infrastructure with a new bike share program—the first in the state of Texas—scheduled to launch in March 2011 and developed with \$700,000 in EECBG funding and \$152,000 in Communities Putting Prevention to Work funding.

The city is also looking into car sharing, with a program that will provide fuel-efficient car-share vehicles for use in and around the downtown area. “While we have a bigger picture of what we want to see in the coming years, we are looking at the small steps like that bike share, car share, and those things that we can do now while we work toward this long-term vision,” says Edward Benavides, chief of staff for the city manager’s office, of these efforts to increase the use of alternative modes of transportation.

Program Implementation

Education. The Office of Environmental Policy emphasizes educating and engaging San Antonio’s residents around sustainability initiatives. To promote community involvement, the city created the Citizens’ Environmental Advisory Committee, made of community members appointed by their council representatives. It meets once per month and advises the city council on environmental efforts, particularly the implementation of Mission Verde. The city also issues regular reports and updates.

In January 2010, the city opened the Mission Verde Center, which serves as an education, training, and research center for energy efficiency, renewable energy, and water conservation. The center—developed in partnership with Alamo Colleges, San Antonio Youth Centers, San Antonio Independent School District, Texas Engineering Experiment Station, CPS Energy, and San Antonio Water System—serves as a location for sustainability demonstration projects. “We want people to actively participate and share the information so we don’t operate in a silo. There is constant communication with the community,” says Benavides.

Observation

- The creation of Mission Verde and the Mission Verde Center demonstrates the city’s commitment to sustainability initiatives. By offering demonstration projects, the city educates the community and engages it in these efforts.

More information

Mission Verde Sustainability Plan: www.sanantonio.gov/oep/sustainabilityplan.asp

Mission Verde Update: www.sanantonio.gov/oep/pdf/OEP-MV-BSession-2010.pdf.

Sarasota County, Florida: Roadmap to Sustainability

Sarasota County is located on Florida's Gulf Coast. The county's sustainability efforts began in the 1980s, when community members began pushing the county to address environmental issues. In 2002, the county passed a formal resolution and established an Office of Sustainability. In 2006, the county took these efforts a step further, developing a *Roadmap to Sustainability*, which helped organize the county's disparate, ongoing initiatives.

Major Initiatives

Green building. Over the past four years, the *Roadmap* has guided Sarasota County's sustainability efforts. First and foremost among them is green building. In 2005, the county was one of the first in Florida to adopt a green building resolution. The resolution requires that all new county buildings and major renovations must meet either U.S. Green Building Council or Florida Green Building Coalition standards. While the county does not have green building requirements for commercial or residential construction, it has created an incentive structure to promote green building. Expedited processing is offered to developers submitting applications for green buildings. These efforts have greatly facilitated green building, and more than 1,300 residential units and 500,000 square feet of new commercial development have been issued expedited permits for green building. The county has also established a Green Business Partnership, which advises and certifies local businesses that adopt green practices.

Low-impact development. Another major area of focus for the county is low-impact development (LID)—a stormwater management approach that uses structural and non-structural hydrologic controls to mimic natural hydrologic functions of the area's pre-development terrain. LID, which can be incorporated into most developments, helps reduce runoff volumes and improve the quality of stormwater runoff. In 2009, the county released the Sarasota County Low-Impact Development Manual, a guide that offers strategies for controlling runoff at the source, promoting infiltration, and harvesting rainwater. In 2010, the county completed LEED Silver Certified buildings, which incorporated LID stormwater design and water-efficient landscaping, into a local park. The county has also promoted water conservation in tandem with LID by installing cisterns and rain barrels around county buildings, libraries, parks, and other facilities to demonstrate and encourage water conservation. More than 560 rain barrels have been sold throughout the community since November 2009.

Sarasota Green Map. The county makes information on community sustainability efforts available to the public. In partnership with Sarasota County Openly Plans for Excellence (SCOPE), a local nonprofit that works to engage citizens to build a better community, the county developed the Sarasota Green Map (<http://ags.scgov.net/GreenMap>). Green Map—which is part of the larger Green Maps movement to help people locate sustainable communities, businesses, and institutions—is an interactive tool that helps residents find information on sustainability efforts in Sarasota County. The map includes the locations of LEED-certified and ENERGY STAR buildings, ENERGY STAR retailers, and other local green businesses, as well as information about alternative energy, agriculture, waste, and transportation. Since its launch in February 2010, the site has had 57,000 hits and more than 2,400 unique visitors.

Sarasota County At-A-Glance

- **Population (2010):**
379,488
- **Square Miles (2000):**
571.55
- **Report Published:**
 - Annual report on progress
- **Measures Used:**
 - Metrics are being developed in a comprehensive sustainability plan

Program Implementation

Sustainability plan. The county is developing an updated sustainability plan, which will expand some of the goals laid out in the roadmap and add quantifiable targets and measurable outcomes. A major focus of this plan—expected to be completed by 2012—will be ensuring that sustainability is woven throughout county operations. It will also focus on continuing momentum from programs such as Energy Efficiency and Conservation Block Grants (which are coming to a close due to funding limitations).

To create the new plan, the county is working closely with the community that sparked the original sustainability initiatives. Visioning events were held in September 2008 and April 2009, and the county hosts annual Sustainable Communities Workshops. In addition, the county holds monthly Sustainable Community Partnership meetings open to businesses and residents. These meetings have a presenter followed by a roundtable.

Staffing. As the county has expanded its sustainability efforts, it has increased the number of staff devoted to these efforts. The Office of Sustainability has two full-time staff members and works with an energy coordinator from the facilities department, as well as staff members from other departments that work on issues related to sustainability, including the water and natural resources departments. Other departments, including health and economic development, have also partnered on sustainability projects.

Observations

- A resolution by the Sarasota governing body and the establishment of an Office of Sustainability made clear the community's commitment to sustainability.
- The *Roadmap to Sustainability* helped provide structure to the county's initiatives.
- The county developed an engagement process by partnering with Sarasota Openly Plans for Excellence, a non-profit that works to engage citizens to build a better community.

More information

Annual Sustainability Program update:

www.scgov.net/Sustainability/documents/2010AnnualReport.pdf

Roadmap to Sustainability:

www.scgov.net/sustainability/documents/SustainabilityRoadmap.pdf

Washoe County, Nevada: Commitment to the Triple Bottom Line

Washoe County is a large county in western Nevada. More than half of the county's residents live in Reno, and much of the remainder live in Reno's metropolitan area. This concentration of population and the expanse of open space that surrounds it have informed the county's outlook on sustainability and environmental initiatives.

Major Initiatives

Recycling, waste reduction, and open-space planning. Two of the county's initiatives stand out: the comprehensive recycling and waste reduction programs and the Regional Open Space and Natural Resources Management Plan. Both have received national recognition.

The county, along with local nonprofit organizations and other community partners, recycles everything from paper to Christmas trees. (Recycled Christmas trees are turned into mulch that is used in county parks and made available to residents.) The county also has a phone book recycling program driven by a friendly competition with the cities of Reno and Sparks. For every ton of phone books dropped off by a community member and recycled, AT&T donates a tree, and the cities and county compete to see who can get the most trees. "These are friendly competitions that elevate awareness," Simon says. For its recycling and waste reduction efforts, the county received an award from the U.S. Environmental Protection Agency for being the number-one local government in the country for waste reduction three years in a row.

Washoe County's 2008 Regional Open Space and Natural Resources Management Plan won the Trust for Public Land and National Association of Counties' Medium County Leadership Conservation Award, which recognizes communities for leadership, innovation, and excellence on local land conservation and park creation initiatives. The plan—which was written with significant stakeholder outreach and regional collaboration—focuses on biodiversity support, cultural resources and sensitive lands, natural hazards, recreation resources, visual and scenic character, and water resources.

The county has found that recycling efforts and the regional open-space planning efforts have an area of overlap. Offering a wide range of recycling programs prevents residents from illegally dumping large items in county parks and open space. This makes recycling not only an environmental issue, but a beautification and public safety issue.

Energy management. Washoe County also emphasizes energy conservation and renewable energy. The Green Team (a volunteer staff group supporting sustainability efforts) and Public Works Department collaborated to create a sustainability plan for county operations, and the county completed an energy audit that led to a significant reduction in energy use. Much of this reduction was due to new technologies, such as motion sensors for lights, which the county was able to invest in through the cost savings resulting from the reduced energy use these technologies provide.

Washoe County At-A-Glance



- **Population (2010):**
421,407
- **Square Miles (2000):**
6,342.27
- **Report Published:**
 - Environmental Action Update
- **Measures Used:**
 - Goals, information, accomplishments (cases of paper and gallons of oil purchased with postconsumer waste products), and results (tons of phone books recycled) reported

The county has four solar installations on county rooftops—including the central county administration building, the senior center, and the northwest library—that were largely funded by grants from the local utility and the American Recovery and Reinvestment Act of 2009. Through these rooftop solar installations, the county expects to save \$30,000 in energy costs in the coming fiscal year. Solar technologies are also used to light restrooms in remote parks and power road signs and radio transmitters in more distant parts of the county. In addition to investing in solar energy, Washoe County is working to make productive reuse of its waste and to generate energy through biomass conversion.

Program Implementation

Business case for sustainability. As with many local governments, a large part of Washoe County's focus on sustainability comes from the cost savings that energy efficiency and conservation measures can provide. Washoe County estimates these savings will be nearly \$250,000 this fiscal year. "People need to look at what is environmentally possible and financially feasible. If it makes good business sense, the elected officials will absolutely support it," says Katy Simon, the Washoe County manager.

"Our commitment is to the triple bottom line," says Simon, describing the county's philosophy on sustainability. "It really has accelerated our efforts to make a business case and a social case for the sustainability initiatives that we promote. People see this is the right thing to do from a social perspective, from a business perspective, from a quality of life perspective—it allows us to do the greatest good for the most people over the longest term."

Staffing: The Green Team. In 2007, the county formed a Green Team made up of volunteer staff members from nine county departments and the Washoe County health department. The Green Team, which works to "encourage, inspire, and support Washoe County's efforts to build a sustainable community for the benefit of current residents and future generations," and which meets regularly with other Green Teams in the region, does not have a budget or any specific resource allocations.¹⁴ The county staff finds that having a central group representing staff from across county operations, rather than a central office, helps make sustainability initiatives more nimble. "From an employee perspective, it has always been an implied value to conserve and renew and have a mind toward sustainability," says Darin Conforti, the county's budget manager, of the Green Team. "It's more of a value, and it's not bureaucratic."

Observations

- The county engages the community through a recycling competition with Reno and Sparks, NV, which has given community members a vested interest.
- The Green Team is staffed by employees from departments across the county, which breaks down organizational silos.
- Reporting on the dollar value of energy savings demonstrates the value of the initiatives.

More information

Regional Open Space and Natural Resource Conservation Plan: www.co.washoe.nv.us/comdev/publications_maps_products/open_space/open_space_index.htm

Washoe County's Environmental Action Update:
www.co.washoe.nv.us

14. www.co.washoe.nv.us/green/about.html

Organizational and financial sustainability plan: <http://www.washoecounty.us>


Washoe County 2010–2012 Strategic Plan with performance measures:
<http://www.co.washoe.nv.us>

Weston, Wisconsin: Stewardship and Conservation Drive Effort

Weston is a small village in central Wisconsin, near Wausau. The village is located in Marathon County, one-third of which is made up of woodlands, wetlands, and other environmentally sensitive areas that cannot be developed. In addition, Weston has two critical watersheds (Bull Junior Creek and Cedar Creek) and a major outstanding waterway (the Eau Claire River). As a result, Weston's sustainability efforts focus on environmental stewardship and protecting and maintaining these environmentally sensitive areas. "We tried to take that stewardship approach instead of a regulatory approach to get people to be a little more cognizant," says Village Administrator Dean Zuleger of Weston's approach to sustainability.

**Weston
At-A-Glance**

- **Population (2010):**
14,868
- **Square Miles (2000):**
21.62
- **Reports Published:**
 - Sustainable Weston overview, with description of program and goals
- **Measures Used:**
 - Goals and information with examples of accomplishments (trees planted) and results (tons of waste diverted from land fill) reported.



Major Initiatives

Conservation framework. Weston developed a sustainability framework that grouped initiatives into five key areas, all of which relate to the conservation of sensitive natural areas: energy; ground and surface water protection; recycling; wetlands and woodlands; and urban sprawl control. Weston has taken steps in each of these areas. The village government went paperless (90 percent of meetings are now paperless) and retrofitted the village building with more efficient lighting and HVAC systems. Weston has been recognized as one of the top recycling communities in the state, with an average of 253.1 pounds of waste (excluding yard waste) per resident recycled annually.

Weston has also reduced winter salt usage—which helps with watershed protection—by 50 percent, saving more than \$70,000. Since 2003, more than 1,000 trees have been planted throughout the village through a neighborhood woodlands initiative and an urban forestry program, which also aims to preserve mature trees and eradicate pests. To control sprawl, Weston has established wetland, woodland, and wellhead protection zones that cannot be developed and has focused on a conservation subdivision and traditional neighborhood development approach to new development.

Transportation. The village has established an alternative transportation policy. Weston added a bus service and completed a bicycle and pedestrian retrofit, adding bike lanes and multi-use trails. The bicycle and pedestrian retrofit focused on creating connections between neighborhoods and schools, parks, shopping areas, and other services and amenities. Through these

efforts, the village was able to improve its walkability score, as reported by walkscore.com,¹⁵ from a score in the 30s to one in the 70s in less than five years. Weston plans to improve this score further in the next two years by adding more than \$500,000 of multi-use trails in the southern part of the village to connect with schools, parks, and shopping areas in the northern part of the village. These approaches to conservation development and alternative transportation not only support the five sustainability focus areas, but they tie into the village's quality-of-life goals. "There is a synergy between sustainability and citizen well-being," Zuleger says.

Dark Skies Initiative. Weston has also become part of the Dark Skies Initiative. Between 2000 and 2010, the village grew from \$448 million to \$1.071 billion in equalized value and gained more than 3,000 residents. As the community grew, residents expressed that one of the things they most valued about living in Weston was being able to see the night sky, and they were concerned that new development would bring additional light pollution. A community resident and astronomer suggested making Weston a dark skies community, promoting reduced light pollution. The Dark Skies Initiative seeks to end light pollution and banish urban sky glare. The Initiative is an effort made by government and non-government organizations to put in place guidelines, policies, and educational materials that will minimize light pollution.

Weston adopted a lighting strategy which requires accent lighting to be low-level and point down, and prohibits light from extending more than one candle foot beyond a property line. This strategy necessitates energy-efficient light fixtures throughout the community, and it has helped conserve resources, lower energy costs, and preserve residents' view of the night sky.

Green Tier Charter. In December 2010, Weston expanded its initiatives by signing the Wisconsin Department of Natural Resources' Legacy Communities Green Tier Charter. Communities participating in the charter voluntarily pledge to achieve superior environmental performance. Weston joined five other communities in the charter pilot program, which is based on sustainable practices or water quality and water resource management.

Program Implementation

Cost savings. The village has seen significant cost savings resulting from these initiatives. "When you adopt these sustainable practices, you become a more efficient government and reduce costs. You don't have to pay for mitigation or remediation when starting at the sources," Village Administrator Zuleger says of this conservation-based approach. "We have found through these practices that we are actually saving money for the community."

Observations

- By developing a framework, the village has a focus for its initiatives. A framework gives structure to sustainability initiatives, so they are integrated and complementary.
- Partnerships, such as that with the Wisconsin Department of Natural Resources' Legacy Communities Green Tier Charter, strengthen the village's program commitment.

More information

Sustainable Weston: http://www.westonwisconsin.org/media/Sustainable_Weston5_1.pdf

Wisconsin Legacy Communities Green Tier Charter:

<http://dnr.wi.gov/org/caer/cea/environmental/participants/legacycommunities/index.htm>.

15. Walk scores, as calculated by <http://www.walkscore.com>, measure how walkable a neighborhood is based on the following criteria: a center; enough people to support businesses and public transit to run frequently; affordable housing, schools and workplaces located in proximity to businesses and services; parks and public space; pedestrian-friendly design, and complete streets.

Action Steps

In examining the survey results and case studies, a set of leading practices emerge in communities with comprehensive, systemic approaches to sustainability. The following action steps should be taken by local governments seeking a long-term, integrated approach to environmental, economic, and social sustainability.

Action Step One: Obtain a Formal Commitment and Pursue a Broad Sustainability Strategy

A resolution from the local governing board with articulated policy goals and defined targets makes it clear to the community that elected officials are behind the effort, as demonstrated by Sarasota County. Because sustainability is easily politicized, it is imperative that elected leadership make a formal commitment that frames the issue for the jurisdiction and provides the political underpinnings and baseline from which to move forward into implementation.

A commitment in the form of a resolution by the governing board stating policy goals and the adoption of a plan with specific targets will contribute to expanded action. For a local government to take effective action to promote sustainability, a broad strategy aimed at achieving defined results is preferable to a number of specific yet disconnected actions. In many cases this takes the form of a strategic plan, whether it be incorporating sustainability into a community's comprehensive plan or creating a separate effort. No matter the form, a strategic effort complete with progress targets and milestones is characteristic of leading-edge governments.

Action Step Two: Develop an Engagement Process to Broaden Community Outreach

A community education process is important, given the complexity of the sustainability concept and the potential for both misunderstanding and politicization. Community engagement in this context is not just opinion polling, but a shared learning experience as the community and leadership become better informed about what is important to their citizens. An engagement approach can be comprehensive across all three areas of the triple bottom line or it can focus on an area that is already compelling, such as a declining economy and high unemployment. Regardless, a strategic sustainability effort begins with an understanding of the current state of a community based on objective analysis, as practiced by Palo Alto and Buncombe County.

Communities have become very creative in their approach to civic engagement, ranging from traditional SWOT (strengths, weaknesses, opportunities, and threats) analysis to more comprehensive processes incorporating in-person (community meetings, design charrettes) and electronic (social media, discussion boards, Wiki postings) outreach initiatives. Community dialogue can provide the information necessary to define the focus and scope of the sustainability effort,

to identify the stakeholders that should be involved, and to determine the resources needed to develop and implement the plan. Inevitably there will be competing priorities and a contest for the limited resources available to local governments today. Thus, establishing a common vision through engagement is paramount to any successful effort and professional city and county managers have extensive experience in this regard.

Action Step Three: Appoint a Citizens' Committee to Engage the Community

Another action that local governments can take is to appoint a citizens' committee or commission to provide input and encourage public involvement—something more than one-quarter of the responding governments have done. This action relates to a broader citizen engagement process and increases the likelihood of community support for the sustainability effort. Committees have developed many government policy ideas that have been considered for adoption, as well as ideas for citizen action, as seen in the San Antonio case study.

Action Step Four: Develop Partnerships with Key Institutional, Private Sector, and Nonprofit Actors

In addition to involving citizens, developing partnerships with other governments in the region, as well as the wide range of private sector and nonprofit stakeholder organizations in the community that can contribute to setting and meeting sustainability goals, is another key element of a comprehensive engagement effort. Partnerships like the ones in Grand Rapids can leverage the limited resources that local governments can commit to the sustainability effort. Inter-governmental partnerships are important, and governments can follow the example of Weston and consider a joint program between cities and their county government in areas such as regional transportation and energy planning.

ICMA has found from its studies that local government managers are increasingly interested in shared services between government agencies, as well as public-private partnerships. Local governments should not expect that all of their sustainability goals will be achieved if their efforts stop at the community's borders. Environmental, economic, and social issues rarely respect jurisdictional boundaries and in all likelihood will require inter-governmental cooperation.

Taking the next step, local government managers should expand their networks and engagement to include private and nonprofit institutional players in their community. In the town of Jackson and Teton County, Wyoming, it was demonstrated that local and regional businesses provide the bedrock for the economic aspects of a sustainability plan; failure to include them in the process is a risky strategic approach. As the ICMA survey results show, few local governments currently use incentives programs to stimulate activity in the business community in areas such as energy or land use planning. There are opportunities for exponentially increasing action by the business community, but success will only occur if there is meaningful engagement.

Similarly, most communities have nonprofit and other institutional resources such as community colleges or universities, community development corporations, neighborhood associations, or ecumenical organizations that can provide support for a local effort. Quality education, affordable housing, support for the aging, and environmental justice are key components of great places and many of these issues are supported by community institutions that should be included in a local and regional effort to create a more sustainable place to live, work, and play.

Action Step Five: Make Changes To Break Down Silos and Encourage Coordinated Action

It is clear that there is no single best method for making changes inside a local government to encourage coordinated action. Some governments, such as that of Washoe County, have been successful with a matrix approach. Other localities, such as Sarasota County, have used a designated director and department to oversee a sustainability effort. Regardless of which approach is taken, it is important to get the staff involved. Governments have tapped the creativity of their staff members for ideas about how the government and the community can do better, and individual departments can develop plans to carry out the overall goals of the jurisdiction.

Action Step Six: Measure Performance to Assess the Sustainability Effort

Sustainability, like any other strategic plan or goal, requires accompanying metrics for local government performance. Best practices and innovative approaches must be tested and measured. Too often, new ideas are prematurely labeled best practices in articles or presentations at major national conferences, when in fact their performance has not been measured. Absent a measurable outcome, the presenter is simply telling a good story about something that may or may not be poised for greatness. On the other hand, good work can go unnoticed because governments do not share information with the public and do not make their sustainability programs central parts of their websites.

A variety of measures can be developed by drawing on local government records—for example, energy costs overall and by category, such as streetlights or motor vehicles, number of staff members who telework, and amount of materials recycled. The government can work with community organizations to measure other sustainability indicators, such as acres of community gardens, number of LEED-certified buildings, and number of businesses that have installed energy-efficient appliances.

Baseline information and targets are helpful in tracking progress toward goals. ICLEI-Local Governments for Sustainability recommends a process in its Cities for Climate Protection (CCP) campaign that promotes sustainable development. This process relies heavily on tracking results.¹⁶ After community goals are affirmed, ICLEI recommends conducting a baseline emissions inventory and forecast, which serves as a benchmark against which the city or county can measure progress, as was done in Anacortes.

An effort led by ICLEI USA—Local Governments for Sustainability is developing a new comprehensive performance measurement approach and tool called the STAR Community Index. Much as LEED™ transformed the building industry, STAR will transform the way local governments set priorities and implement policies and practices to improve their sustainability performance. It will become the definitive means by which local governments measure and certify their achievements.¹⁷

Measuring performance allows local governments to make mid-course policy or implementation corrections.

16. The organization was founded in 1990 as the International Council for Local Environmental Initiatives. It was formerly known as the Council for Local Environmental Initiatives. See www.iclei.org. ICLEI is an association of more than 1,200 local governments internationally and more than 600 local government members in the United States. Among governments responding to the ICMA survey, 10 percent (211 governments) are members.

17. See www.icleiusa.org/star

Action Step Seven: Report to Citizens on Progress

Government must report the results of its activities to the public. The most engaging measurement and reporting programs are easily found on the local government's web page; provide information that permits citizens to see what is being done (activities) and what is being accomplished (results); and offer feedback to citizens about their own contributions and how they can do more. It is important to follow the example of Grand Rapids and keep citizen attention focused on the government's sustainability goals.

Looking Ahead

ICMA plans to conduct a sustainability survey bi-annually; the next is planned for 2012. The 2012 survey instrument will be designed to collect longitudinal data and will include new questions addressing sustainability issues that have arisen since 2010. In particular, the 2012 survey will collect information on the financial benefits of increased energy efficiency. Based on the data collected in 2010 and the researchers' ongoing monitoring of sustainability practices, we anticipate that progress will be evident through increased initiatives among local governments.

Appendix A: Survey Summary

Local Government Sustainability Policies and Programs, 2010

The survey was developed with the input of ICMA's Center for Sustainable Communities, the Center for Urban Innovation, Arizona State University's Global Institute of Sustainability (ASU GIOS), the Alliance for Innovation, and others. Survey distribution was conducted through a collaboration of ICMA, ASU GIOS and the Sustainable Cities Network, a multi-jurisdictional partnership. The survey was provided in a print format because the response rate is both higher and more scientifically representative than for an electronic survey.

The survey was sent to 8,569 local governments. The survey response rate is 25.4%, with 2,176 local governments responding. The summary below shows the percentage reporting to each item. The highest percentages are in bold. There are notable variations in the results by population size and geographic division; more populous areas, and those in the West, are more actively pursuing sustainability. To purchase the survey results in a downloadable Excel spreadsheet, go to http://bookstore.icma.org/Local_Government_Sustainability_C170.cfm.

Policy Action

1. To what extent are the following a priority in your jurisdiction?

Policy issues	High priority (% reporting)	Priority (% reporting)	Somewhat a priority (% reporting)	Not a priority (% reporting)
a. The environment	21.0	40.7	33.2	5.2
b. The economy	68.3	25.9	4.6	1.2
c. Social justice	9.2	29.4	41.7	20.2
d. Climate change	5.0	14.1	34.6	46.3
e. Green jobs	6.5	22.8	41.8	28.9
f. Energy conservation	23.9	45.7	27.5	2.9
g. Housing for all income groups	14.0	33.6	36.9	15.4
h. Public transit	8.9	25.4	33.9	31.8

2. Please indicate which of the following actions your locality has taken related to sustainability, energy conservation, resilience, climate change, emissions reductions, or similar concerns in your community. (Check all applicable.)

Action	Local government has taken action (% reporting)
a. Adoption by the governing body of a resolution stating policy goals.	28.7
b. Adoption by the governing body of a plan with specific targets or benchmarks.	18.5
c. Establishment of a sustainability policy and/or plan by the chief executive.	18.1
d. Appointment of a citizens committee, commission, or task force.	26.7
e. Provided a budget specifically for the sustainability effort	15.6
f. Dedicated staff to the sustainability effort	26.8

3. If your local government has dedicated staff to the sustainability effort, how many FTEs are dedicated?

1.9

4. Please indicate which of the following your local government has **established** related to the environment. (Check all applicable.)

Action	Local government has established (% reporting)
a. Baseline greenhouse gas emissions of the local government	14.4
b. Baseline greenhouse gas emissions of the community	8.9
c. Greenhouse gas reduction targets for local government operations	11.4
d. Greenhouse gas reduction targets for businesses	2.7
e. Greenhouse gas reduction targets for multi-family residences	1.7
f. Greenhouse gas reduction targets for single-family residences	1.9
g. Locally initiated air pollution measures to reduce dust and particulate matter	8.7
h. Plan for tree preservation and planting	44.7

Recognition Programs

5. Please indicate whether your community been recognized, credentialed, or won an award for any sustainability-related initiatives undertaken by your local government or through a public-private partnership. (Check all applicable.)

Recognition programs	Local government received recognition (% reporting)
a. Tree City USA designation	41.5
b. EPA Smart Growth Achievement Award	1.3
c. Phoenix Award for Brownfields Redevelopment	1.0
d. Historic Preservation Merit Awards	11.4
e. Other (Please describe)	8.2

Water

6. Is your local government responsible for water services?

Yes 66.7%

No 34.3%

6A. Which of the following actions has your government taken to improve and protect water?

Action	Local government has taken action (% reporting)
a. Actions to conserve the quantity of water from aquifers	33.5
b. Use of grey-water and/or reclaimed-water use systems	16.3
c. Sets limits on impervious surfaces on private property	30.3
d. Use water price structure to encourage conservation	33.0
e. Other incentives for water conservation behaviors by city, residents, and businesses	27.6

Recycling

7. Which of the following actions has your government taken to promote recycling?

Action	Local government has taken action (% reporting)
a. Internal program that recycles paper and plastic and glass in your local government	72.0
b. Community-wide recycling collection program for paper and plastic and glass for residential properties	75.7
c. Community-wide recycling collection program for paper and plastic and glass for commercial properties	44.9
d. Recycling of household hazardous waste	54.9
e. Recycling of household electronic equipment (e-waste)	52.0
f. Pay-As-You-Throw (PAYT) program with charges based on the amount of waste discarded	10.5
g. Community-wide collection of organic material for composting	32.5
h. Require minimum of 30% post-consumer recycled content for everyday office paper use	9.2

Energy

8. Which of the following actions has your government taken to decrease its use of energy?

Action	Local government has taken action (% reporting)
a. Established a fuel efficiency target for the government fleet of vehicles	12.5
b. Increased the purchase of fuel efficient vehicles	44.4
c. Purchased hybrid electric vehicles	23.7
d. Purchased vehicles that operate on compressed natural gas (CNG)	8.5
e. Installed charging stations for electric vehicles	5.3
f. Conducted energy audits of government buildings	62.9
g. Installed energy management systems to control heating and cooling in buildings	46.4
h. Established policy to only purchase Energy Star equipment when available	17.4
i. Upgraded or retrofitted facilities to higher energy efficiency office lighting	55.9
j. Upgraded or retrofitted traffic signals to improve efficiency	37.1
k. Upgraded or retrofitted streetlights and/or and other exterior lighting to improve efficiency	30.5
l. Upgraded or retrofitted facilities to higher energy efficiency heating and air conditioning systems	39.3
m. Upgraded or retrofitted facilities to higher energy efficiency pumps in the water or sewer systems	23.4
n. Utilize dark sky compliant outdoor light fixtures	15.1
o. Installed solar panels on a government facility	13.1
p. Installed a geo-thermal system	6.6
q. Generated electricity through municipal operations such as refuse disposal, wastewater treatment, or landfill	7.4

9. Has your local government established any energy reduction programs targeted specifically to assist low-income residents?

a. Yes 8.1% **b. No 91.9%**

10. Has your local government established any energy reduction programs targeted specifically to assist small businesses?

a. Yes 5.8% **b. No 94.2%**

11. Please indicate which of the following actions your local government has taken to reduce energy consumption in the community.

Action	Direct Grant (% reporting)	Direct Loan (% reporting)	Tax Incentive (% reporting)
a. Energy Audit-Individual residences	6.4	0.9	0.3
b. Weatherization- Individual residences	11.1	2.9	0.6
c. Heating / air conditioning upgrades- Individual residences	5.5	2.3	0.6
d. Purchase of energy efficient appliances- Individual residences	4.7	0.8	0.7
e. Installation of solar equipment- Individual residences	1.4	1.0	1.3
f. Energy Audit-Businesses	4.2	0.5	0.1
g. Weatherization-Businesses	2.8	1.1	0.3
h. Heating / air conditioning upgrades-Businesses	3.4	1.1	0.3
i. Purchase of energy efficient appliances-Businesses	2.7	0.7	0.3
j. Installation of solar equipment-Businesses	1.3	1.0	0.8

Transportation

12. Please indicate whether your local government offers incentives for the local government employees to take any of the following actions:

Action	Incentive offered (% reporting)
a. Take mass transit to work	7.2
b. Carpool to work	6.5
c. Walk to work	4.3
d. Bike to work	5.8

13. If your local government offers employees parking, do you charge market rates for employee parking?

- a. Yes 5.0%
- b. No 95.0%**

14. Is telework permitted for staff members in your local government?

- a. Yes 26.8%
- b. No 73.2%**

15. Do you have a specific target for the percent of your government work force that will tele-work?

- a. Yes 0.6%
- b. No 99.4%**

15A. If yes, what is it? 11.1%

16. Does your local government use a compressed work week with offices closed one day?

- a. Yes 10.2%
- b. No 89.8%**

17. Within the last 5 years, which of the following transportation improvements has your community implemented?

Transportation improvements	Local government has initiated (% reporting)
a. Expanded dedicated bike lanes on streets	34.2
b. Added biking and walking trails	61.4
c. Added bike parking facilities	27.8
d. Expanded bus routes	21.9
e. Requiring sidewalks in new development	54.4
f. Widened sidewalks	24.5
g. Require charging stations for electric vehicles	1.2
h. Require bike storage facilities	8.0
i. Require showers and changing facilities for employees	4.0

18. Does your community currently have a commuter rail system (subway or streetcar)?

a. Yes 7.2% **b. No 92.8%**

19. Does your community have a plan to create or expand the use of subway or streetcars?

a. Yes 6.3% **b. No 93.7%**

20. Has your local government established any transportation programs targeted specifically to assist low-income residents?

a. Yes 20.6% **b. No 79.4%**

Building and Land Use

21. Please indicate whether your land use and development policies cover any of the following:

Activity	Land use and development policies cover (% reporting)
a. Require all new government construction projects to be LEED or Energy Star certified	12.3
b. Require all retrofit government projects to be LEED or Energy Star certified	7.5
c. Permit higher density development near public transit nodes	19.5
d. Permit higher density development where infrastructure is already in place (utilities and transportation)	22.2
e. Incentives other than increased density for new commercial development (including multi-family residential) that are LEED Certified or an equivalent	5.1
f. Incentives other than increased density for new single-family residential be LEED certified or the equivalent	2.8
g. Apply LEED Neighborhood Design standards	3.6
h. Provide density incentives for "sustainable" development (such as energy efficiency, recycling of materials, land preservation, storm water enhancement, etc.)	9.8
i. Provide tax incentives for "sustainable" development (such as energy efficiency, recycling of materials, land preservation, storm water enhancement, etc.)	2.8
j. Reduce fees for environmentally friendly development	3.3
k. Fast track plan reviews and or inspections for environmentally friendly development	8.4
l. Residential zoning codes to permit solar installations, wind power, or other renewable energy production	20.8
m. Residential zoning codes to permit higher densities through ancillary dwellings units or apartments (such as basement units, garage units, or in-house suites)	13.7
n. Zoning codes encourage more mixed-use development	35.4

22. Please indicate which of the following programs your local government has.

Program	Local government has program (% reporting)
a. An active brownfields, vacant property, or other program for revitalizing abandoned or underutilized residential, commercial or industrial lands and buildings	22.4
b. A land conservation program	22.4
c. A program for the purchase or transfer of development rights to preserve open space	15.5
d. A program for the purchase or transfer of development rights to create more efficient development	5.9
e. A program for the purchase or transfer of development rights to preserve historic property	7.8

Social Inclusion

23. Please indicate which of the following programs your local government has.

Action	Local government has taken action (% reporting)
a. Provide financial support/incentives for affordable housing	32.6
b. Provide supportive housing to people with disabilities	15.3
c. Provide housing options for the elderly	27.2
d. Provide housing within your community to homeless persons	10.2
e. Provide access to information technology for persons without connection to the internet	27.1
f. Provide funding for pre-school education	12.3
g. Provide after-school programs for children	26.3
h. Report on community quality of life indicators, such as education, cultural, diversity, and social well-being	14.9

Other Actions

24. Has your local government taken action—either through restrictions or incentives—in any of the following areas? (Check all applicable.)

Action	Restriction (% reporting)	Incentive (% reporting)
a. To use locally produced material or products	1.5	8.5
b. To reduce the use of plastic bags by grocery or retail stores	0.6	2.0
c. To use locally grown produce	0.1	8.8

25. Has your local government taken action in any of the following areas? (Check all applicable.)

Action	Local government has taken action (% reporting)
a. Restriction on purchase of bottled water by the local government	10.6
b. Use of public land for community gardens	28.8
c. Support a local farmer's market	52.4
d. Education program in the local community dealing with the environment and energy conservation	28.0
e. Locate recycling containers close to refuse containers in public spaces such as streets and parks	34.0
f. Green product purchasing policy in local government	12.9

Appendix B: Determinants— Understanding the Impact of Type of Local Government, Geography, and Population on Sustainability

The type of local government (city or county), the state/geographic region, and population size are variables that deserve special attention for their strong association with greater action to promote sustainability.

Type of Local Government

Cities and counties generally engage in sustainability actions at approximately the same level, and their overall ratings are virtually identical. There are three exceptions. First, cities are more involved in the service of providing water, and they have a higher rating for sustainability action related to water quality and conservation. Second, counties provide more social services and have a higher social inclusion rating. Third, counties are more likely to be involved in land conservation and use of development rights to promote sustainability goals—presumably because of their larger geographic size and land devoted to forests and farming.

State and Geographic Region

Local governments in different parts of the country vary in the likelihood that they will take sustainability action. To some extent, there is a state effect as well. Local governments in states that have approved more climate change initiatives are more likely to have higher activity levels, in part because they are mandated to do so by the state. California, which has the highest number of state initiatives, also has the highest activity level in local government, with an average score of 33.¹⁸ Dividing the states into two groups based on the number of initiatives shows a clear difference in average activity level related to the number of state initiatives.

- For the 23 states with 11 or fewer state initiatives, the local government activity rating is 13.7 percent.
- For the 26 states with 12 or more state initiatives, the local government activity rating is 19.9 percent.¹⁹

Despite this overall association between state government commitments and those of local government within the same state, detailed examination reveals exceptions. The five states with five or fewer initiatives tend to have low local government activity ratings. Still, whereas three of these states—Alabama, Mississippi, and South Dakota—are in the bottom quintile in sustainability levels among the states, two others are doing more. Tennessee is in the fourth and Nebraska in the third quintile. California has the top rank on both the state initiative and local activity lists, but the other states that lead in sustainability initiatives vary in their activity

18. Pew Center on Climate Change, "All state initiatives," www.pewclimate.org/docUploads/AllStateInitiatives-01-27-09-a_0.pdf (accessed January 29, 2011). The California Global Warming Solutions Act of 2006 requires all localities with publicly owned utilities to report their emissions.

19. Hawaii is excluded from this comparison because it had only one responding local government.

rating. Among the four states tied for the second-highest number of state initiatives (19), two were in the top quintile of average ratings—Massachusetts and Washington—Oregon is in the second quintile, and New York is in the third. This dispersion in the level of local activity shows that state initiatives can provide a generally positive or negative climate for sustainability programs, but state initiatives alone do not determine how active local governments will be.

Regions, on the other hand, differentiate activity level to a greater extent. Local governments in the western United States do the most in the energy and environment activity areas measured in the survey. The exceptions are recycling and land conservation, which are used most commonly in the Northeast. Although still uncommon, promoting alternative sources of energy is happening more in the West than in other regions.

Population

Population size is a major determinant of sustainability action. On average, the larger the city or county, the more is being done to promote sustainability. Appendix A provides adoption rates for all activities measured by the survey, divided by major activities. The presentation includes the overall percentage of local governments using each activity and a breakdown for five major population groups.²⁰ The largest cities and counties (population more than 1.5 million) have an average activity rating three times higher than the smallest cities and counties (population less than 10,000).

Table B.1 shows that only three specific activities are conducted by a majority of responding governments in all five population categories: internal recycling, community-wide recycling, and biking/walking trails. Table B.2 shows that when the smallest governments (population less than 10,000) are left out of the analysis, a majority of the remaining cities and counties utilize many of the sustainability activities. As shown in Table B.3, a majority of the jurisdictions in the top three size categories (population more than 50,000) take on additional activities.

Table B.1: Percentage of Local Governments Conducting Sustainability Activities, by Population Category

Activity	Population group				
	500,000 or higher (%)	100,000-499,999 (%)	50,000-99,999 (%)	10,000-49,999 (%)	Under 10,000 (%)
Internal program that recycles paper and plastic and glass in local government	83	89	87	76	61
Community-wide recycling collection program for paper and plastic and glass for residential properties	78	80	81	79	71
Addition of biking and walking trails	86	81	73	65	50

When the smallest governments (those under 10,000 in population) are set aside, a majority of the remaining cities do the following:

20. The 10 population categories normally used in ICMA surveys show the same patterns of variation. The five categories are used to simplify the presentation.

Table B.2: Percentage of Local Governments Conducting Sustainability Activities

Activity	Population group			
	500,000 or higher (%)	100,000–499,999 (%)	50,000–99,999 (%)	10,000–49,999 (%)
Recycling of household hazardous waste	78	80	71	59
Recycling of household electronic equipment (e-waste)	69	73	70	54
Energy audits of government buildings	97	89	81	68
Upgraded or retrofitted facilities to higher energy efficiency office lighting	100	86	72	60
Increased purchase of fuel-efficient vehicles	94	76	68	50
Require sidewalks in new development	67	61	65	60
Support a local farmers' market	50	56	65	55

A majority of the jurisdictions in the top three size categories (over 50,000) take on additional activities:

Table B.3: Additional Sustainability Activities Conducted by Local Governments

Activity	Population group		
	500,000 or higher (%)	100,000–499,999 (%)	50,000–99,999 (%)
Installed energy management systems to control heating and cooling in buildings	97	76	66
Upgraded or retrofitted facilities to higher energy efficiency heating and air conditioning systems	94	71	58
Upgraded or retrofitted traffic signals to improve efficiency	72	59	58
Expanded dedicated bike lanes on streets	78	61	55
Provided financial support/incentives for affordable housing	81	60	56
Planned for tree preservation and planting	56	53	56
Purchased hybrid electric vehicles	81	65	50

It is important to note that only one additional activity is provided by a majority of cities with more than 100,000 residents: offering educational programs on the environment and energy conservation.

Additional Activities Used by a Majority of Cities and Counties With a Population of 500,000 and Higher

- Use of greywater and/or reclaimed-water use systems
- Other incentives for water conservation behaviors by city, residents, and businesses
- Community-wide recycling collection program for paper and plastic, and glass for commercial properties
- Purchase of vehicles that operate on compressed natural gas
- Upgraded or retrofitted streetlights or/and other exterior lighting to improve efficiency
- Upgraded or retrofitted facilities to higher energy efficiency pumps in the water or sewer systems
- Establishment of policy to purchase only ENERGY STAR equipment when available
- Installation of solar panels on a government facility
- Local government incentives for local government employees to take mass transit or carpool to work
- Permitting telework for staff members in local government
- Addition of bicycle parking facilities
- Use of a commuter rail system (subway or streetcar)
- Creation or expansion of subway or streetcars
- Requirement of all new government construction projects to be LEED- or ENERGY STAR–certified
- Permit higher density development near public transit nodes
- An active brownfields, vacant property, or other program for revitalizing abandoned or under-utilized residential, commercial, or industrial lands and buildings
- A land conservation program

Thus, only 18 activities are in widespread use among a range of local governments, and even for these, the range for most activities is progressively confined to larger places. Of cities and counties with a population of 500,000 and higher, however, a majority are making use of the additional activities above related to energy and the environment.

Implications of Population and Geographic Region

A number of factors may explain the substantial differences based on population. Some needs, such as changes related to transportation, are related to larger population and geographic size.²¹ It costs money to install or retrofit facilities and offer incentives to homeowners and businesses. Standards for buildings can be more easily instituted in larger places with a bigger impact on their regional construction market. Mass media and more organized groups are likely to exert greater pressure in larger places. The one activity that smaller communities may have an easier time putting in place is a farmers' market. Indeed, they are more common in smaller (but not the smallest) jurisdictions than in the largest. Otherwise, characteristics associated with smaller populations tend to reduce the likelihood of sustainability action.

21. The case study of Weston, Wisconsin, demonstrates that small towns can be active in developing alternative transportation policies and options.

The observed patterns of higher usage in larger places and certain regions is not a negative factor or necessarily a fixed condition. For many kinds of new approaches, a relatively small proportion of innovative local governments are pioneers and early adopters. They provide an example that other governments will follow. Furthermore, even now, smaller communities and those outside the West are not automatically consigned to lower levels of activity. Of the top 10 percent of participants in the survey—218 governments with an average utilization rating of 35.9 or higher—only one in 10 has a population greater than 500,000, and most of these large governments are not in the West. More than 40 percent of the top 10 percent of local governments have a population less than 50,000, and almost half are outside the West.

There is little connection, however, between an area's growth rate and its sustainability action, and the linkages to specific activity areas are weak. Modestly more actions are taken related to water, transportation improvements, and building and land use in faster-growing local governments, but there is virtually no relation between growth rate and actions on land conservation.²² The supposition that fast growth would increase (or some might presume decrease) the concern about preserving land is not supported by the survey results.

To summarize, active involvement in sustainability increases with population size and is most commonly found in the West—but the activity level of each community is not predetermined. The decisions of leaders and citizens can take any jurisdiction into the leading ranks of sustainability communities, even if the conditions are not highly favorable.

22. The correlation between growth rate and average activity level is only 0.10—a very weak level of association. The correlation with water is 0.17, with transportation improvements is 0.17, and with building and land use controls is 0.13. All correlations are significant at the 0.001 level. The correlation with land conservation, in contrast, is only 0.05.

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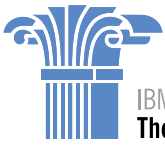
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