

What does it mean to be green?

PROMOTING SUSTAINABILITY
IN SYRACUSE AND ONONDAGA COUNTY

OCTOBER 2010



Onondaga
**Citizens
League**

Onondaga Citizens League

MISSION STATEMENT

The Onondaga Citizens League fosters informed public discourse by identifying and studying critical community issues affecting Central New York, developing recommendations for action, and communicating study findings to interested and affected groups.

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Preface

For over 30 years, the Onondaga Citizens League has represented an outstanding example of citizen participation in public affairs. Founded in 1978, OCL is an independent, not-for-profit organization that encourages civic education and involvement in public issues. The OCL's annual study on a topic of community-wide relevance culminates in a report designed to help citizens comprehend the issue and its implications, and give decision makers recommendations for action.

When the "What Does It Mean to Be Green?" Study Committee began meeting in early 2009, the enormity of the subject of environmental sustainability required much discussion and research in order to define the study topic to something "manageable." Those broader discussions of sustainability, ecosystems, and sustainable human settlements added much to our understanding of the breadth and interconnectivity of the issues.

After months of study, the Study Committee came away optimistic about the future of Central New York and our ability to marshal the combined efforts of municipalities, citizens, schools, businesses, and other institutions to make a positive impact not only on this community, but also as an example to others. Given the huge importance of the issue, the Onondaga Citizens League hopes that this study report contributes, in a significant way, to the community action.

Special thanks are due to the Study Committee and its co-chairs, Jason Allers and David Holder. We also extend appreciation to the individual and corporate members of OCL, listed elsewhere in this report, who support the work of the League through their membership dues and financial contributions, and to University College of Syracuse University, which provides the administrative and organizational support without which the Citizens League could not function.

The Onondaga Citizens League is open to any individual or organization in Central New York. While some join to become involved in the study process, many become members to support the concept and practice of citizen involvement in public policy issues. More information on OCL is available on our website, www.onondagacitizensleague.org.

Sandra Barrett
Executive Vice President

What does it mean to be green?

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Acknowledgements

Given the complexity and breadth of the issue, this committee went to considerable lengths to engage experts in many fields of sustainability- experts both local and national, with sound backgrounds, a deep understanding of “green” philosophies, and a rich regional experience. We also solicited the opinions of many non-experts, lay-people if you will, for this topic also relies heavily on public opinion, and individual politics. What we found was encouraging and, in some cases, even inspiring.

Dozens of committee meetings, several public presentations, and many private conversations were responsible for the content and recommendations of this year’s study. As a result, there are many individuals to whom we owe our gratitude.

First, to the committee itself, whose dedication and enthusiasm for the topic provided for an honest and insightful glimpse into this picture of sustainability, and the effect it has on our region. They also provided guidance and direction when we appeared to be going off-track. Their support and their many opinions helped keep this study in focus, and without it, we would have been lost.

Second, to the presenters and speakers at the 10 public sessions, whose thoughtful comments and knowledge of each topic provided the facts and figures that ultimately led to the many recommendations presented in this study. Special thanks to Dr. Richard Smardon and Emanuel Carter of SUNY ESF, whose rich understanding of our regional ecosystem provided a wonderful canvas on which to start. To Peter Arsenault and Diane Brandli of GreeningUSA and the work they had done on the broader picture of sustainability proved immensely helpful. To the many city and county employees who apprised us regularly of our local municipal progress in our studied areas of sustainability; especially to Megan Costa and David Coburn, whose individual efforts on this committee, and as presenters, were key components to this report. Special thanks to Sam Gordon, to whom we are indebted for the excellent job of designing the layout of the report.

Furthermore, special thanks should go to our current slate of leaders in both city and county government. Their recent efforts in creating a sustainable region can be seen in recent policy implementation for each of the city and county administrations; and whose recent collaborative efforts would give cause to even the most skeptical that our elected leaders are beginning to understand the importance of sustainability to the long-term health of the region.

We also thank this year’s study writer, Carol Boll, who turned the committee’s work into what we believe is a well-crafted and valuable report. And to Colleen Karl-Howe for her skills of organization, her constant communication with the committee, and for her keen eye for all things sustainable, we are grateful.

Finally, as is the case with every recent OCL study, we relied heavily on the skills, resources and dedication of Sandra Barrett, the League’s executive vice president. Her leadership and patience are only two of her many virtues. Thank you

--

Jason Allers and David Holder

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<http://onondagacitizensleague.org>

At the outset of this yearlong study process, the Onondaga Citizens League study committee agreed that, "... pursuing sustainability as a goal is not only the right thing to do for our planet but essential to our collective well-being as a community and region."



photo: clinton square

What Does It Mean to be Green?

Forty years ago, with the historic observance of the first Earth Day, the environment emerged as a public and political cause to address threats posed by air and water pollution and unabated population growth. In recent years, the environment has stormed back into the public consciousness—this time fueled by worldwide scientific consensus on the potentially catastrophic effects of climate change, concern over the depletion of natural resources and nonrenewable energy sources, and growing recognition of the political and economic need to reduce reliance on foreign oil.

At the heart of this resurgent movement is the acknowledgement that we can no longer afford to live and do business as usual—that our choices have serious consequences for the health of our

communities, residents, and world, both now and into the future. We're finally catching up with the ancient Haudenosaunee wisdom that says every action and decision must be made with consideration of the effects on the seventh generation to come.

While “green” may be the environmental marketing buzzword of the day, sustainability—loosely defined as meeting the needs of today's generation without compromising the needs of future generations—has become the mantra of this burgeoning movement. And local governmental leaders have been among the vanguard in pursuing policies that further its goals.

As just one example of the widespread interest in sustainability at the municipal level, mayors from more than 1,000

cities, including Syracuse, have signed onto the U.S. Conference of Mayors' Climate Protection Agreement, pledging to reduce their cities' carbon emissions to 7 percent below 1990 levels by 2012. And a 2009 survey by Living Cities, an international collaboration of 21 of the world's largest foundations and financial institutions, found that more than 75 percent of cities already had detailed sustainability plans in place or were currently developing plans for decreasing their carbon footprint.

Recognizing this growing trend, the Onondaga Citizens League (OCL) decided to study the issue in the context of Onondaga County. What are local municipalities doing to become more sustainable places to live and work? What more could local governments, businesses, institutions, and citizens do to further that effort?

These questions guided OCL's process of inquiry.

At the outset of this yearlong study process, the Onondaga Citizens League study committee agreed that “green” is good and that pursuing sustainability as a goal is not only the right thing to do for our planet but essential to our collective well-being as a community and region. This report outlines some of the reasons behind that conviction addresses the issues and lays out recommendations in areas we believe have the greatest potential for positive change.

Sustainable communities don't just happen; they come about through careful planning and forward-thinking policies that integrate the needs of being environmentally responsible; socially equitable; and economically beneficial.

The Big Picture: Attributes of a Sustainable Community

At their most fundamental level, sustainable communities function in harmony with the natural ecosystem in ways that protect wildlife habitat and species (and the services they provide, such as pollination and pest control); result in more equitable use of natural resources; consume less energy and less acreage per person; and reduce the community's carbon footprint. But they also generate a myriad of other benefits—economical, environmental, health, and personal—sometimes in unexpected ways.

Green spaces and forest canopies in cities, for example, do more than protect wildlife habitat. They also:

- + Remove air pollutants and sequester huge quantities of greenhouse gases.
- + Reduce residential energy use—and heating and cooling costs—by moderating temperatures and offering wind protection.
- + Protect community watersheds.
- + Encourage pedestrian and bicycle friendly streets.

12 Traits of Sustainable Communities

GreeningUSA, a Central New York-based not-for-profit organization that advocates



for sustainable communities, says, "For better or for worse, existing communities have made, and will continue to make, decisions that affect

the long-term and short-term sustainability of all three of these areas. The quality of life and long-term viability of a community, however, relies on the fundamental decisions that leaders and citizens make (or by default don't make) to nurture and sustain all three. "Sustainable communities don't just happen; they come about through careful planning and forward-thinking policies that integrate the needs of being environ-

mentally responsible; socially equitable; and economically beneficial.

In its 12 Traits of Sustainable Communities, GreeningUSA has identified the critical qualities that sustainable communities share, including these six, which serve as the focus areas of this report (for more information on the 12 Traits visit www.greeningusa.org):

+ Land-use planning and resource preservation: Development patterns reflect the concepts of "new urbanism"—mixed-use development, walkable communities, and a variety of housing types. It's "smart growth" instead of sprawl, with less emphasis on commuter lifestyles and more on holistic community living.

+ Transportation and mobility options: Communities are not designed and built around the needs of cars. Instead, residents have access to a variety of public transit options and walkable, bicycle-friendly streets.

+ Water-based infrastructure systems that take the long view: Solutions to infrastructure issues like wastewater treatment and delivery consider the long term when addressing short-term problems.

+ Environmentally responsible (green) buildings and housing: Buildings and homes are environmentally friendly, and feature energy efficiency, informed material selection,

improved indoor environments, and other green technologies.

+ Non fossil-fuel-based or renewable energy: Sustainable communities increasingly work to replace fossil fuels as an energy source with alternative sources like solar, hydro, wind, and biodiesel.

+ Waste management that is holistic and values based: Management of waste is based on the recognition that when we throw something away, there is, in fact, no "away"—all trash winds up somewhere. Emphasis is on reduction and reuse rather than disposal.

Why should we care: Benefits of Sustainability

Clearly, concern for the environment—which largely represents the “green” piece of the sustainability movement—drives much of this interest. But in Syracuse and Central New York—as well as across the country—policymakers, businesspeople, educators, and individuals increasingly recognize that making environmentally responsible choices isn’t just good for the environment. It’s good for business, good for communities, and essential for maintaining a high quality of life and happiness for all.

Whether the motivation is cost savings and economic opportunity, quality of life, or concern for the planet, sustainability has taken firm root in the way many cities do business, and we believe that’s a very good thing. Cities from Copenhagen to Chicago have used sustainability policies to transform their communities’ fortunes and position themselves among the most desirable cities in which to live and work.



photo: Tully Street Rain Garden, Amy Samuels, Onondaga Environmental Institute

Sustainability has taken root in the way many cities do business, and we believe that’s a very good thing.

- OCL Study Committee

Municipal Leadership

Municipal and business leaders, in particular, have identified a number of powerful benefits to embracing “green” policies and practices in their communities, including:

- + Lower, more stable, energy costs and greater U.S. energy independence through the use of energy-efficient building technologies and domestically produced renewable energy sources like wind, solar, hydroelectric, and biomass.
- + Increased property values for homes with money-saving green-building features and in neighborhoods with attractive streetscapes, green

spaces, easy accessibility to common destinations, and other pedestrian-friendly features. A study by the Congress for the New Urbanism reports that access to protected green spaces can raise property values by 5 to 50 percent.

- + Higher quality of life and health for all residents through such assets as cleaner air and water, pedestrian- and bike-friendly neighborhoods, and abundant natural spaces within the urban environment.
- + Expansive economic opportunities in the green tech industry and in providing

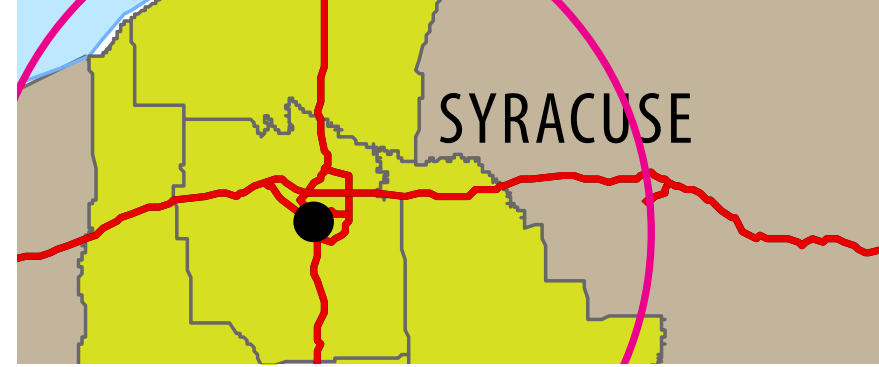
the necessary training for a green work force.

- + Revitalized downtowns and neighborhoods through an infusion of green business and the kind of people-friendly development—walkable and bicycle-friendly streets with easy access to schools, jobs, parks, and other popular destinations; attractive streetscapes; mixed-use development and housing; and green spaces—that attract young professionals and innovators, and lure business and industry to the region.

Local Efforts

In Syracuse and Onondaga County, our own leaders have taken an active interest in sustainability. Former Mayor Matt Driscoll, whose administration embraced the moniker “Emerald City” to trumpet its engagement in green initiatives, launched a variety of sustainability-related actions before leaving office in 2009. Those initiatives include powering City Hall with a mix of re-

newable energy; adopting a green-building standard for municipal building projects; and establishing a city-wide energy management system, among many other measures. Such efforts have earned the city national notice, including a spot (17th) on Popular Science magazine’s list of America’s 50 greenest cities.



City of Syracuse

Current Syracuse Mayor Stephanie Miner continues that focus on sustainability, listing it along with the environment among the priorities in her 50-point plan.

Since assuming office, she has created a Bureau of Planning and Sustainability to champion environmentally friendly and sustainable practices. The City of Syracuse this spring agreed to find out how it measures up in GreeningUSA’s 12 Traits of Sustainable Communities program and rating system. As one of the first communities in the nation to use this program, the city will be scored on 36 overall criteria using objective data from the U.S. Environmental Protection Agency (EPA), the Bureau of Labor Statistics, the U.S. Census, and other sources. Further, participating communities will be scored on their initiatives in sustainability. The combined scores of data and initiatives will allow for a comprehensive assessment of the level of sustainability currently being achieved.

Onondaga County

At the county level, officials have already taken or are currently pursuing a number of measures promoting sustainability. To name a few: creation of an Environmental Sustainability Advisory Committee; development of a County Sustainable Development Plan to promote responsible land-use decisions and discourage sprawl; signing of the Climate Smart Community Pledge; and implementation of energy-efficiency and greenhouse gas reduction measures. Early in her administration, Onondaga County Executive Joanie Mahoney devised a revised Onondaga Lake cleanup plan that substitutes a combination of “gray” and “green” infrastructure for three additional neighborhood treatment plants. The “Save the Rain” plan calls for an extensive system of green solutions—tree trenches, rain gardens, green roofs, rain barrels, and porous pavement—to catch and absorb storm water, preventing it from flowing into sewer systems.

Other Examples

Add to those efforts our region’s abundance of higher education institutions and cutting-edge research facilities like the Center of Excellence in Environmental and Energy Systems, and we have plentiful assets to fuel a movement toward creating a sustainable Central New York. In fact, Syracuse University, Upstate Medical University, Le Moyne College, SUNY College of Environmental Science and Forestry, and Onondaga Community College, all signatories of the Association of College and University Presidents Climate Commitment, are already taking steps toward achieving carbon neutrality in campus business and operations, and promoting sustainability education throughout the curriculum.

Many other examples, from The Post-Standard’s Green CNY publication and blog on Syracuse.com, to the Syracuse City School District’s Go Green initiatives to rain gardens and rain barrel workshops, green business entrepreneurs and car-share programs abound. And throughout the region, there are efforts like Cornell’s “Rust to Green” initiative to help upstate rust belt communities like Utica and Binghamton shift to sustainability.

Survey Results

Not surprisingly, our research also found that Central New Yorkers care deeply about the environment and are very supportive of policies that protect or improve the environment.

When the study committee, with the help of Maxwell School Public Affairs students, surveyed local elected officials, high school students, and registered voters in Onondaga County in early 2010, we found that citi-

zens believe that “Being Green” is important and that they are very concerned about protecting our water resources, improving our air quality and reducing energy usage.

While OCL’s surveys were not designed to be statistically valid, the results probably give us a good reflection of the general population’s green attitudes. A recent survey by Earthsense LLC reported on Syracuse.com also found that Central New Yorkers are greener than you might think—and are even greener than New Yorkers or Americans as a whole by some measures. And politicians considering “green” legislation, take note: A whopping 91 percent of registered voters in OCL’s phone survey said they favored candidates who are supportive of policies that preserve and protect the environment (see page 9 for additional details).

“What Does It Mean to Be Green” Surveys

The OCL Study Committee spent over a year learning from experts on the environment and sustainability. Expert knowledge, however, is only one prerequisite for moving Onondaga County toward a greener, more sustainable, future. The specialists help us understand the situation and to suggest better alternatives. But it is the actions of average citizens, and their representatives in government, that will ultimately shape the future of Central New York.

So the Study Committee conducted three surveys to better understand where we, as a community, stand on environmental issues. The surveys were structured to give OCL a better sense of: (1) what people value; (2) how those values play into larger issues of sustainability; and (3) how those values can inform approaches to building a greener future.

The surveys consisted of a random telephone interview of Onondaga County voters; a student survey completed at four county high schools; and a survey sent to every elected official in the county.

Volunteers randomly made 482 telephone calls, culled from the list of 81,131 registered voters in the county. That led to 77 completed surveys — a margin of error of +/- 11 percent. Although small by telephone survey standards, the sample did end up being representative of the demographics of the county, with good distribution among Republicans, Democrats and non-enrolled voters; men and women; young and old; and city and suburban residents.

For the high school survey, all 135 seniors in the classes OCL surveyed at Corcoran High School, East Syracuse-Minoa High School, Fayetteville-Manlius High School, and Jamesville-DeWitt High School completed the written survey. But whether those students’ opinions are representative of other seniors at other Onondaga County schools cannot be known.

On the elected officials survey, 218 local elected officials with policy influence in Onondaga County (town supervisors, mayors, legislators, etc.) received the survey. Fifty-one of them completed it, either in paper or email form.

For more details and to complete the version of the survey used during the telephone sample yourself, see the Appendices to the report at <http://onondagacitizensleague.org>.

We believe the surveys have value, giving us a glimpse into where people stand on these issues and providing a basis for further research and engagement. At the very least, the surveys tell us how those sampled — a diverse group of 263 people with no involvement in OCL — rank various environmental policy initiatives.

What emerged from the surveys is a strong sense that Onondaga County residents deeply value the region’s natural resources and want them protected. OCL asked all three survey groups to rank the importance they place on policies that improve certain environmental assets, such as clean water, open space and mass transit. Respondents ranked the importance

of these efforts on a scale of 1 to 5, with 1 being not important at all and 5 being very important. We asked the elected officials to rank both their own personal preferences, and then to estimate how their constituents might answer the same question.

Averaging the scores of 1-5 on all 10 environmental questions, here are the rankings:

Students	3.65
Residents	4.06
Officials	3.98
Constituents	3.45

Not a single environmental issue among the 10 received an average score of less than 3 (somewhat important). Both the high school and registered voter groups ranked reducing water pollution as their top environmental priority, where as the elected officials picked reducing energy use, which ranked second among voters.

Interestingly, the elected officials correctly guessed that voters would pick water quality as their No. 1 concern. However, based on our surveying, they underestimate the sacrifices voters are willing to make to further environmental causes. Elected officials indicated that they themselves were more supportive of environmentally beneficial policies than they thought their constituents would be. Yet our telephone survey found residents extremely supportive of these policies.

Also, 68 percent of the registered voters surveyed indicated that they would support policies that improved the environment even if it meant a

slight increase in taxes, while elected officials believed such taxes would be deemed unacceptable by their constituents.

Another sign of this disconnect is that elected officials ranked policies that promote walking and biking as their least important environmental goal. The officials thought that walking and biking, along with improving public transportation, would rank last for their constituents as well. However, both the registered voters and the high school students ranked walking, biking and public transportation significantly higher. Additionally, on the open ended question, “Do you have any suggestions about what can be done to make our community more green?”, more people focused on transportation than on any other issue, with multiple respondents calling for better public transportation and a culture that promotes walking and biking.

Other studies have identified a bikeable community as something Onondaga County residents keenly desire, including FOCUS Greater Syracuse’s original community benchmarking study, which ranked bike trails as its top priority. It’s surprising, then, that more progress has not been made in this area.

For politicians who favor sustainability initiatives, take heart: fully 91 percent of registered voters said they favored candidates who are supportive of policies that preserve and protect the environment.

Scope of the Study and Methodology

So what does a sustainable community look like?

When we chose this study topic, the sheer breadth of the subject compelled us to limit the study's scope to a handful of key, often overlapping, areas that we believe pose both challenges and opportunities for Syracuse and other municipalities throughout Onondaga County. While sustainability is often broadly defined to include social and economic issues, the Study Committee limited its focus primarily to those areas relating to the environment and protection of natural resources. These key areas primarily focus on the overarching goal of reducing pollution in our air, land, and water, and decreasing the size of our carbon footprint by reducing greenhouse gas emissions.

This study looks at those areas within the context of our community and explores the problems and possibilities of each in terms of sustainable practices. For each area, we also offer recommendations that we believe are both possible and practical for policymakers, businesses, and/or individuals to take in order to make sustainability part of a new, improved version of "business-as-usual." Over the course of a year, from spring 2009-spring 2010, we hosted a series of public study sessions, forums, and panels featuring local and regional experts—scientists, scholars, municipal planners, transportation officials, and others working

in areas relating to sustainability. We explored current research and studied the actions other cities, both here and abroad, have taken toward becoming sustainable communities.

We also conducted surveys to get a picture of the common perceptions and values of citizens, students and public officials on our topic, and we facilitated community discussion on the OCL Facebook page and study blog. Following are the findings and recommendations that grew out of this information-gathering process.

While our elected leaders must set both the tone and policies that will drive the effort to "be green", we also recognize their need for support, affirmation, and engagement from an informed public that recognizes the value of sustainability policy—to our economy, our environment, and to our overall quality of life. Everybody plays an important role in promoting and achieving the objectives of sustainability. We hope this study serves as one tool to educate and motivate residents, business owners, and leaders to embrace sustainability as both smart policy and the right thing to do for Syracuse and Central New York today and for the generations yet to come.

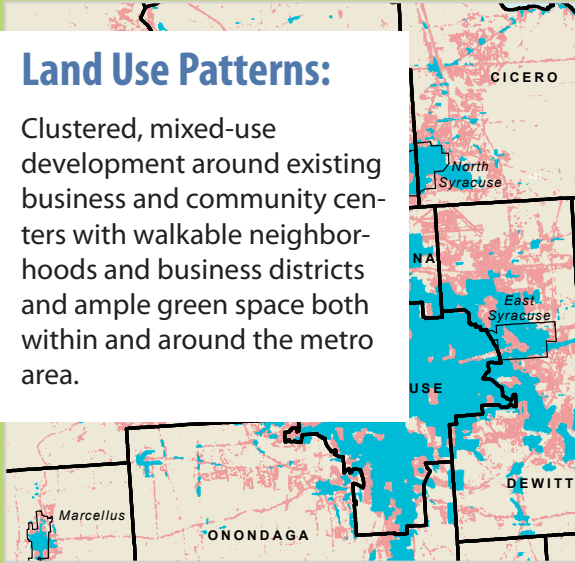


Findings and Recommendations

Communities celebrated for their sustainable, environmentally friendly qualities share a number of essential characteristics and assets. Among them are efforts in six specific areas:

Land Use Patterns:

Clustered, mixed-use development around existing business and community centers with walkable neighborhoods and business districts and ample green space both within and around the metro area.



Transportation:

Tree-lined streets with dedicated bicycle lanes, walking paths as well as buses, and other public transit options – a focus on moving people, not just cars.



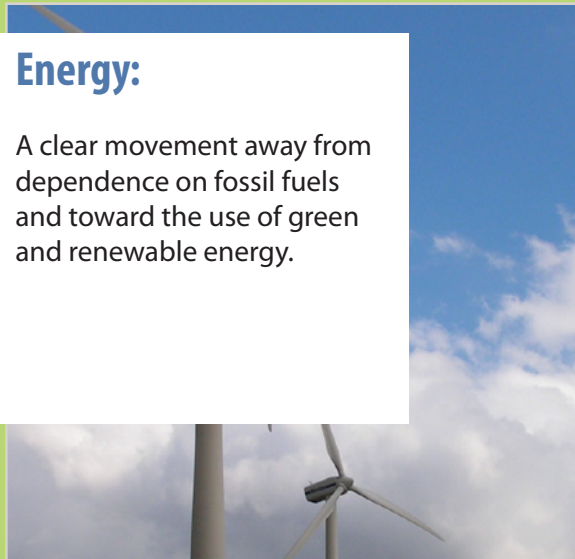
Waste Management:

Effective and expansive recycling, and reuse, with a focus on reducing the amount of waste produced.



Energy:

A clear movement away from dependence on fossil fuels and toward the use of green and renewable energy.



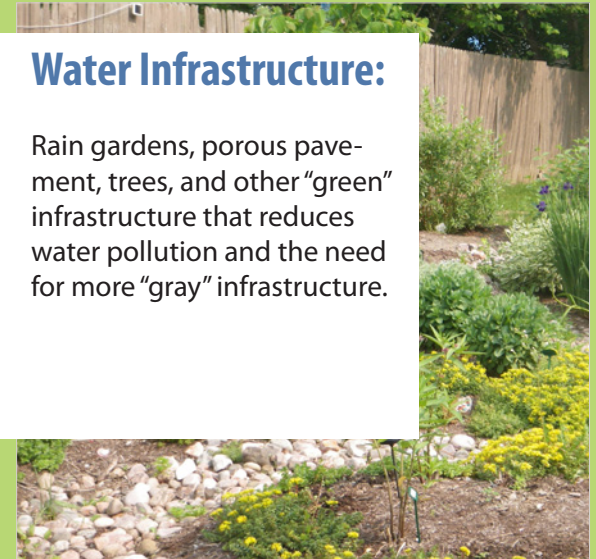
Green Buildings:

Energy-efficient buildings and homes, both new and existing, with a focus on reuse of existing structures.



Water Infrastructure:

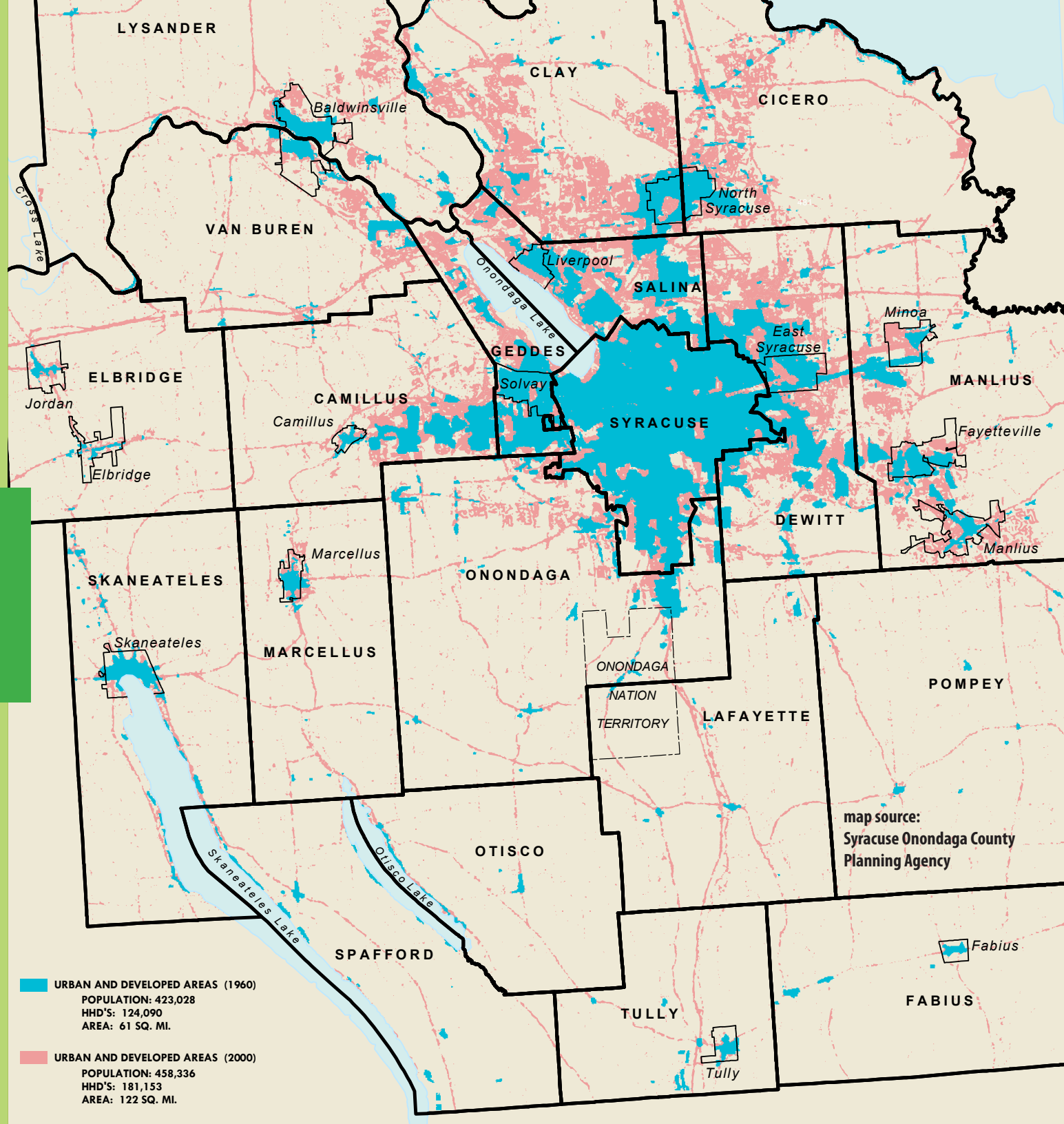
Rain gardens, porous pavement, trees, and other “green” infrastructure that reduces water pollution and the need for more “gray” infrastructure.



FACT

Over the last several decades, the rate of sprawl in Onondaga County has been nothing short of relentless. Since 1970, the amount of "urbanized" land in the county has increased 92 percent—expanding by 50 square miles in the 1990s alone. In the last 10 years, almost 7,000 new residential parcels have been created, including 147 major subdivisions encompassing 2,600 acres—all with no new population growth.

Land Use Patterns



LAND USE PATTERNS

One of the ironies of living “green” is the fact that residential living in leafy, low-density suburbs—characterized by expansive yards, increasingly large homes, and car-dependent lifestyles—causes more damage to the environment, and leaves a significantly deeper carbon footprint, than living in high-density cities. New York City—with its compact, mixed-use neighborhoods, heavily used public transit and walkability—ranked fourth lowest in carbon emissions per capita based on transportation and residential energy use, according to the Brookings Institution’s 2008 Blueprint for American Prosperity report.

Syracuse ranked a distant 67th among the 100 largest metropolitan areas.

Over the last several decades, the rate of sprawl in Onondaga County has been nothing short of relentless. Since 1970, the amount of “urbanized” land in the county has increased 92 percent—expanding by 50 square miles in the 1990s alone. The sprawl has so thoroughly eclipsed the “first-ring” suburban communities bordering the city that development pressures now extend into a third ring of outlying towns and villages—Lysander, Elbridge, and Marcellus among them—and formerly rural areas.

In the last 10 years, almost 7,000 new residential parcels have been created, including 147 major subdivisions encompassing 2,600 acres—all with no new population growth. On average, the county sees 160 new units outside the existing sanitary district annually. According to the Syracuse-Onondaga County Planning Agency (SOCPA), this countywide expansion has brought with it:

Larger houses and lots.

On average, home size is up 40 percent from 20 years ago, consuming more energy. The average urban/suburban parcel size for residential units is nearly an acre in size.

Expansion of water infrastructure.

Between 2001 and 2008, a total of 290 miles of new water main was installed, along with 1,611 new hydrants, 15 new pumping stations and 13 new storage facilities.

Expansion of sewer infrastructure.

Since 1998, more than 12,000 acres have been added to the sanitary district; in 2007 alone, more than 57,000 feet of new sewer pipe was installed for new developments.

Burgeoning network of new roads.

Over the last 10 years, municipalities in Onondaga County have added 61 miles of road, mostly residential streets. Daily vehicle miles traveled is up 43 percent since 1990, and the average vehicle commute time is more than 20 minutes and growing each year—short by some standards, perhaps, but far from a “sustainable” goal.

As residential sprawl has marched ever deeper into surrounding towns and countryside...the City of Syracuse and older village centers have suffered a substantial loss of residents—factors that suggest a clear correlation between suburban sprawl and urban decline.



map source:
Central New York Regional Planning and
Development Board

This pattern of sprawl without growth has spawned a wide range of challenges that are taking a serious toll on our environment. Among them:

Increased reliance on cars and a larger carbon footprint.

As residents have moved farther and farther from city, town, and village centers, common destinations like schools and shopping districts have become less easily accessible, and our workday commutes have become longer. Development patterns that continue to favor single-use development over mixed-use make walkability impractical and perpetuate our reliance on cars for even the simplest errand.

Challenges to mass transit.

A thriving public transit system is only feasible when sufficient community density exists to support the service. With personal vehicles accounting for a signifi-

cant portion of our household carbon emissions, decisions on where and how we live, and the way those decisions dictate our transportation needs, have resulted in a much larger per capita carbon footprint than in most metro areas.

Loss of farmland, forests, and open spaces.

The expansion of housing—and larger houses on larger lots—has cost the county 30,000 acres of prime farmland since 1980. In addition, this conversion of green space to landscaped/built environments has damaged natural habitats and heightened concern over lawn chemical usage and storm water overflow.

Abandonment of existing infrastructure and buildings.

Conversion of rural areas into suburban developments creates demand for new buildings and facilities, including schools, rec-

reational facilities, offices, and streets, all of which consume energy and resources to build and maintain. This expansion without population growth leads to abandonment of existing buildings and the need to maintain new infrastructure along with the old.

Beyond the environment, sprawl also poses significant economic and human challenges, including:

Abandoned city neighborhoods and older village centers.

Flight from the city and other older community centers produces significant educational, racial, and wealth imbalances. Some neighborhoods are marred by neglected and empty houses, buildings, neighborhoods, and business districts, and poverty is concentrated in older urban areas. More than half of Syracuse's housing stock is renter occupied,

while less than 10 percent of suburban/rural construction is rental or affordable housing.

Health problems.

Increased incidences of life-threatening obesity, asthma, and cardio-vascular problems among residents in Onondaga County, as well as nationwide, have been linked to the way we live, including communities that discourage walking, encourage driving and air pollution, and lack sufficient vegetation and green space.

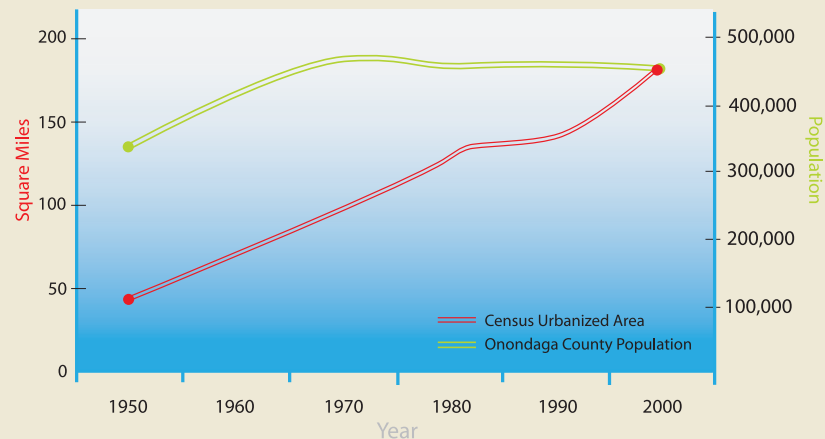
Reduced economic competitiveness.

Suburban sprawl and the resultant imbalances in wealth, racial makeup, and educational resources take a substantial toll on a city's viability as a thriving regional hub capable of attracting new residents, workers, business, and industry.

FACT:

As residential sprawl has marched ever deeper into surrounding towns and countryside, county population growth overall has stagnated, and the City of Syracuse and older village centers have suffered a substantial loss of residents—factors that suggest a clear correlation between suburban sprawl and urban decline. Between 1970 and 2000, the city's population dropped by 50,000 while town populations rose by 35,000 and the County overall lost 15,000 residents.

Onondaga County Population Growth vs. Urbanized Land Area Growth



Higher demand on tax dollars.

As sprawl radiates farther into new territories, the need is created for new schools and fire stations, hundreds of miles of new water and sewer lines, and miles of new streets. And with no net population gains—again, sprawl without growth—the available revenue to pay for these expanded services and infrastructure continues to shrink.

Higher costs for services.

Services spread over greater area, for fewer people, means higher costs for all. As an example, from 2001-2008 the cost per 1,000 gallons of water was up 78 percent. The amount of water delivered actually decreased 11 percent.

In short, unsustainable sprawl eats up our farmland, increases our reliance on cars, pollutes our atmosphere, generates higher levels of greenhouse gases, spreads our tax dollars too thin, promotes urban blight, and seriously diminishes our collective economic fortunes. We—policymakers, business leaders, and residents—must start to recognize the consequences of our land-use choices and policies and take actions to reverse this trend.

County leaders have already taken one step toward that goal by working on a new **Onondaga County Sustainable Development Plan**. Working in conjunction with the Syracuse-Onondaga Planning Agency, leaders hope the

new plan will result in a shared community vision for sustainable development that puts an end to the relentless sprawl creeping ever deeper into our surrounding countryside. The plan would focus on “smart growth” principles that include compact, mixed-use development; walkable neighborhoods; transportation choices; preserved open space; and, in general, development patterns that strengthen existing communities.

“Smart growth” is a win for everybody: It benefits municipalities by keeping a lid on infrastructure costs; it benefits businesses through increased accessibility and pedestrian traffic; it benefits the environment by reining in carbon emissions and other pollutants; and it benefits residents through, among many other things, higher property values and lower transportation costs. In fact, a 2009 study report by CEOs for Cities revealed that in 13 of the country’s 15 major real estate markets, higher levels of walkability were directly linked to higher home values. And a 1996 national homebuyers survey found that nearly three-quarters of the respondents expressed a desire to live in a community where they could walk or bicycle everywhere. In light of wildly fluctuating gasoline prices in recent years, growing awareness of global warming, and a desire for healthy living, we suspect that number has only gone up.

While county government itself has no power to limit development in its towns, the County Legislature does have the power to limit the expansion of the sanitary district boundary, and the Department of Water Environment Protection has the authority to allow or disallow access to the existing trunk sewer system within the existing sanitary district. . These controls, along with incentives, could be used to promote the principles outlined in the Sustainable Development Plan, limiting irresponsible growth and encouraging development in or near existing community centers. The County Executive has voiced a commitment to adhere to the final plan, which also will be used as a tool for educating the public about planning and land-use decisions and for illustrating outcomes and consequences of different choices.

At the federal level, the administration’s Partnership for Sustainable Communities, run jointly by the Environmental Protection Agency, the Transportation Department, and the Department of Housing and Urban Development, embraces the idea of “livable communities.” The Sustainable Communities initiatives support the dense, transit-oriented housing typically built in urban centers, which helps to conserve undeveloped land, reduce pollution and greenhouse gas emissions, and promote transit, biking, and walkability. And in June 2010,

In short, unsustainable sprawl eats up our farmland, increases our reliance on cars, pollutes our atmosphere, generates higher levels of greenhouse gases, spreads our tax dollars too thin, promotes urban blight, and seriously diminishes our collective economic fortunes.

the EPA picked Central New York as one of 25 Climate Showcase Communities, granting \$500,000 to the CNY Regional Planning and Development Board to help local governments develop strategies to reduce greenhouse gas emissions by making their buildings more efficient, “greening” their transportation fleets, and adopting building codes that promote sustainable growth.

In New York State, the State Public Infrastructure Act was signed into law on August 30, 2010. This “Smart Growth” law basically states that any state department should make capital decisions on infrastructure projects in a manner consistent with the tenets of smart growth. The law will shift state spending—on roads and sewers, for example—toward

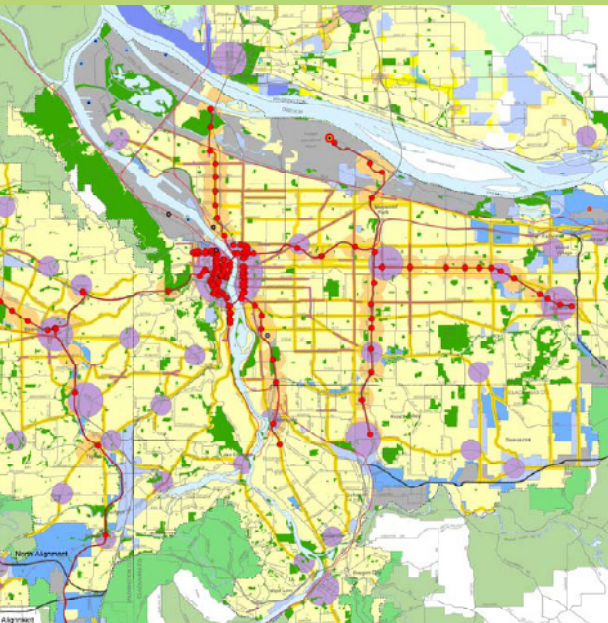
existing communities rather than toward subsidizing more sprawl. While it doesn’t go as far as some would like, it is a VERY significant step in the right direction and gives municipalities leverage for instituting their own smart growth rules.

The state legislation says the measure is needed because “Sprawl is a problem that has exacerbated New York’s financial crisis. The extension of infrastructure to areas that have traditionally been green fields have caused runaway expenditures and economic costs. This law seeks to stop the bleeding by reprioritizing state infrastructure expenditures. New York State has a history of leading the way in protecting the environment, encouraging economic activity, and pursuing equity for all of its citizens. However, state infra-

structure funding decisions have supported settlement and land-use patterns that necessitate expansive and expensive infrastructure resulting in new roadways, water supplies, sewer treatment facilities, utilities, and other public facilities at great cost to the taxpayer and the ratepayer. With this pattern of dispersed development, public investment in existing infrastructure located in traditional main streets, downtown areas, and established suburbs has been underutilized, and those areas have suffered economically. New York State needs to focus on smart spending that supports existing infrastructure and development in areas where it makes economic and environmental sense. This law will require state infrastructure funding to be consistent with smart growth principles, with

priority given to existing infrastructure and projects that are consistent with local governments’ plans for development.”

For Syracuse and Central New York, land-use considerations may simply be the most critical, and complicated, piece of the sustainability puzzle. We are heartened by federal and state action and by our city and county leaders’ efforts to pursue responsible development and urge municipal leaders and residents to embrace those efforts as well. Toward that end, we offer the following recommendations:



Snapshot: Land-Use Planning—Portland, Oregon

In 1979, the City of Portland established an urban growth boundary (UGB), as required by state law, to control urban sprawl by drawing a clear distinction between urban and rural land. The boundary is regulated by an elected regional government—known as Metro—that encompasses three counties and 25 cities in the Portland region.

In confining large-scale development to land within the UGB, the boundary protects farmland, forests, and other natural resources and promotes the efficient use of land, public infrastructure, and urban services. The result has been a thriving urban center in which to live, work, and play. The boundary encourages development patterns that support mass transit, provide easy access to open green spaces for residents, and balance the interests of developers, farmers, and environmentalists. And while some challenges remain, including high property values

that limit housing opportunities for low-income individuals, residents have shown their support for the UGB by rejecting (in increasing numbers) repeated ballot initiatives designed to dissolve the boundary. By law, the city must maintain within the UGB enough land to accommodate 50 years (originally 20 years) growth.

While only three states mandate such boundaries—Oregon, Washington, and Tennessee—some U.S. cities have created their own UGB’s, including Minneapolis, Virginia Beach, and Lexington, Kentucky. Outside the United States, UGB’s, also sometimes known as greenbelts, can be found in Vancouver, Ottawa, and Toronto, among other cities.

GREEN LAND USE RECOMMENDATIONS:

+ Promote Sustainable Land Development Patterns.

Land-use patterns across municipal boundaries may well pose the most comprehensive challenge as we look to become a more sustainable community. Suburban communities in particular must strive to restructure their development patterns around transit in order to grow and prosper without adding more roads, cars, and unnecessary car trips. We strongly urge county leaders to complete the Sustainable Development Plan and all municipalities and school districts throughout the county to embrace similar sustainable land-use principles. Toward that end, we endorse intermunicipal planning that focuses on protecting natural corridors and ecosystems and promotes the logical and efficient use of land. While land-use is a local issue, the county encompasses a collective of local governments and without collaboration across local municipal boundaries, we have little

hope of reining in sprawl or becoming a truly sustainable community. We would urge that the County's Sustainable Development Plan and other municipalities' plans include:

- + Farmland, forest, and open space protection, particularly for areas in the county that are uniquely rich in agricultural value.
- + Natural resource and habitat protection, including protection of significant natural open spaces, protection of water resources (lakes, streams, rivers, etc.), and protection of the diversity of plant and animal life in the area. Protective techniques might include storm water management; creation of new permanent green spaces, including multiple small "pocket" parks throughout the city; and possibly a "greenbelt" surrounding the county.
- + Incentives that promote and provide for priority investment areas encouraging development in existing community centers both within the city and within each of the county's towns and

villages. Also concentrate public investment in public infrastructure in priority areas. Development should promote compact, mixed-use neighborhoods that are both walkable and supportive of mass transit.

- + Endorsement of "complete streets" principles that enhance walkability of neighborhoods, accommodate bicyclists, and generally slow down traffic.
- + Creation or expansion of bicycle lanes throughout the county to encourage fewer car trips.

+ Use Zoning Ordinances as a Tool.

Municipalities should review and revise zoning ordinances to ensure building and site planning that allow for higher densities and more mixed-use development. These characteristics increase walkability to neighborhood destinations and improve the viability of public transit.

photo: Jefferson Clinton Commons

Complete Streets

Complete streets, as depicted in this artist rendering for the Connective Corridor project, are designed and operated to enable safe access for all users. Pedestrians, bicyclists, motorists and transit riders of all ages and abilities must be able to safely move along and across a complete street. Places with complete streets policies are making sure that their streets and roads work for drivers, transit users, pedestrians, and bicyclists, as well as for older people, children, and people with disabilities.

Transportation



TRANSPORTATION

Transportation is another essential factor in creating sustainable communities—and one closely intertwined with land use. Sustainable communities have the density and compact development patterns to support multiple transportation options, including mass transit systems, walking paths connecting neighborhoods with common destinations, and dedicated bicycle lanes. The Syracuse metro area's carbon emissions from transportation are much higher than the average U.S. metropolitan area. The transportation portions of our per capita carbon footprint increased 3.6% from 2000 - 2005 and continues to rise faster than other metro areas, accord-

ing to the Brookings Institution's Blueprint for American Prosperity report.

Alternative transportation can substantially reduce greenhouse gas emissions, as illustrated by New York City's surprisingly low per capita carbon footprint. Alternative transportation options also improve overall air quality, lower our dependency on fossil fuels and foreign oil, reduce gasoline costs, revitalize neighborhoods, boost the local economy, encourage healthy lifestyles, and make urban living more efficient and desirable.

Transportation data on Onondaga County reveals a heavy reliance on private vehicles. Where NYC ranked #1 for least per capita emissions from cars, Syracuse ranked a dismal 91st out of 100.

While Centro provides bus service in Syracuse and several surrounding counties, transportation data on Onondaga County reveals a heavy reliance on private vehicles. While the Brookings report ranked New York City #1 for least per capita carbon emissions from cars, Syracuse ranked a dismal 91st out of 100. Our poor ranking reflects the fact that 80 percent of Onondaga County residents drive to work alone, according to 2000 Census figures – and that was up from 75% in 1990. During the same period the number of county residents who used public transit or carpooled to get to work decreased by 45% and 23%, respectively, and the number of people in the county who walked or biked to work decreased from 5.3% to 4.1%. In the city, 66% of workers drove alone (Census 2000) and a greater

percentage of city residents carpool, use public transportation, and walk or bike to work than suburban county residents.

The Brookings Institution's study also ranked Syracuse one of the highest - 83rd - in terms of vehicle miles traveled (VMT) per capita. In 2005, the average VMT per Syracuse resident was 11,946 miles. By comparison, Rochester ranked 4th with a VMT of 7,055, and Buffalo-Niagara Falls area ranked 5th, with a VMT of 7,066 miles per resident. Forecasts prepared by Global Insight for the NYS Department of Transportation estimated that per capita daily VMT in Central New York would increase about 30% by 2030.

The movement of population within Onondaga County from the city

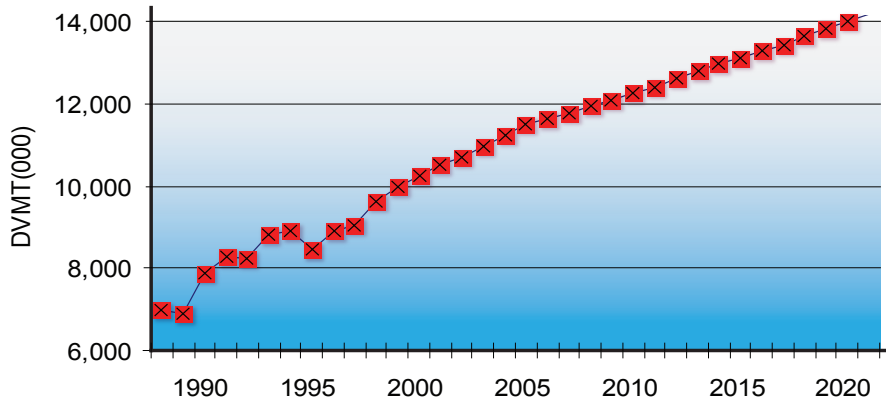
to the suburbs over the past several decades has contributed to the steadily increasing commuting distances and increased reliance on personal vehicles over other modes of transportation.

Our car-driven lifestyles generate more than carbon emissions and air pollution. They also add a substantial burden to our household cost of living. A study by the Chicago-based Center for Neighborhood Technology found that transportation costs now are the second-highest household expense, after housing, in some areas of the country. The cost of driving to work, school, grocery stores, and other destinations is making otherwise affordable homes in modest suburban neighborhoods increasingly unaffordable. Replacing traditional cars with hybrids

is not the solution either, for even "green" cars are unhealthy when they help perpetuate sprawl, eat into our personal time, and contribute to a sedentary lifestyle.

If we are to curtail our dependency on cars, we need to rethink our housing choices, and our municipal leaders need to ensure that we have access to alternative modes of transportation. Earlier this spring, U.S. Secretary of Transportation Ray LaHood issued a new policy statement calling for full inclusion of pedestrians and bicyclists in transportation projects. He endorsed the "complete streets" approach that would cease favoring motorized transportation at the expense of non-motorized. Among other points, the policy statement urges transportation agencies of all sizes to consider walking and

Onondaga County Daily Vehicle Miles Traveled (VMT)



FACT

A Brookings Institution study ranked Syracuse one of the highest - 83rd - in terms of vehicle miles traveled (VMT) per capita. In one year, the VMT per Syracuse resident traveled 11,946 miles by car. By comparison, Rochester ranked 4th with a VMT of 7,055, and Buffalo-Niagara Falls area ranked 6th, with a VMT of 7,066 miles per resident. As depicted in the graph above, vehicle usage has increased dramatically since 1990.



bicycling equal to other transportation modes; provide convenient choices for people of all ages and abilities; and maintain sidewalks and shared-use paths in the same way roads are maintained. The New York State Legislature is also considering Complete Streets legislation.

Syracuse, a city whose origins predate the automobile, is fortunate to have compact, easily walkable neighborhoods, which could become even more pedestrian-friendly with some street and sidewalk improvements. For cyclists, the city has taken steps to designate bicycle lanes in some city neighborhoods and portions of the business district; others are planned as part of the Connective Corridor’s East Genesee Street redesign. Some city bike lanes, however, share space with alternate-side parking, and safety is always a major concern with motorists still adjusting to

sharing the road with cyclists. Cold weather turns out to be less of a factor in discouraging cycling than one might think: In *Bicycling* magazine’s ranking of the most bikeable cities in the country, seven of its top 10 are northern cities—with Minneapolis ranked number one and Portland, Oregon, second. Internationally, Amsterdam and Copenhagen are considered tops, with 40 percent and 32 percent bicycle commuting rates, respectively.

Alternative transportation is a big issue for Onondaga County residents, according to OCL’s surveys. While elected officials ranked policies that promote walking and biking as their least important environmental goal and thought that walking and biking, along with improving public transportation, would rank last for their constituents as well, both the registered voters and the high school students we surveyed ranked walking, biking, and public transportation significantly higher. Additionally, when asked, “Do you have any suggestions about what can be done to make our community more green?”, more people focused on transportation than on any other issue, with multiple respondents calling for better public transportation and a culture that promotes walking and biking. Other studies have identified a bike-able community as something Onondaga County residents keenly desire, includ-

ing FOCUS Greater Syracuse’s original community benchmarking study, which ranked bike trails as its top priority.

The American Automobile Association estimates that public transit can save individuals \$9,215 annually, and these cost-saving benefits were demonstrated locally when Centro ridership skyrocketed in 2008 as gas prices hit all-time highs. But Centro faces numerous challenges, including a loss of operating funds from the state and from fares, the difficulty of accommodating the region’s developmental sprawl, and general reluctance on the part of the public to use its services regularly. The company last year raised fares and cut services for the first time since 1995. It anticipated having a \$6 million funding shortfall in spring of 2010, necessitating more service cuts in the near future.

Centro is taking its own steps toward making its operations more sustainable and its services more convenient. It runs a compressed natural-gas fleet, a more environmentally clean alternative to other fossil fuels, with 10 hybrid electric vehicles. On those diesel buses it still runs, it uses a biodiesel fuel mix. Another positive step taken by Centro was the installation of bike racks on buses. The company is pursuing “next bus” technology that will add several convenience features for customers,

Steps towards Greener Transportation

According to data from the Surface Transportation Policy Project (April 2003), 55 percent of Americans say they would prefer to walk more and 68 percent favor additional funding for walking and biking facilities. During presentations to the OCL Study Committee, the Syracuse Metropolitan Transportation Council (SMTC), shared several recommendations for Syracuse and Onondaga County municipalities to encourage biking and walking, including:

- + Zone for high-density, mixed-use development around destination centers (again, compact development), ensuring that residents are within a one-quarter-mile walk of those destination centers.
- + Within those “pedestrian sheds,” retrofit existing shopping plazas with walkways, bus pull-offs and shelters; add safe-crossing features and sidewalks; and create pedestrian-friendly streetscapes with such

amenities as benches, planters, trees, and lighting.

- + Develop an on-road bicycle network with dedicated bike lanes as well as shared-use walking/biking paths that connect major destinations. And provide ample parking facilities, including some covered spaces, for bikes.

The SMTC also recommends employers provide incentives for employees to carpool or use alternative forms of transportation, something several large local employers already do. In addition to other initiatives, Syracuse University participates in the Zipcar program, which provides employees and students who use alternative transportation with a car if needed during the work day. SU, Onondaga County, and Onondaga Community College also offer, in conjunction with Centro, pre-tax bus passes for employees and a guaranteed ride home in the event of emergency.

including the ability to track, online, the anticipated arrival of a scheduled bus. It also offers free or reduced-fare services for major-destination employers, including SU, Onondaga Community College, and SUNY Upstate; and its Fare Deal program enables employers to offer workers the opportunity to purchase bus passes with pre-tax dollars. Employees of Onondaga County, for instance, under the county’s “Flex Plan,” can estimate how much they will spend on bus passes annually, and the county then deducts that amount from

their pre-tax pay. Employees then recoup the funds by submitting a claim after the fact.

With the Baby Boom population aging, the wildly unpredictable nature of foreign fuel supply and costs, and the environmental, political, and personal consequences of our choices becoming more evident, we must pursue every means possible to encourage the use of mass transit or other alternative modes of transportation. We offer the following recommendations:

CuseCar, Car-Share

CuseCar, a Syracuse-based community car-share program now in its second year, provides another option for individuals who use alternative transportation to get into the city for work. The program, with membership plans for individuals and businesses, provides members with access to alternative-fuel vehicles on an hourly basis, saving them gas money and parking fees. CuseCar currently maintains five hybrid vehicles and is preparing to add 10 more. Synapse Partners, which runs the program, says it has had limited success so far and may take another year or two to catch on. The service is not yet available citywide. Onondaga County is among the employers who participate with CuseCar, providing discounted membership and fees to county workers.



GREEN TRANSPORTATION RECOMMENDATIONS:

+ Refocus priorities.

We must refocus local transportation policies and spending from speed and auto-centric construction to local streets and transit. Municipalities should pursue strategies that allow safe access on public roads to bicycles and pedestrians as well as cars, to encourage residents to bicycle or walk to their destinations. Experience in other places has shown that “if you build it, they will come.” Dedicated bicycle lanes and pedestrian-friendly street features including lighting and safe crossing zones encourage biking and walking. The New York State Legislature currently has under consideration a bill that endorses this “complete streets” approach. If passed, the legislation would recognize bicycle, pedestrian, and transit modes as integral to the transportation system, and require bicycle and pedestrian ways and safe access to public transportation for all travelers. We urge our state lawmakers to support this pending legislation.

The Syracuse Common Council recently approved “complete streets” revisions to parts of East Genesee Street that will reduce the number of traffic lanes and create bicycle lanes on both sides of the street, better connecting the University Hill area to downtown and the businesses and institutions in between. Municipal centers, including the city and villages in Onondaga County, should develop and adopt “complete streets” legislation setting principles and practices to guide all public transportation projects to encourage safe walking, bicycling, and transit use. Through zoning ordinances and site plan reviews at the municipal level, a requirement should be made for pedestrian ac-

cess to and within public and private developments such as the regional transportation center, shopping malls, and office parks. Short car trips account for a large percentage of our vehicle miles traveled, and the more we can do to encourage alternatives to driving, the more we can develop “green” habits.

+ Take Advantage of Commuter Options.

Use the Centro Park ‘n’ Ride option that services suburbs in virtually every direction. Riders can park their car for free at designated locations and ride the bus into the city. (See a complete list of areas covered at www.centro.org/Parknride.aspx) Arrange to carpool or use alternative modes of transportation. Use car-sharing programs such as CuseCar and, on the SU and SUNY-ESF campuses, Zipcar. These are innovative programs designed to meet the needs of individuals who might like to carpool or ride the bus to work but who also might want or need a car for errands or appointments during the workday.

+ Encourage More Employee Incentives.

Employers that already offer incentives to encourage their employees to carpool, walk, bicycle, or use other alternative modes of transportation to get to work should be commended, and other employers should be encouraged to do the same. In addition to its Zipcar program, for instance, Syracuse University will help employees find carpool partners and allow registered carpoolers to share the same parking space, reducing their campus parking costs by half. Employers should familiarize themselves with the full range of incentives already available, such as Centro’s Fare Deal program, or formulate incentives that work for their own workplace. And we urge employees to break free of the one-person, one-car mindset and consider carpooling or

using alternative modes of transportation, such as bicycles, as much as possible. By doing so, they will save money; reduce oil consumption, pollution, and carbon emissions; avoid the stress generated by commuter traffic; and—for those who live within walking or biking distance—promote good health.

+ Promote Use of Low-Carbon Emission Vehicles and Alternative Fuels.

Reducing vehicle usage should be the number one transportation goal. For remaining trips, individuals, governments, institutions, and businesses should use compact, hybrid or electric vehicles and alternative fuels (as many Centro buses already do). The city and county should also prepare for a future with the electric car by installing charging stations in places like public parking garages and requiring new structures to be wired for car chargers, and studying likely hot spots for new e-car buyers.

+ Coordinate Land Use Planning with Transportation and Incorporate Smart Growth Principles.

To create walkable communities, municipalities throughout the county should establish land-use planning policies based on smart growth principles. Local planning, site design requirements, and incentives should promote density, mixed-use development, accessibility to transit, and pedestrian and bicycle amenities, as defined in “complete streets” principles.



PHOTO:

In February of 2010, Syracuse University Food Services started composting food waste from their food service establishments. The photo to the right shows a Syracuse University Physical Plant truck dumping 4.45 tons of food waste on May 6, 2010, at the Onondaga County Resource Recovery Agency (OCRRA) Amboy Compost Site in Camillus. Food Services has sent a total of 18.33 tons of food waste to Amboy for composting since February.

Waste Management



WASTE MANAGEMENT

Sustainable communities know that when it comes to deciding where we throw our trash, there is no “away.” Everything winds up somewhere. The U.S. dumps 4.6 pounds of trash per person per day, according to EPA figures, and more than half finds its way to landfills or into an incinerator. Americans are in love with “stuff,” and consumer spending is a primary driver of our economy. But with this consumerist culture comes an ugly reality—depletion of our precious natural resources in the constant manufacturing of material for new products; landfills despoiling our countryside and generating greenhouse gas in the form of methane; and incinerators that require careful monitoring of emissions levels of mercury and other pollutants as they convert waste to energy.

The average household in Onondaga County generates the equivalent of about one ton of trash per year, or 3.5 pounds per person per day (this does not include recyclables). That’s slightly lower than both the U.S. average of 4.6 pounds and the New York State average of 4.1 pounds. Our recycling rate countywide is among the best in the state—67 percent compared to about 50 percent statewide. Paper and organic waste account for more than half of all solid waste statewide, while plastic accounts for about 17 percent. That figure includes plastic bottles, rigid containers, and film plastics. In Onondaga County, plastic accounts for about 19 percent of all disposed trash, with the largest component in the form of film plastic, which includes such items as grocery bags, shrink wrap, and garbage bags.

The average household in Onondaga County generates the equivalent of about one ton of trash per year, or 3.5 pounds per person per day (this does not include recyclables).

In September 2008, Westport became the first town in Connecticut to ban plastic shopping bags. Residents say the ban has prompted a 70 percent increase in the use of reusable bags and reduced by an estimated 20,000 the number of plastic bags used weekly by the town’s 10,000 households. Just as important, it has inspired residents to a greener mindset overall. In Washington, D.C., the result of a new 5-cent tax on shopping bags has surprised even supporters of the measure. Within the first month of the tax going into effect last January, the monthly average total of plastic bags used by consumers dropped from 22.5 million bags to 3.3 million bags. Even if the city’s figures are not totally accurate, retailers themselves are reporting drops of 50

percent and more in the use of bags. The bulk of the tax revenue goes toward cleaning up the Anacostia River, into which an estimated 20,000 tons of trash flow each year, much of it in the form of plastic bags. The city instituted the tax after aggressive recycling efforts proved inadequate to slow the growing problem of plastic bags clogging the river and its tributaries.

New York last year passed legislation requiring most large stores and chains to set up recycling programs for plastic bags. That same legislation also requires stores to offer or sell reusable bags for their customers.

The benefits of recycling are clear: It saves energy and natural resources,

limits the production of greenhouse gases and other pollutants, and reduces the need for landfills, which have dropped from more than 350 in the late 1970s to about 47 – albeit larger – today, as recycling rates have increased. According to figures from the state Department of Environmental Conservation, paper recycling in New York State has saved 6.7 million cubic yards of landfill space and reduced greenhouse gas emissions by 5.2 million tons of carbon. Every ton of paper that is recycled saves 463 gallons of oil, 7,000 gallons of water, and 17 trees. Products made from recycled aluminum require 90 percent less energy and account for 90 percent less air pollution than “virgin products.”

The Onondaga County Resource Recovery Agency (OCRRA), which oversees solid waste management for the county (and the waste-to-energy plant in Jamesville operated under agreement with Covanta), believes that in order to minimize what goes into our landfills and waste-to-energy plants we must focus on reducing, reusing, and recycling. We agree. While our waste-to-energy plant has been cited as one of the top five renewable energy facilities in the world, and it may be preferable to methane-generating landfills, the most sustainable way to treat solid waste is to minimize the production of it “upstream.”

Among the steps some states are pursuing to limit the amount of solid waste they have to dispose of:

- + Zero-waste policies that among other features include curbside pick-up of residential food waste—one of the most potent generators of methane when sealed in landfills—for composting
- + Product stewardship policies that require manufacturers to consider the entire

life cycle when they create products, for instance by designing for reuse and recyclability, reducing use of toxic substances, and creating take-back programs

- + “Pay-as-you-throw” policies that provide incentives for residents to limit the amount of trash they dispose of

New York State took a bold step in the right direction earlier this spring when it passed a landmark bill requiring that manufacturers take back e-waste

such as old computers, TVs, and other unwanted electronics from consumers for recycling. The e-waste legislation, already in effect in 22 other states, not only will remove these toxin-containing products from our landfills and incinerators; it also will encourage manufacturers to design products with components that can be recycled or reused.

While such policies can go far toward reducing waste, we also need widespread educational efforts to counteract cultural forces that relentlessly push the notion

that happiness comes from the acquisition of ever more quantities of stuff. As with so many other areas of sustainability, we, along with OCRRA, believe that residents must begin to understand the trade-offs and consequences of their choices. With both of these needs in mind, we offer the following recommendations (on page 24):

Snapshot: Food Composting—Seattle, Washington

Residents of Seattle, Washington, have participated in curbside recycling for nearly two decades. But in 2005, the city took its sustainability efforts to a new level when it launched a voluntary curbside composting program that allowed homeowners to include food scraps with yard-waste pickup.

As part of a new Zero Waste Strategy, the city ramped up its commitment even more in 2009, moving from biweekly to weekly pickup and adding a requirement that all single-family households rent a composting bin or commit to tending a backyard composting pile. There is no penalty for non-compliance with the weekly pickup; instead, city officials believed that the rental fee—\$5 or \$7 per month—would encourage buy-in by homeowners. City officials also expanded the list of compostable food items to include meat and dairy scraps.

A year later, the city’s efforts appear to be paying off. According to figures compiled by The Seattle Times, Seattle residents today are “recycling” food at 10 times the national average. The city’s composting rates have increased steadily since collection began in 2005; but between 2008 and 2009, rates climbed by an unprecedented 47 percent. During 2009, the Times reports, Seattle Public Utilities collected 26,400 tons of food scraps from Seattle residents’ homes—enough to produce nearly 10,000 tons of compost. About 48 percent of Seattle’s waste is now composted or recycled; the city hopes to hit 60 percent by 2012 and 70 percent by 2025.

In further efforts to meet that goal, city officials in July of this year passed legislation requiring that all takeout service ware containers, plates, and cups sold in fast-food restaurants be recyclable or compostable. City officials anticipate the new law will

take another 6,000 tons of leftover food and food containers out of landfills.

After food and yard waste are converted into compost and aged, the bagged compost is distributed to stores around Seattle for residents to purchase and use in their yards and gardens.



The Sustainable Plate

Food lovers have always known the obvious benefits of eating produce fresh from the garden. But today's local foods movement is about much more than taste. Whether it's called the 100-Mile Diet, the Slow Foods Movement, or simply "locavore" eating, the desire to purchase and eat locally grown produce stems from a growing awareness of the complex links between environmental degradation, climate change, and our global food systems.

It's been estimated that the average piece of food travels 1,500 miles from farm to plate—whether by rail, truck, ocean freighter, or air. Such a long-distance journey not only consumes fossil fuels; it also generates carbon dioxide emissions and necessitates the use of preservatives, irradiation, and other processes to ensure the foods' fitness for transport and sale. Processing and packaging designed to further prolong freshness of produce, as well as large-scale industrial farming techniques, can also cause harm to the environment and local ecosystems.

Even in Central New York—a region abundant with farmland—relatively little of what's grown here actually reaches our plate. According to a SUNY-ESF study of the regional food

shed, Central New York is the most productive and diverse agricultural region of the state—and yet less than 1 percent of the food grown here is consumed locally. Central New Yorkers daily spend about \$3 million on food, but local farmers see only about 7 cents to the dollar.

Local farmers' markets, of course, are a reliable source for local produce, and the Syracuse area is fortunate to have many markets, both seasonal and year-round. Community Supported Agriculture (CSA) farms are another increasingly popular option. CSA's provide weekly shares of seasonal produce to subscribers who sign up at the beginning of the growing season. Shares may be delivered to homes or picked up at neighborhood distribution points. In addition to the environmental benefits, CSA's:

- + Guarantee revenue for farmers regardless of seasonal weather and harvest conditions.
- + Reduce the farm-to-plate distance to about 40 miles.
- + Feed the local economy as farmers send 73 percent of their earnings back into the community.

- + Foster relationships between consumer and farmer.
- + Lower costs by eliminating the need for grocers and distributors.
- + Cultivate among consumers a taste for seasonal foods.

CNY Bounty, which functions as a "virtual" farmers' market, also offers fresh, local produce from more than 90 small and medium-sized farms throughout Central New York. Available produce lists, with prices, are posted weekly on the CNY Bounty web site (cnybounty.com); customers make their selections, and produce is delivered either to a distribution point or directly to the customer's home. Based in Madison County, CNY Bounty also currently has distribution sites in Fayetteville, Manlius, and Liverpool.

Urban agriculture—in the form of community gardens, urban farms, and orchards—is yet another way to promote local eating, and cities of all sizes—from Detroit and San Francisco to Albany and Binghamton—have launched urban gardening and farm programs that are transforming vacant lots into productive green space. Such efforts not only provide city

residents with easy access to fresh produce; they also help with storm water retention, raise property values, reduce crime, and build community pride.

Locally, Syracuse Grows provides resources for individuals, schools, churches, and other groups interested in setting up a community garden. A grassroots coalition of individuals and community groups, Syracuse Grows provides resources, education, advocacy, and assistance with everything from soil testing to greenhouse construction.

For more information on the local foods movement, Syracuse area farmers' markets and CSA's, and local community garden opportunities, contact Syracuse Grows (syracusegrows.org), Slow Food CNY (slowfoodcny.org), or Syracuse First (syracusefirst.org).



GREEN WASTE MANAGEMENT RECOMMENDATIONS:

+ Reduce the Amount of Waste We Generate.

The most sustainable way of treating waste is by reducing the amount we generate in the first place:

- + We encourage state and federal legislators to support “product stewardship” policies, making manufacturers accountable for product disposal and encouraging them to design for recyclability and reusability. The state’s new e-waste legislation is a significant step toward this goal.
- + Consumers: Make wise choices when purchasing products, avoiding disposable products in favor of those that can be recycled or reused.

+ Restructure Financing of Solid Waste Management.

We must rethink financing of the solid waste management system so there is an incentive to reduce trash volume, while maintaining support for OCRRA’s conservation, recycling and public education efforts. Under the current system, OCRRA’s revenue mostly comes “tipping fees” for waste dumped at the incinerator or landfills. If OCRRA is successful at reducing wastethrough recycling or other programs, it actually loses revenue. Total OCRRA costs are about \$69 per ton of trash; for about that amount a household in Onondaga County gets an entire year of solid waste management program – a real bargain. Compare that to Tompkins County’s charge of about \$50 per year per household plus tipping fee or Westchester County’s \$100 plus tipping fee. Sustainable waste management financing programs must recognize the cost and value of waste minimization efforts instead of relying on waste volumes to support them. OCRRA’s recycling, composting, education, and other “green” efforts must be supported in new ways, whether through user fees, the county’s general fund, and/or new revenue-generating activities.

+ Expand Food Waste Composting.

After paper, organic waste makes up the next largest segment of the waste stream. About 14 percent of the waste stream in the county is food waste, and this same waste, when sealed in landfills, generates methane gas, a greenhouse gas even more potent than carbon dioxide. In Onondaga County, food waste goes to the waste-to-energy plant. Some communities that are leaders in waste recycling have food composting for residents who do not do at-home composting. For instance, San Francisco recently passed its own mandatory composting law believed to be the strictest such ordinance in the country. Residents of that city use three color-coded trash bins—one for recycling, one for trash, and one for food waste. At OCRRA, food waste is a component of the waste-to-energy stream through incineration. OCRRA has piloted a pre-consumer (restaurant, food preparers) compost project, accepting food waste from a few businesses and institutions. OCRRA’s compost sites accept yard waste from some municipalities and residents. OCRRA is now accepting post-plate waste from Syracuse University and the composting operations are generating income. We recommend that OCRRA move ahead to expand its food composting experiment to make food composting a revenue center to help support OCRRA’s programs.

+ Create County Incentives for Use of Reusable Shopping Bags.

While plastic and paper bag recycling efforts are to be commended, recycling only ameliorates the problem; it does not eliminate it. The real objective is to REDUCE the amount of waste generated in the first place by helping County residents to change their behavior, and by increasing our awareness of environmental issues. Reusable bags are readily available, often from stores themselves, and experience in other communities has shown that imposing fees on the use of thin plastic bags

has been phenomenally successful in significantly reducing the number of bags shoppers used. In addition, bag fees, a portion of which would be turned over to the County, provide funds for environmental education programs or other environmental initiatives.

+ Recycle and Reuse Construction Waste.

We recommend promotion of programs that provide incentives for recycling and reuse of waste from remodeling, demolition, and new-construction sites. Builders can earn points toward the U.S. Green Building Council's LEED certification by using recycled materials. Other local incentives could be developed.

There are positive things happening. The Syracuse Habitat for Humanity ReStore is a great example of diverting reusable building and home improvement materials from landfills and putting them to good use. D-Build, a Syracuse-based organization whose website brings together sellers and potential buyers of reclaimed materials, is helping to create a market that will make it economically worthwhile to “deconstruct” a house, rather than simply demolish it and send the rubble to a landfill. And Patchwork is an emerging enterprise that uses reclaimed materials to utilizing them to patch and renovate old structures or create new ones.

Local companies and incentives can also build on national programs by some product manufacturers of such items as carpet, ceiling tile, movable office partitions, etc. Since many commercial and institutional buildings are more likely to remodel or rearrange their space before they build new, these interiors-focused programs can significantly reduce construction and remodeling waste.

+ Public Education.

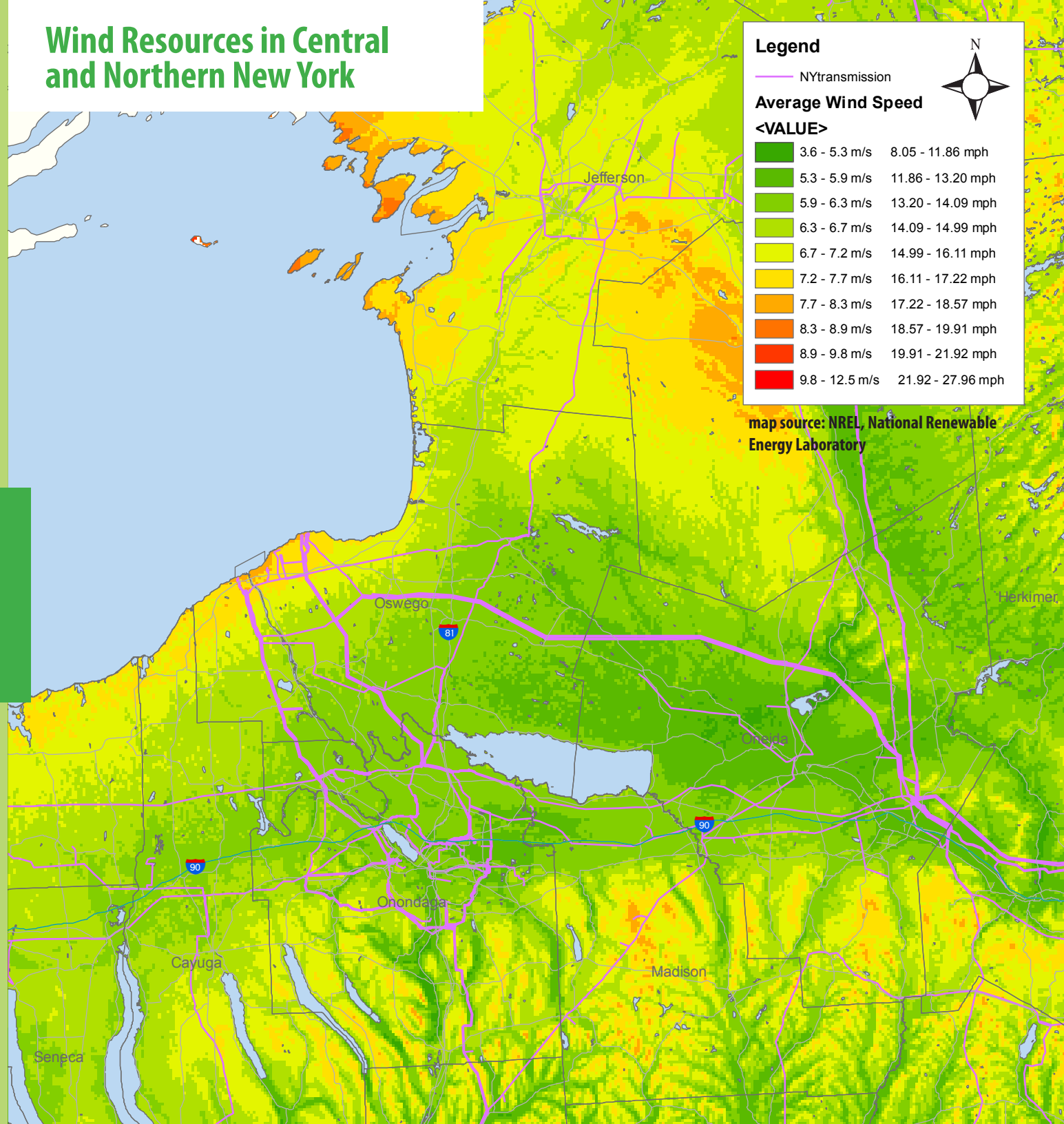
The U.S. economy is largely driven by consumer spending. And consumers, unfortunately, increasingly purchase disposable products. As consumers, we need to recognize the impact and consequences of our behavior and choices on the environment—both in terms of the amount of waste or trash generated and in terms of our level of support for reusable/recyclable products instead of disposable ones. Schools should continue to incorporate sustainability principles in their own practices and throughout the curriculum. And OCRRA should continue efforts to promote “reduce, reuse, recycle” campaigns, expand entrepreneurial revenue-generating efforts such as food composting, and seek other funding sources to pursue its public education mission.



FACT

The map to the right depicts wind resources in Central and Northern New York. There is a substantial wind resource in Central New York especially along the shore of Lake Ontario and the Tug Hill Plateau. The Onondaga escarpment in Madison County also presents opportunities for large scale wind power generation as evidenced by the wind farms in the town of Fenner. The hills in southern Onondaga County also provide adequate wind resources for small-scale generation.

Wind Resources in Central and Northern New York



Energy

ENERGY

The burning of fossil fuels to generate energy for our buildings, transportation systems, and industries is the single greatest source of climate-changing greenhouse gas emissions. Fossil fuels—notably coal and oil—also despoil our waters with acid rain and pollute our air in ways that can cause serious health problems. In addition, their supplies are limited and in the case of oil—the most commonly used fossil fuel—largely imported, leaving us vulnerable to price spikes, erratic supplies, and shifting political dynamics. Yet fossil fuels remain our primary source of energy in the U.S.

As a country, we consume 25 percent of the world's energy while comprising just 5 percent of its population. According to the Brookings Institution, carbon emissions nationwide have increased by almost 1 percent each year since 1980, with emissions from the residential, commercial, and transportation sectors increasing by more than 25 percent over the last 25 years. We are an energy-hungry country with an unsustainable addiction to fossil fuels.

Energy conservation and efficiency only go so far; for more sustainable solutions, we need to vigorously pursue measures and policies to replace fossil fuels with renewable sources of energy.

Regional Trends

Statewide, our energy numbers are better than the national figures, with 76 percent of our energy coming from fossil fuels versus 86 percent nationally and, because of the abundance of hydroelectric power, a greater percent of our energy is generated from renewable sources. New York State's per capita energy consumption is among the lowest in the country, due to New York City's public transit system and a greener mix of power that includes hydro and natural gas.

Homes and commercial buildings account for nearly 40 percent of total U.S. energy consumption and 39 percent of carbon dioxide emissions, through heating and cooling, lighting, and operating appliances, among other factors.

In fact, according to a Brookings Institution report, as emissions from residential, commercial, and transportation sectors have gone up, emissions from the industrial sector have gone down due to the shift from energy-intensive manufacturing to a service and knowledge economy. As a result, "(c)onsumers are increasingly the driving force of domestic energy consumption and carbon emissions," the report states.

So how do we best pursue sustainable energy practices? The New York State Energy Research and Development Authority (NYSERDA) recommends, in order of preference:

- + Conservation—through building insulation, weather

stripping, reduced travel, lights-off practices, etc. In offices, plug-in equipment accounts for more than 20 percent of total electric usage, which could be reduced by turning off computers at night and unplugging appliances.

- + Adoption of energy-efficient technologies—compact fluorescent lights, LEDs, Energy Star appliances, and other green technologies
- + Use of renewable energy sources—wind, hydro, solar, and biomass, among others

The U.S. EPA and Energy Star web sites offer a variety of resources in all three of these areas—in-

cluding a virtual tool for pinpointing energy-saving measures room by room—to facilitate energy savings for both homeowners and businesses.

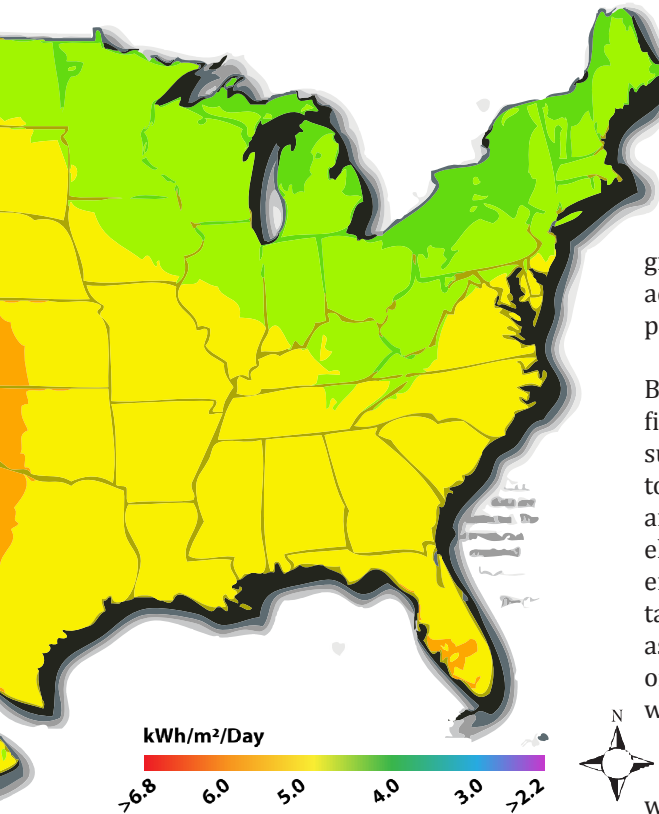
Several Central New York municipalities have already begun taking steps to reduce their energy consumption. The Central New York Regional Planning and Development Board (CNY RPDB), through its Energy Management program, is currently assisting DeWitt, Oswego, and Oswego County in performing a baseline energy inventory of government operations and identifying NYSERDA programs that can help them reduce their energy use.

Syracuse uses a mix of renewable energy to power City Hall and also

FACT

Contrary to conventional wisdom, solar resources in Central New York are adequate for supplementing electrical consumption. In fact when, corrected for our longer days in the summer months, Central New York's solar resource rivals areas in the southern U.S.

Photovoltaic Solar Resources



map source: NREL, National Renewable Energy Laboratory

has installed energy-efficient street lighting and traffic signals. Municipal buildings have been retrofitted with energy-efficient equipment; facilities have undergone comprehensive energy audits; and monitoring and control measures have been implemented.

In recent years, Onondaga County has retrofitted 13 county facilities with energy efficient lighting and improved district heating/cooling at its downtown facilities and HVAC systems at various locations, among other measures. It also anticipates using an Energy Efficiency and Conservation Block Grant under the federal stimulus program to follow up on or initiate additional energy performance measures.

But energy conservation and efficiency only go so far; for more sustainable solutions, we need to vigorously pursue measures and policies to replace fossil fuels with renewable sources of energy. Residential and business tax credits are already in place as incentives for promoting use of renewable energy, including wind, solar, and biofuels.

NYSERDA reports that 2009 was a record year for the wind power industry, and while Onondaga County does not hold the same potential in this area

as Madison or Oswego County, opportunities do exist. One such possibility is creation of “community wind power” projects. Community wind power, in which operations may be owned by residents, are an option for areas that are too small to make large-scale projects cost effective but could support small clusters of five to 10 industrial-size turbines. Community wind farms are already in operation in the Midwest and in Europe, and a feasibility study for such a project is under way in Fabius, with funding from a U.S. Department of Agriculture Rural Business Enterprise Grant. The Sodus School District last year won voter approval to erect a single turbine to help power its school campus.

Solar power is another option for Central New York business owners, residents, and municipalities. While the cost is still greater than the cost of wind power, photovoltaic (PV), or solar electric, systems currently outnumber small-wind systems primarily because of planning and zoning regulations that make wind power more difficult to pursue. With NYSERDA incentives, 30 percent federal tax credit, 25 percent New York State tax credit, sales tax exemption, and the option for municipalities to exempt solar electric equipment from local sales and property taxes, it is possible to greatly reduce the

payback period for residential and commercial PV systems.

Other renewable energy sources and alternative fuels that hold potential:

- + Biomass—organic matter used to produce biofuels and biopower. SUNY ESF is on the cutting edge of research with willow shrub plantations.
- + Biogas —energy obtained from manure and landfill waste. This is particularly feasible among farmers collaborating regionally, as in Cayuga County.
- + Bioenergy—use of underutilized forests, timberland and cropland to produce grasses or willow for electricity.
- + Biodiesel—made from vegetable oil or animal fats, and already in use on many farms. The process has been implemented by SUNY ESF students.

While the costs of installing alternative energy technologies remains relatively high, New York State last fall attempted to address that issue by passing the Property Assessed Clean Energy, or PACE, bill (A 4004 /S.66004-A). The legislation eliminates the

up-front cost of alternative technology or energy efficiency projects by allowing property owners to pay for the improvements over 15 to 20 years through an increase in their property taxes. Currently, the enabling legislation only allows municipalities to use federal funds to establish PACE programs, but there is no bill that would allow local governments to finance the programs through local bond financing mechanisms. NYSERDA is establishing a pilot program to assist municipalities in setting up alternative financing mechanisms.

Sustainable energy measures promoting conservation, efficiency, and replacement of fossil fuels with renewables are critical to our efforts to address climate change, stabilize energy costs, and assure an ongoing supply. In the process, they have the potential to create regionally based, diversified energy systems that are both good for the environment and good for the local economy. Entities such as CNY RPDB Energy Management Program, NYSERDA and the Clean Tech Center will be critical to growing green industry here. In an effort to move our city, county, and local municipalities toward all of those goals, we offer the following recommendations:

GREEN ENERGY RECOMMENDATIONS:

+ Conservation.

While the adoption of energy-efficient technologies and the use of renewable should be pursued, reducing energy consumption through less vehicle travel, more building insulation, and lights-off and equipment shut-off should still be a primary goal.

+ Purchase Green Power.

We applaud the City of Syracuse for choosing to power City Hall with a mix of renewable energy, and we urge other municipalities to follow that example. Residents and businesses, too, can opt for “green” energy. As more homeowners, businesses, and municipalities select renewable energies to heat and power their homes and buildings, costs for these alternative fuels will decrease, bringing them more in line with fossil fuels but without the harmful, and costly, ramifications.

+ Protect and Promote Access to Alternatives.

We urge municipalities to protect the rights of energy customers to pursue options such as wind or solar power. Municipalities, through zoning, planning policy, sales and property tax exemptions, and other means, must do everything they can to encourage—not discourage—access and availability to “green” energy. Models in which alternative energy companies develop solar or wind projects for public or private customers should be investigated and piloted here. And access to alternative energy sources – biofuel refueling stations, electric vehicle recharging stations – will be critical to the early and successful adoption of new technologies here.



FACT

A green roof is a roof of a building that is partially or completely covered with vegetation and a growing medium, planted over a waterproofing membrane. It may also include additional layers such as a root barrier and drainage and irrigation systems. Also known as “living roofs”, green roofs serve several purposes for a building, such as absorbing rainwater, providing insulation, creating a habitat for wildlife, and helping to lower urban air temperatures and combat the heat island effect. There are two types of green roofs: intensive roofs, which are thicker and can support a wider variety of plants but are heavier and require more maintenance, and extensive roofs, which are covered in a light layer of vegetation and are lighter than an intensive green roof.

Green Building

GREEN BUILDING

The construction, heating, cooling, and powering of buildings—residential and commercial—accounts for nearly one-half of all greenhouse gases emitted in the U.S. With that fact in mind, cities and counties across the country are taking steps to reduce emissions, and significantly cut energy and operating costs of their buildings, by establishing green building policies for municipal buildings and, in some more progressive areas, for commercial and residential buildings as well.

Green buildings, like so many features of sustainability, generate numerous benefits. They not only contribute to the future well-being of the planet; they also:

- + Generate opportunities for green-collar jobs
- + Reduce energy and water costs
- + Reduce waste
- + Increase market value
- + Create healthier, higher quality indoor environments

Green building programs at the municipal level are catching on in a big way, increasing by 50 percent over the last three years. Twenty-four of the 25 largest metropolitan regions in the country have green policies for their center cities, and surveys by The American Institute of Architects (AIA) show that at least 138 of U.S. cities with populations of 50,000 or more already have or are currently developing green building mandates.

As part of its early embrace of sustainability objectives, the City of Syracuse in 2007 became one of the first cities in the state to adopt green building standards for all new construction and major renovations of city-owned municipal buildings. The law requires that all major renovations and new construction of public buildings meet, at minimum, basic LEED certification standards, and Silver certification standards whenever possible. The majority of other cities that have green-building mandates also strive for Silver-level certification.

Counties also are getting into the act. Among the top 200 counties in the country by population, the AIA reports that 48 have or are currently developing green building mandates. While On-

ondaga County does not have a green-building policy yet, its Environmental Sustainability Advisory Committee is in the process of developing such a policy. It also has installed various roofs on the county penitentiary to test energy efficiency and storm water runoff features.

In addition the Onondaga County Industrial Development Agency has established a Green PILOT Tax Credit Program to encourage businesses throughout Onondaga County to pursue LEED certification for new construction projects. For projects that qualify, the credit reduces property taxes based on the level of LEED certification achieved. The credit ranges from 4.8 percent of the building cost for basic certification up to 15.6 percent for

Platinum-certified buildings.

While municipalities most commonly establish green building mandates for new construction, the LEED certification process can be applied to any part of a building's life cycle. In fact, while setting green building standards for new municipal construction is certainly a step forward, applying them to retrofit existing buildings generates far greater benefits, since the number of existing buildings is far greater than the number of new buildings constructed in any given year. Further, construction itself—even of a green building—creates significant carbon emissions. Green building consultants note that some of the most cost-effective ways to cut building emissions—improving

Green Building Resources

Green building programs establish voluntary guidelines, mandates, or incentives for promoting green/sustainable building practices. Of those municipalities that have green building policies, more than 90 percent follow standards set by the U.S. Green Building Council's Leadership in Environmental and Energy Design (LEED) voluntary certification system. LEED standards ensure that buildings are designed, built, and maintained in ways that minimize their environmental impact and are healthier places for their occupants, whether homeowners, employees, or schoolchildren. Projects are awarded points based on various criteria—siting and impact on ecosystem, water and energy efficiency, and indoor air quality, among other factors. How well a project meets those criteria determines its level of certification: LEED-Certified, Silver, Gold, or Platinum. (For specifics on this program and its certification process, go to www.usgbc.org.)

The U.S. Environmental Protection Agency's Energy Star program also offers resources and guidelines for individuals interested in building an energy-efficient home or commercial building. The program uses proven technologies and advanced building techniques for construction, and homes that successfully meet high energy-efficiency standards on final evaluation receive Energy Star certification.



insulation, lighting, air-conditioning, and water heating—are often done as building retrofits.

Some municipalities are going beyond building mandates for their own properties and establishing them for private construction as well. A survey by Living Cities, a global collaborative of philanthropic foundations and financial institutions, found that one in four of the country's 40 largest cities have established green building mandates for private construction. That same report found that nearly half of those cities have programs subsidizing insulation, energy-efficient appliances, and weatherization.

In spite of occasional criticism among builders that green building mandates would prove too costly, LEED certification, even at the Silver level, is not hard or terribly costly to achieve. Much of it has already become standard because it has been recognized to just make good business sense. According to research done by the USGBC, basic LEED certification typically adds little or nothing to common construction costs, and while the highest level of certification—LEED Platinum—might increase initial costs by 10 percent to 12 percent, that expenditure is typically more than recouped by the 30 percent to 60 percent improvement in building performance,

resulting in lower operating costs.

The International Code Council (ICC), which is the source of the building codes adopted in New York State, has developed a "Green Construction Code." The 2010 Public Version of that code currently is being reviewed and in some cases adopted by localities. The final version is expected to be available in 2011 and incorporated into the full "family" of codes in the 2012 edition.

Aside from mandating green building standards, cities have employed a variety of incentives to encourage green building, including:

- + Tax incentives
- + Bonus density for developers
- + Expedited permitting
- + Permit fee waivers
- + Subsidized LEED fees
- + Energy-efficiency block grants
- + Revolving loan funds for green projects

We are encouraged by the steps Syracuse and Onondaga County government already have taken toward establishing green building mandates for municipal buildings. But, given the substantial impact buildings have on our environment and well-being, we would like to see more. We offer the following recommendations:

GREEN BUILDING RECOMMENDATIONS:

+ Support Green Construction Code.

We recommend that New York State support the adoption of the ICC's emerging Green Construction Code at the state level as soon as possible.

+ Municipal/Government Buildings:

In order to maintain their credibility and demonstrate the importance of green building, local governments need to lead the way—and, in fact, they already are in many cities and municipalities. The City of Syracuse already has a green building policy, and county leaders are considering one as well. Such leadership sets an example for others and responds to public demand for environmental responsibility.

We urge local elected and appointed leaders to establish green building requirements for all existing and new buildings and facilities owned or operated by Central New York local government agencies in each of the towns, villages, school districts, etc. In addition to the environmental and health benefits, green buildings also promote fiscal responsibility of public funds.

+ Existing Buildings:

Because existing buildings comprise such a substantial portion of our building stock, we see a particular need for outreach and education in that area. We urge local organizations involved in green and sustainable building operations and maintenance to encourage, and provide the necessary education for, building owners and operators to follow green and sustainable principles in the operation and

maintenance of their buildings. We also encourage building owners to pursue certification under LEED for Existing Buildings: Operations and Maintenance.

+ New Construction and Major Renovation:

We urge local government leaders to pass legislation that requires building owners, designers (architects, engineers, etc.) and constructors to meet minimum standards of green construction and renovation, as set out by such national programs as the U.S. Green Building Council's LEED certification standards the U.S. Environmental Protection Agency's Energy Star Program. The Energy Star web site (energystar.gov) offers a wealth of resources and information on how homeowners, builders, and businesses can make their homes or

Snapshot: Green Building— Grand Rapids, Michigan

Since the election of George Heartwell as its part-time mayor in 2004, Grand Rapids, Michigan, has embraced sustainability in a number of ways. But Heartwell's leadership in the area of green building, in particular, has positioned the former Rust Belt city as a national model in sustainable building practices. With more LEED-certified buildings per capita than any other city in the country, Grand Rapids has earned recognition from the United Nations as a center of expertise in sustainability.

The city (pop. 200,000) mandates that all new municipal-owned construction and major renovation (more than 10,000 square feet and \$1 million) meet LEED certification standards, and it offers incentives and education to encourage green building for private commercial projects as well. In fact, private manufacturers have helped lead the surge in green building development

throughout the city. Office furniture manufacturers Herman Miller and Steelcase both have LEED-certified buildings, and the retired chairman of Steelcase gave \$20 million for construction of the LEED-Gold certified Grand Rapids Art Museum, the world's first art museum to earn LEED certification. Among the city's many other LEED-certified buildings are a hotel, school and university buildings, a performing arts center, and a rehabilitated Greek Revival building housing a local nonprofit.

The city's embrace of green building and other measures adhering to sustainability's triple bottom line has transformed the city into a showcase for sustainable practices and generated a surge in economic development as the formerly industrial city moved to a more knowledge-based economy. Skeptics were won over, and in 2007, Heartwell was re-elected to a second term. As he told

fellow mayors from cities and small towns across the country at a green-building conference that same year:

"If it can happen in Grand Rapids, it can happen anywhere. The culture of a place can change, and the culture of every place must change. If we do not become more sustainable, then the future of the United States is grim indeed. If we do not become more sustainable, then our vision of a world that gets progressively better with every generation is itself a vision. If we do not become more sustainable, then our grandchildren will curse the days we lived and the ways we lived. It has to happen. There's nothing more important than that."

workplaces substantially more energy efficient and monitor energy performance.

Whether new or existing buildings, the following specific recommendations apply to particular building types:

+ Commercial Buildings:

Commercial, industrial, and institutional buildings represent a large percentage of the building stock in Central New York and, collectively, can make a dramatic difference in our carbon emissions and sustainability profile. We urge local business and institutional leaders to educate themselves on the benefits of green buildings and use green construction methods for all building construction and renovation as well as for the operations and maintenance of existing buildings. We also encourage local government leaders to develop local

property tax incentives or other enticements for private building owners who embrace green building practices.

+ Multi-family Housing:

Rental units in Central New York collectively account for a large percentage of households, and the adoption of sustainable building methods at those sites can have a significant impact. We urge local landlords and other multi-family housing owners to embrace green building practices. And along with that, we urge local government leaders to develop local property tax incentives or other enticements to facilitate that effort.

+ Single-family Housing:

Single-family homes are the most numerous type of structure in Central New York and account for significant amounts of energy use, water consumption, waste, and negative

impacts on the environment, economy, and society. In light of that, we urge local homebuilders and remodelers to learn the benefits of, and practice, green building construction. We also urge homeowners themselves to recognize their own responsibility in practicing good environmental stewardship and to participate in state and local programs for green improvements to existing or new homes. By doing so, they will increase their property values and make their home more appealing to potential buyers.

In all of the above cases, regardless of building type, the benefits of green building are the same: reductions in operating costs; reductions in carbon emissions; a healthier work/indoor environment for employees, customers, and residents; a favorable public image; and increased market value. Progress in each area can be measured by monitoring reductions in trash, energy expenditures, and sick leave.

FACT

A rain garden is a garden which takes advantage of rainfall and stormwater runoff in its design and plant selection. Usually, it is a small garden which is designed to withstand the extremes of moisture and concentrations of nutrients, particularly Nitrogen and Phosphorus, that are found in stormwater runoff. Rain gardens are sited ideally close to the source of the runoff and serve to slow the stormwater as it travels downhill, giving the stormwater more time to infiltrate and less opportunity to gain momentum and erosive power. On the surface, a rain garden looks like an attractive garden. It may support habitat for birds and butterflies, it may be a formal landscape amenity or it may be incorporated into a larger garden as a border or as an entry feature.

Water Infrastructure



WATER INFRASTRUCTURE

Aging water infrastructure, as well as environmental concerns for clean water, is compelling municipalities nationwide to focus on water infrastructure. Rainwater flowing over roofs, streets and parking lots picks up pollutants that wind up in our streams and lakes - a major cause of water pollution in suburban and rural areas. In addition, high levels of precipitation, particularly from intensive rainstorms and heavy snow melts, can cause serious problems when they overload the combined storm water and sewage system and cause untreated overflows to spill into area bodies of water.

This type of overflow—rainwater mixed with human and industrial waste and debris—is a common problem in cities where aging sewage systems were designed to handle both sewage and rainwater. As a growing percentage of the natural landscape is converted to sidewalks, parking lots, and streets, preventing rainwater from reaching the soil beneath, the volume of flow to these combined sewer systems increases, and they are proving inadequate to the task.



photo: Tully Street Rain Garden

Tougher federal standards will soon force municipalities to do a better job controlling stormwater runoff. New approaches – called “green infrastructure” – rely on soil, trees and plantings to naturally absorb, store and filter rainwater, allowing it to soak down through the soil and slowly release into the watershed. Some municipalities have instituted their own tougher standards. In Philadelphia, for example, rules state that all new buildings must capture the first inch of rain on site, feeding grass and trees instead of draining into the sewer. Stormwater fees based on the size of impervious surfaces, incentivize green roofs and rain gardens.

The good news locally is that Onondaga County government has launched a green infrastructure initiative, titled “Save the Rain,”

to focus on ways of eliminating or decreasing the effects of combined sewer overflows on Onondaga Lake and its tributaries. When County Executive Joanie Mahoney took office two years ago, she put a hold on all new public “gray infrastructure” construction projects, including a new downtown regional treatment facility, in favor of exploring the feasibility of green infrastructure solutions. Green infrastructure, already popular in Europe, Seattle, Portland, and numerous other cities, has numerous benefits:

- + It diverts rainwater away from storm sewers before it becomes a problem. Rain gardens, porous pavement, trees, planters, green roofs, cisterns, and rain barrels are just some of the green infrastructure used to

capture, and often recycle, rainwater.

- + It reduces maintenance and treatment costs of gray infrastructure and would reduce the necessary size of a new regional treatment and/or storage facility.
- + It prevents flooding and erosion.
- + It adds green spaces—community or rain gardens, urban parks, trees, and other greenery—creating recreational opportunities, increasing property values, and contributing to the health and vitality of neighborhoods and communities.

One initiative associated with the county’s “Save the Rain” program is the development of a matching grant program for green projects on public and private properties. Given that green infrastructure often is more costly than traditional infrastructure, these grants are designed to encourage their use by covering the difference in cost, and we hope developers and others take advantage of them.

Onondaga County has said it cannot adequately treat the issue of lake and tributary pollution through green infrastructure alone. However, we are encouraged by its commitment to pursue those measures in concert with traditional gray infrastructure. We also offer the following recommendations (on page 37):

Snapshot: Onondaga County Save the Rain Program

Since signing a consent judgment in 1998, in which Onondaga County agreed to improve its wastewater infrastructure and reduce sewage discharges into the Onondaga Lake, Onondaga County has completed more than 30 "gray" infrastructure projects at a cost of more than \$300 million. These investments have produced significant improvements in Lake water quality. However, Onondaga County continues to face water infrastructure needs, leading public officials to the creation of the Save the Rain campaign. By reducing the amount of storm water entering sewers during storm events through the use of "green infrastructure," the County hopes to reduce the need for

and cost of any future "gray" facilities. In addition, the use of green infrastructure will continue to protect water quality in Onondaga Lake and its tributaries.

Save the Rain was created by Onondaga County to educate the public and enhance urban settings by building and developing green infrastructure throughout the community. The campaign aims to raise the public's awareness and understanding of what they can do to help reduce storm water runoff and improve the environment. The Save the Rain Campaign includes, a comprehensive strategy of workshops, trainings, demonstration projects, advertising

and social marketing, in addition to its reimbursement program for green infrastructure projects called the Green Improvement Fund.

The Green Improvement Fund offers financial assistance to businesses and non-profits to install green infrastructure on their property. The fund invests in projects including green roofs, bioswales, porous pavement, rain barrels, cisterns, tree trenches/ tree planter boxes, and storm water planters.

In December 2009, county officials announced that more trees, plants and environmentally friendly solutions will be a large part of the new

green landscape designed to manage storm water runoff naturally. Officials also announced plans to construct several large holding tanks to temporarily store runoff from overflowing sewers. The New York State Department of Environmental Conservation Commissioner Peter Grannis announced, "This can make the Syracuse area one of the national leaders in the emerging green infrastructure movement."



photo: Tully Street Rain Garden, Amy Samuels, Onondaga Environmental Institute

WATER INFRASTRUCTURE RECOMMENDATIONS:

+ Capture Stormwater on-site.

Municipalities should adopt new minimum standards for green infrastructure or low-impact development for all new or developments or redevelopments.

+ Citizen Participation.

City and suburban property owners can play their own part in protecting water quality and reducing runoff. Among the actions homeowners and other property owners can take on their own properties: installing a rain barrel to capture runoff from roofs and gutters and reuse in the garden; planting a rain garden; using porous pavement for patios or other paved areas; and conserving water by watering early mornings or evenings. In addition, residents should never dispose of household or yard waste, oil, or other toxic fluids in storm drains, culverts, or waterways.

+ Develop support resources.

To promote such citizen engagement, municipalities should develop resources and supports to assist residents who are interested in installing green infrastructure on their properties.

+ Rally Support from the Business Community.

We also urge lawmakers and business leaders to encourage private developers and the entire business community to implement green infrastructure as “common” practice in the development and construction of new projects.

Conclusion

Over the last decade, municipal leaders across the U.S. and around the world have stepped up to acknowledge that for the health of our planet and the well-being of future generations, we cannot continue to live without regard to the consequences of our choices. Those consequences grow increasingly obvious as we hear daily about the effects of greenhouse gases on our climate; the depletion of our natural resources; the degradation of our air, water, and natural ecosystems by fossil fuels; and the security risks posed by our reliance on foreign oil.

By embracing sustainability and its goals, we not only protect the environment and our precious natural resources. We also promote the long-term vitality of our city and village centers, generate forward-thinking economic opportunity, and protect and enhance the quality of life for all, now and into the future.

Becoming a sustainable city, county, and region, however, requires profound changes in the ways we live, lead, and do business. And while the benefits are clear, collectively we are not likely to summon the necessary resolve to effect lasting change without vigorous leadership from our community leaders and public officials.

We commend Syracuse and Onondaga County leaders for the efforts they already have made to make our communities more sustainable. But we believe more can, and should, be done—by government, the business community, and by residents themselves. We all have a part in this effort, and our elected officials need to know we not only support their efforts but are willing to take responsibility for our own role in changing our community and our culture.

The task is not without significant challenges, and some of the most important measures—reining in sprawl, for instance—will require collaboration across municipal borders. Yet along with those challenges comes opportunity. Central New York is blessed with tremendous natural assets and a wealth of technical and educational resources. Embracing sustainability not only will protect our natural landscapes; we believe it also has the capacity to revitalize our city and position it as a center of innovation and leader in the emerging green economy. For a city working to reposition itself as a thriving regional hub, “going green” is a critical move in the right direction.

And while embracing green energy, retrofitting buildings for energy savings, or expanding our alternative transit options may initially cost more than doing nothing, we would urge skeptics to take the long view. As Jennifer Bradley of the Brookings Institution says, sustainability is not simply “a luxury to be funded in flush times and abandoned when the economy weakens.” For in spite of sustainability’s short-term costs, the damage we invite by doing nothing is incalculable while the long-term gains—financial and otherwise—are profound.

Clearly, sustainability is a sprawling and somewhat daunting subject. But it really boils down to what our indigenous neighbors, the Haudenosaunee, have known all along: For better or for worse, the choices we make today will determine our quality of life for generations yet to come. Now more than ever, we have a moral and practical imperative to acknowledge that wisdom, rethink our choices while we still can, and embrace our role as responsible stewards of this planet.



OVERALL RECOMMENDATION:

+ Everybody Must Accept Responsibility.

The first step toward achieving a sustainable community is conserving our natural resources. No matter where one lives or works, whether public official, private citizen, business person, or retiree, we all have a role to play, and we are all responsible for the outcome. We must be mindful of our choices—how we consume and dispose of goods, where we choose to live, how we get to work, for example—and recognize that those choices do have consequences.

Creating a sustainable community also clearly requires a merging of minds around policies and actions based not on self interest but rather on the collective good. County, city, town, and village governments, public authorities, and school districts all must take steps to reverse the practices of the past 50 years and set a deliberative course toward creating a healthy, sustainable community. We do that by rethinking the way we design and maintain our urban centers and neighborhoods; where we locate our schools, libraries, town halls and parks; and how and where we build our roads, among other things. In the process, we not only reduce our carbon footprint and conserve precious resources; we revitalize our city “core” and other community centers, which strengthens our entire region.

photo: Children from the Near Westside use the new crosswalks along the Connective Corridor

Epilogue

In organizing the work of this Onondaga Citizens League study, the study committee had a fairly clear understanding of the basic challenges that were part of such a comprehensive study. The topic alone was wide and varied as sustainability touches so many potential elements. Passions on this topic run deep and managing expectations becomes a truly constant task. Measuring perceptions across a diverse community creates challenges in collecting a truly representative mix of people.

To this end, the report that you've just finished captures the intent of this grand attempt of measuring local perceptions. And thanks to the work of numerous individuals, we are pleased to provide a snapshot in time of how Syracuse stands on the sustainability battlefield. We are also pleased to report that our work includes pointed comparisons with leading communities in the sustainability marketplace.

This work is important because it provides a benchmark measurement on where we are in sustainability practices. It provides solid and sometimes simple steps for improving our position in each of the selected sustainability categories. The recommendations also help us embrace a level of accountability within the public sector, private business and as individual residents within our community.

In short, the study committee went into this process knowing that our topic was nearly infinite. Hopefully you will agree that the process we followed organized this expansive topic and produced a final report that will provide value and insight for years to come. It might not be easy being green, but at least we know where we stand.

David Holder & Jason Allers, Study Topic Committee Co-chairs

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What does it mean to be green?

PROMOTING SUSTAINABILITY
IN SYRACUSE AND ONONDAGA COUNTY

OCTOBER 2010

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