



GOING
BEYOND
GREEN



TOLEDO - LUCAS COUNTY SUSTAINABILITY PLAN

2014

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- Lucas County Board of Commissioners
- City of Toledo
- Lucas Soil and Water Conservation District
- Toledo Community Foundation
- Toledo Area Regional Transit Authority
- Owens Corning
- The Lathrop Company

Toledo-Lucas County Sustainability Commission

- American Institute of Architects Toledo
- American Rivers
- *City of Toledo: Division of Environmental Services
- GDI Designs
- Infinitely Green Consulting
- Keep Toledo-Lucas County Beautiful
- *Libbey Glass
- *Live Well Greater Toledo
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- The Collaborative Inc.
- *The Lathrop Company
- The Olander Park System
- *Toledo Area Regional Transit Authority
- Toledo Choose Local
- Toledo Community Development Corporation
- *Toledo Community Foundation
- Toledo-Lucas County Plan Commission
- *Toledo-Lucas County Port Authority;
- Better Buildings of Northwest Ohio
- Transforming Environmental Solutions
- United States Department of Agriculture/ Natural Resources Conservation Service
- University of Toledo
- Vistula Management Company

Stakeholders

- Ability Center of Greater Toledo
- Alliance to Save Energy
- Amexum United Alliance
- Area Office on Aging
- Aspire
- Black Swamp Conservancy
- Board of Community Relations
- Cherry Street Legacy Project
- Children's Hunger Alliance
- City of Oregon
- City of Sylvania
- City of Toledo
- City of Waterville
- Clay High School
- Columbia Gas
- Commercial Buildings and Retrofit Inc.
- Community Connections/Feed Your Neighbor
- Congresswoman Marcy Kaptur's Office
- DANA

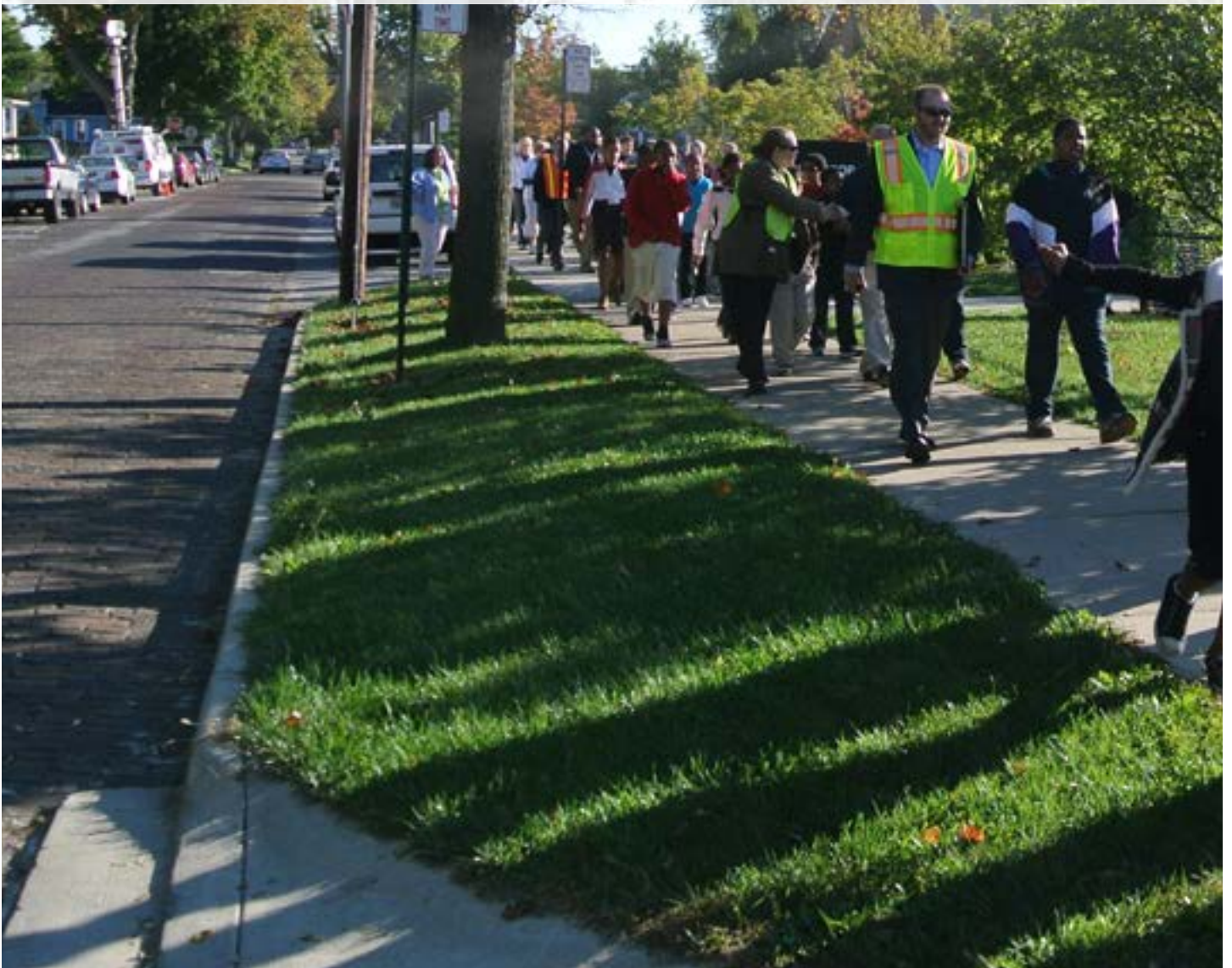
- Downtown Toledo Improvement District
- Duket Architects
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- Federal General Services Administration
- First Energy
- First Solar
- Friendly Center
- Home Builders Association
- Lake Erie Commission
- Lake Erie Waterkeeper
- LEGACY
- Local Initiatives Support Corporation
- Lourdes University
- Lucas County Economic Development Corporation
- Lucas County Emergency Services Agency
- Lucas County Engineers Office
- Lucas County Jobs and Family Services
- Lucas County Land Bank
- Lucas County Waste Management District
- Lutheran Social Services
- Mannik & Smith Group
- Mercy Health Partners
- Midwest Environmental Control
- Minority Health Commission
- Neighborhood Health Association
- Neighborhood Housing Association Toledo
- Oak Openings Region Conservancy
- Ohio Department of Natural Resources
- Ohio Environmental Protection Agency
- Owens Illinois
- Palmer Energy
- Partners for Clean Streams
- Phoenix Earth Food Co-op
- Pilkington North America
- ProMedica
- Regional Growth Partnership
- Safe Kids Greater Toledo - Toledo Children's Hospital
- Sierra Club
- Sodexo
- Springfield Township
- SSOE
- Stormwater Action Group
- Sylvania Township
- The Nature Conservancy
- Toledo Bikes
- Toledo Botanical Garden
- Toledo City Council
- Toledo Design Center
- Toledo Fair Housing Center
- Toledo GROWS
- Toledo Metropolitan Area Council of Governments
- Toledo School for the Arts
- Toledo Zoo
- Toledo-Lucas County Health Department
- Toledo-Lucas County Public Library
- Toledo-Lucas County Rain Garden Initiative
- Toledo-Lucas County Sanitary District
- Turner Electrical Services
- United North
- United Way
- University Church and Garden
- UpTown Association
- Village of Holland
- Youth Commission

Consultant Team

- Brendle Group
- Center or Neighborhood Technology
- The Collaborative Inc.

Going Beyond Green: Executive Summary

- The Triple Bottom Line
- A Road Map for Progress
- Regional Sustainability Index
- Getting Involved



The Toledo-Lucas County region has made great strides in addressing many aspects of sustainability that will improve and sustain our natural systems (environment), social systems (our communities), and economic systems (our economy) for current and future generations. From the existing initiatives to improve and protect the region's water resources to the wide range of programs supporting healthy, local food to efforts to improve building energy efficiency and neighborhood livability, the Toledo-Lucas County region has a great foundation from which to build.

But there is still more work that can be done – work that entails Going Beyond Green, taking a broader look at how we can work together across the Toledo-Lucas County region to protect and restore natural systems, enhance social systems, and grow healthy economic systems in our communities. This is the focus of the Greater Toledo Going Beyond Green Regional Sustainability Plan.

Going Beyond Green addresses issues of sustainability from the perspective of the entire region as opposed to a narrower focus on specific and individual communities. Many other regions across Ohio and the Midwest, as well as around the country, have taken similar regional approaches to collaboration and realized benefits from doing so. These benefits include working toward common and shared goals through partnerships and sharing resources and expertise.

With the Toledo-Lucas County Sustainability Commission spearheading the effort, Going Beyond Green reflects the ideas and input of people and organizations throughout the region. The Toledo-Lucas County Sustainability Commission is an association of government entities, educational institutions, non-profit organizations, and business leaders working to promote sustainability in the region.

The Triple Bottom Line

Going Beyond Green is organized around natural systems, social systems, and economic systems, often called the triple bottom line of sustainability. Governments, companies, and other organizations use triple bottom line thinking to help evaluate choices and develop solutions that ideally benefit the three components of sustainability (natural, social, economic). By using the triple bottom line, choices can be evaluated to ensure they benefit, for example, the environment without inadvertently causing economic harm and vice versa.

Sustainability and the Triple Bottom Line

Sustainability is often defined as meeting the needs of the present without compromising the ability of future generations to meet their own needs. To encourage and support sustainable decision making, the concept of the **triple bottom line** is often used. Commonly referred to as **People, Planet, and Profit**, the triple bottom line is an expansion of traditional business accounting to consider the social and environmental performance of an activity in addition to its financial performance.



For Going Beyond Green, the Toledo-Lucas County Sustainability Commission worked with stakeholders to identify the defining issue, or lens, that could be used to represent each part of the triple bottom line – lenses through which to evaluate the entire plan. These triple bottom line lenses include:



- **Climate Change Lens (Natural Systems):** Climate change is one of the most pressing issues of our time with projected widespread impacts on the environment and people across the Toledo-Lucas County region. The climate change lens includes both reducing greenhouse gas pollution (mitigation) and adapting to a changing climate (adaptation).



- **Equity Lens (Social Systems):** Personal well-being; social equity; and vibrant, livable communities are core principles of the people lens of the triple bottom line. Providing equitable access to resources and services and targeting strategies that improve opportunities for disadvantaged members of the community will increase the overall quality of life in the region.

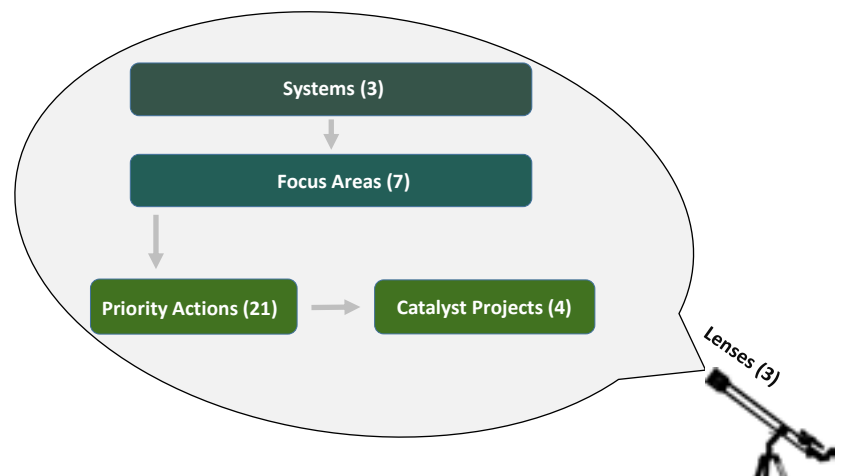


- **Economic Health Lens (Economic Systems):** The region’s economic systems are what enable our region to provide jobs for people, grow businesses and attract new businesses to the region, and provide people opportunities to move up the income ladder. A more resilient economy and greater job opportunities can bolster consumer spending and drive the region’s overall economic health.

While each of the three lenses of the triple bottom line are discussed separately, in reality they are all interdependent. For example, the region’s economy depends not only on the natural wealth of the environment, but also on the productivity of the community in which people have the opportunity to pursue fulfilling and healthy lives.

A Road Map for Progress

Going Beyond Green contains 21 priority actions that are grouped into 7 focus areas. Four specific catalyst projects – the first projects to implement from the 21 priority actions – are identified to help organize action and make progress. To ensure all three aspects of the triple bottom line are considered, the climate, equity, and economic health lenses are used to view the overall plan. The following table provides a summary of the focus areas, priority actions, and catalyst projects.



		Priority Actions
 Natural Systems	 Water Quality & Supply	<p>**Develop a comprehensive, County-wide plan to protect and improve the quality of fresh water in the County's rivers and lakes.</p> <p>**Create a Green Infrastructure Portfolio Standard to expand the use of more natural ways to manage water that runs off our streets and other paved areas.</p> <p>Develop resources to encourage cities, residents, and businesses to work together and share ideas on water issues.</p>
	 Land & Natural Resource Use	<p>Protect more land for our region's wildlife and unique plant life, targeting urban and coastal areas along Lake Erie and building off the work done in the Oak Openings region.</p> <p>Develop a way for City Parks, Metroparks, and any other agencies to share ideas and practices to make the best use of parks, wildlife habitats, and other green spaces for the community.</p> <p>Support farmers in adopting best practices to help their farms remain productive while protecting the health of nearby lands and waters.</p>
 Social Systems	 Healthy, Active, & Safe Communities	<p>**Encourage a "Complete Streets" transportation policy to increase options for biking and walking, and provide access to safe and affordable ways for people to travel around the region.</p> <p>Develop better ways to encourage growing, distribution, and access to locally grown and nutritious food throughout the region, with a particular focus on areas where access to nutritious food is most limited – sometimes called food deserts.</p> <p>Increase the level of education and outreach about local, healthy food to develop greater interest in and demand for local food.</p>
	 Education, Engagement, & Empowerment	<p>Develop programs to foster the development of strong youth/community leaders.</p> <p>Support, enhance, and expand the community's arts and cultural resources and strengthen industries that support individual creativity and innovation.</p> <p>Support and grow the ASPIRE Initiative, which is working to improve education opportunities from cradle to career.</p>
 Economic Systems	 Community Vitality	<p>Develop programs and policies that encourage connecting neighborhoods to nearby businesses and open spaces with walking and/or biking trails or sidewalks.</p> <p>Work with community groups to develop neighborhood Going Beyond Green plans and encourage grassroots implementation and ownership.</p> <p>Develop a regional Climate Action Plan.</p>
	 Infrastructure Investments	<p>Expand and build on the BetterBuildings program which provides financing for energy efficiency technology.</p> <p>Decrease the amount of energy businesses and governments use while increasing the amount of energy they get from renewable sources such as solar and geothermal.</p> <p>Develop tools and programs to encourage more people to ride public transportation.</p> <p>Support the solid waste management programs being implemented for residential, commercial and industrial entities decreasing reliance on landfilling while encouraging recycling and reaching waste reduction goals.</p>
	 Economy & Workforce Development	<p>**Support and grow locally-owned businesses and encourage local governments to shift purchasing to locally-produced products and services.</p> <p>Align programs aimed at growing job skills for residents with current and emerging needs of the region's primary industry clusters, with a particular focus on developing high-skilled careers.</p> <p>Enhance job training to preserve local manufacturing industries while also helping the region remain globally competitive as it transitions to industries such as advanced manufacturing technologies.</p>

** Catalyst Project: Priority action that will be the main focus for plan implementation in 2014-2015

Measuring Progress: Going Beyond Green Sustainability Index

To ensure that Going Beyond Green's priority actions and catalyst projects have the desired effect, it is important for the Toledo-Lucas County Sustainability Commission and partners to measure progress over time. To do so, Going Beyond Green contains 10 key indicators of progress. For each of these 10 indicators there is a baseline measuring current conditions and a goal for where the region wants to go.

Going Beyond Green will measure progress using a report card format. Each indicator is given a score – from 1 to 100 – and a rating – from Poor to Excellent – based on how close or far the region is to its goal for that indicator. This report card approach helps to translate complex, diverse metrics into a format that is easier to understand. Averaging the report card scores for all 10 indicators also allows us to calculate an overall Going Beyond Green Sustainability Index – one combined score of progress.

Given current conditions, the Toledo-Lucas County region scored a 41 out of 100 on the Going Beyond Green Sustainability Index in 2012 – a Fair rating. The 2012 Index results by system are summarized in the table below. By implementing this plan, the goal is to increase the Index to 70 (Good to Very Good) by 2030. More details on the Sustainability Index and the underlying metrics that contribute to the scoring in the table below can be found in the Tracking Progress section of the plan.

Natural Systems	1.5 / 5
Climate	
Water Quality and Supply	
Land and Natural Resource Use	
Social Systems	1.5 / 5
Equity	
Healthy, Active and Safe Communities	
Education, Engagement, and Empowerment	
Economic Systems	2.5 / 5
Economic Health	
Community Vitality	
Infrastructure Investments	
Economy and Workforce Development	
GOING BEYOND GREEN SUSTAINABILITY INDEX	

1 Icon= Poor 2 Icons = Fair 3 Icons= Good 4 Icons= Very Good 5 Icons= Excellent

Getting Involved

There are many ways to participate and help create a sustainable and vibrant Toledo-Lucas County region. Opportunities include being a community leader, volunteering for various positions, getting involved in educational campaigns, and donating money to support local programs and campaigns. You can also donate your time and knowledge to help make any of the 21 priority actions a reality.



How Can You Go Beyond Green?

Be a part of the community planning process. Citizens of the Toledo-Lucas County region have a host of opportunities for getting involved with Going Beyond Green. Volunteering for an issue you are passionate about can be rewarding and fun. If you are interested in natural ecosystems, volunteer your time with a local conservation group. If health and wellness is your passion, organize a campaign to increase the level of education and outreach about local, healthy food in the community. Find a topic you are excited about and reach out to local non-profits to see how you can help make a change. For a list of specific volunteer opportunities and organizations involved with Going Beyond Green, visit LucasCountyGreen.com.

Going Beyond Green Working Groups

Volunteer your time and ideas to one of the Going Beyond Green Working Groups to advance sustainability in the Toledo-Lucas County region. One of the first implementation steps for Going Beyond Green is the development of working groups for each of the seven focus areas. These groups will provide an opportunity for people with similar interests to get together and discuss, lobby, promote, and advance sustainability initiatives throughout the region's natural, social, and economic systems.

Toledo-Lucas County Sustainability Commission Website

A concise summary of Going Beyond Green, including the focus areas, priority actions, catalyst projects for the 2014-2015 implementation phase, and the Going Beyond Green Sustainability Index for tracking progress can be found at LucasCountyGreen.com. The website provides residents and businesses opportunities to get involved and communicate their ideas. Additionally, the website allows the community to monitor the progress of Going Beyond Green.



Visit the Going Beyond Green web site: LucasCountyGreen.com

What is Going Beyond Green?



Natural Systems



Social Systems



Economic Systems



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At the successful regional sustainability conference - Green Town^[viii] Toledo-Lucas County - held in fall of 2012, the need for a comprehensive sustainability plan to organize current and future regional efforts was identified as a priority initiative for the Toledo-Lucas County Sustainability Commission. This sparked a grassroots effort to pool funds and resources from various organizations in the region to develop a Toledo-Lucas County Regional Sustainability Plan. The Plan is now known as the Greater Toledo Going Beyond Green initiative, acknowledging the need to step beyond the environmental topics typically associated with sustainability to a broader view that equally addresses social and economic opportunities for the Toledo-Lucas County region. The core committee for plan development includes representatives from the following organizations:

- City of Toledo: Division of Environmental Services
- Libbey Glass
- Live Well Greater Toledo
- Lucas County Board of Commissioners
- Lucas Soil and Water Conservation District
- Owens Corning
- The Lathrop Company
- Toledo Area Regional Transit Authority
- Toledo Community Foundation
- Toledo-Lucas County Port Authority

Who is the Toledo-Lucas County Sustainability Commission?

The Toledo-Lucas County Sustainability Commission is an association of government entities, educational institutions, non-profit organizations, and business leaders working to promote sustainability in the Toledo-Lucas County region. The Commission’s vision is to enhance the health of ecological, social, and economic systems to produce vibrant, sustainable communities and happy, healthy citizens. The mission of the Commission is centered on three directives — to educate, to engage, and to act throughout the region around all issues connecting natural, social, and economic systems. The Commission works to encourage collaboration and provide balanced benefits for the good of all communities — human and non-human — in the region. The Commission chooses projects using the holistic model of sustainability, often referred to as the triple bottom line. The triple bottom line addresses environmental, economic, and social issues.

2013 Toledo-Lucas County Sustainability Commission

- American Institute of Architects Toledo
- American Rivers
- City of Toledo: Division of Environmental Services
- GDI Designs
- Infinitely Green Consulting
- Keep Toledo/Lucas County Beautiful
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- Northwest Ohio Chapter of the United States Green Building Council
- Northwest Ohio Food Council
- Ohio State University Extension Lucas County
- Owens Corning
- Rudolph/Libbe Inc.
- Silverback Supply Company
- Sylvania Franciscan Village
- The Collaborative Inc.
- The Lathrop Company
- The Olander Park System
- Toledo Area Regional Transit Authority
- Toledo Choose Local
- Toledo Community Development Corporation
- Toledo Community Foundation
- Toledo-Lucas County Plan Commission
- Toledo-Lucas County Port Authority: Better Buildings of Northwest Ohio
- Transforming Environmental Solutions
- United States Department of Agriculture/ Natural Resources Conservation Service
- University of Toledo
- Vistula Management Company

Why a Regional Sustainability Plan?

Going Beyond Green addresses sustainability from the perspective of the entire region. By taking such an approach, the Toledo-Lucas County region joins many communities in the Midwest and throughout the country that have taken similar regional collaborative approaches and realized benefits from doing so.

Going Beyond Green's focus areas are complex and are not easily addressed within the boundaries of a particular neighborhood or community. While resources like land have traditionally been divided by municipal boundaries, natural resources, community assets such as food and education, and economic opportunity largely transcend municipal boundaries. For example, the region's water flows through watersheds that span several communities. Local food production and consumption are linked across rural and urban boundaries. Such topics can be more efficiently managed from a regional and collaborative perspective.



Regional planning also allows sustainability issues to be viewed as a system rather than in a piecemeal or siloed approach. For natural systems, habitats and ecosystems can be managed to reduce fragmentation while creating and maintaining linkages of various parts into a whole. With this approach water resources can be managed as a whole watershed. The region can proactively create a vibrant local food system where food producers, processors, transporters, and consumers can be linked together for mutual benefit. In terms of economic systems, infrastructure – roads, transit, water, and other assets – can be managed collaboratively and efficiently beyond what any one community could do alone.

Going Beyond Green's regional focus creates a valuable framework within which to coordinate and integrate various programs and goals. This coordination will improve the effectiveness and synergy among various local, regional, state, and federal planning efforts. Regional planning can also help make these plans more coherent and less confusing to the public and elected officials. Furthermore, as government budgets are strained, cooperative program delivery at a regional level can coordinate services, build partnerships, and pool resources to improve delivery and cost-effectiveness through economies of scale.

Going Beyond Green Terminology

Systems Not Silos refers to a planning method that ensures a community's plans, codes, capital projects, permitting, budgeting, strategic planning, and employee training are aligned and working toward common desired outcomes.

What Has The Region Already Accomplished?

From efforts to improve and protect the region's water resources to programs supporting healthy and local food to initiatives that improve energy efficiency, the Toledo-Lucas County region has a strong foundation to build upon. To learn more about all of the existing sustainability initiatives and accomplishments in the Toledo-Lucas County region, go to LucasCountyGreen.com/greater-toledo-going-beyond-green.

How to Navigate this Document – The Planning Framework

A planning framework provides a consistent and clear procedure for outlining community goals, organizing strategies, defining outcomes, and measuring progress toward those outcomes. The Going Beyond Green framework was developed through close coordination with the Commission while gathering input from a diverse group of community stakeholders.

Triple Bottom Line Systems and Lenses - The three systems of the triple bottom line – natural, social, and economic – provide an overall organizing structure to Going Beyond Green. For each system, a lens through which all aspects of the plan will be viewed has been identified. These lenses help to ensure that triple bottom line elements are addressed throughout the plan. The Commission and stakeholders selected climate change, equity, and economic health as defining issues for the region and the lenses through which the entire plan will be viewed.

Focus Areas – Within each triple bottom line system there are a number of topics to consider. The Going Beyond Green focus areas are the seven key topics identified by the Commission around which the plan was organized.

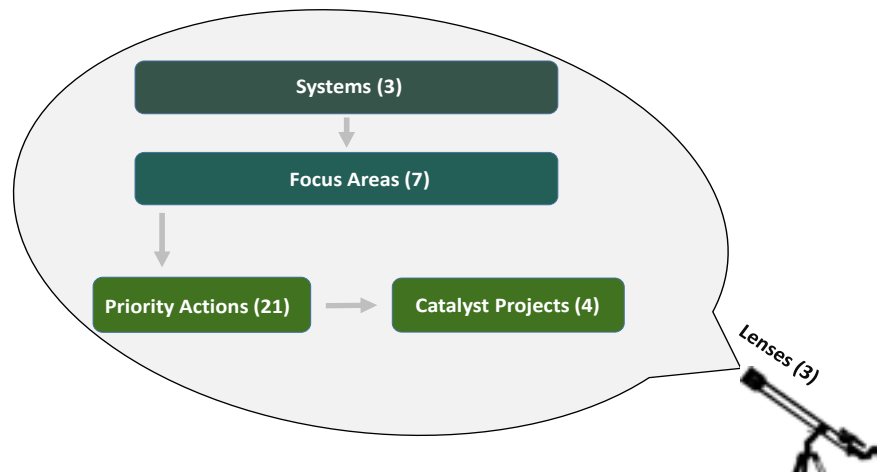
Priority Actions – For each of the seven focus areas, three priority actions were identified. Priority actions are specific programs or projects for implementation with targeted efforts and focused resources. There are a total of 21 priority actions in the plan, 3 for each focus area.

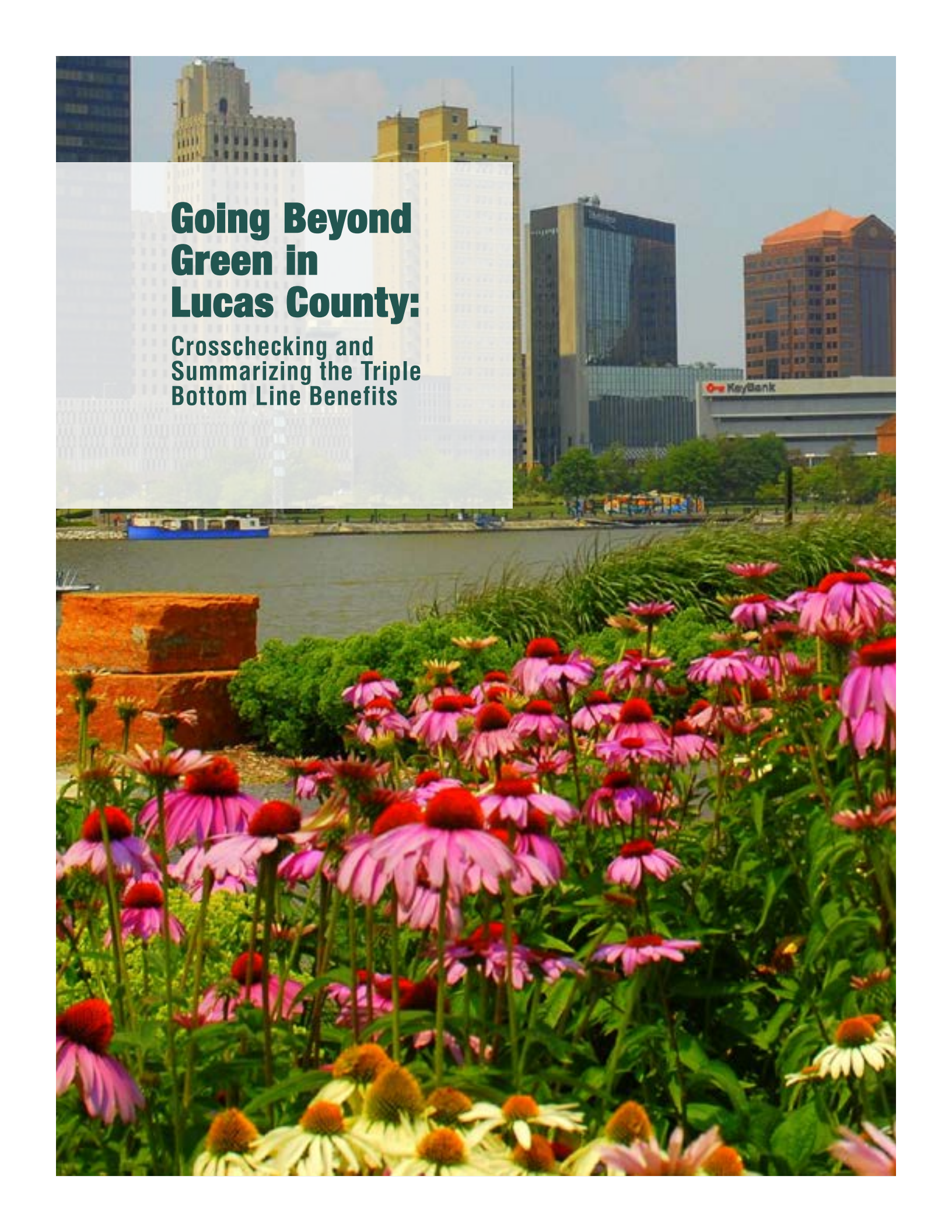
Catalyst Projects – From the 21 priority actions, 4 catalyst projects were selected. The catalyst projects are meant to jump start Going Beyond Green, will be the main focus of plan implementation in 2014-2015, and have been developed in a greater level of detail in this plan.

Indicators and Metrics– Supporting indicators and metrics help validate, assess, and measure progress. Indicators measure progress at the focus area level while the metrics help to assess individual priority actions and catalyst projects.

Sustainability Index – The sustainability index is the overall measure of progress of the plan and incorporates 10 quantifiable indicators – one for each of the triple bottom line lenses as well as the 7 focus areas. More details on the sustainability index and how it is calculated can be found in the Tracking Progress section of this plan.

Figure 1 – Going Beyond Green Framework





Going Beyond Green in Lucas County:

**Crosschecking and
Summarizing the Triple
Bottom Line Benefits**

The Plan is organized around natural systems, social systems, and economic systems – or the triple bottom line of sustainability.

The phrase triple bottom line was coined by sustainability thought leader John Elkington in 1994 to acknowledge that the value of human and natural capital should also be recognized in addition to the financial bottom line when making business decisions. Since then, the concept of the triple bottom line often has been equated with the concept of sustainability. In addition to the business sector, many local governments have adopted triple bottom line approaches in community and regional planning, finding that improving environmental and social conditions can also improve quality of life and the local economy.

The Triple Bottom Line and Going Beyond Green

For Going Beyond Green, the Toledo-Lucas County Sustainability Commission worked with stakeholders to identify key issues facing the region that could be used to represent the three parts of the triple bottom line – lenses through which to evaluate the entire plan and compare choices: The Going Beyond Green Lenses are:

- **Climate Change**¹ measured by greenhouse gas (GHG) emissions for natural systems
- **Equity** measured by income disparity for social systems
- **Economic Health** measured by median household income for economic systems

By systematically reviewing the priority actions within each system against these three lenses, the region can derive greater results from an integrated approach. This approach also allows the region to check the compiled priority actions for any gaps or imbalances during development and implementation of the plan.

The Going Beyond Green triple bottom line lenses – climate change, equity, and economic health – are described in further detail on the next page.



Going Beyond Green Terminology

Climate change refers to any significant change in the measures of climate lasting for an extended period of time - including major changes in temperature, precipitation, or wind patterns among other effects - that occur over several decades or longer.

Mitigation involves reducing greenhouse gas emissions and lessening impacts from additional warming of the atmosphere.

Adaptation is preparing for the impacts of an already-changing climate.

¹ Climate change includes both mitigating the effects of climate change by reducing GHG emissions and adapting to an already changing climate.



Climate Change: Climate change is arguably the most pressing environmental challenge of our generation. The Toledo-Lucas County region and local jurisdictions in the region can adapt and prepare for the impacts of a changing climate, including more severe flooding events from rainstorms, longer droughts, more frequent and intense heat waves, higher winds, and more intense snowfall events. Contingency assessments, emergency preparedness, and attention to future impacts from climate change in land use planning can help the region manage such risks. Examples include proactively protecting water resources and people from floods that may impact water resources or creating response mechanisms for times of drought and heat to safeguard human health.

In addition to adapting to an already changing climate, the Toledo-Lucas County region can help mitigate further climate change by doing its part to reduce GHG emissions. Most of the region’s GHG emissions—its carbon footprint—are the result of fossil fuel combustion to produce energy for electricity, heat, and transportation. Mounting regulatory requirements, growing negative public opinion, and an extremely volatile global energy market are all making fossil fuels a progressively less reliable fuel source. As a result, reducing fossil fuel-based energy consumption while increasing renewable energy generation will lead to lower GHG emissions. These efforts can also help insulate the Toledo-Lucas County region’s economy from an unstable fossil fuel market and rising energy costs.



Equity: Personal well-being; social equity; and vibrant, livable communities are core principles of the society lens of the triple bottom line. Those on the lower end of the socio-economic spectrum tend to be more vulnerable to the negative impacts of climate change, including severe weather, unstable agricultural supply chains, and volatile energy prices. Crime, mortality, and high school graduation rates all rise and fall with overall socio-economic status. Conversely, providing more transportation choices, job skills training, and access to educational and cultural resources will improve the quality of life for those with the least access to the environmental and cultural wealth of the region.

Income disparity along gender, racial, and regional lines is a key indicator of inequity. Providing more equitable access to resources and services and targeting strategies that improve opportunities for disadvantaged populations will lead to reduced income disparity and increased overall quality of life in the region.



Economic Health: The health of a local economy is often measured by the median household income, which is an indicator of not only the quantity of economic growth in the region but also the quality of such growth. Supporting local businesses that keep dollars in the community; providing skills and training for workforce development; and encouraging a strong, balanced education system improve business health and employment opportunities in the region. A more resilient economy and greater job opportunities lead to increases in the average household income, buoying consumer spending, and helping to drive the region’s overall economic health.



The Triple Bottom Line: An Integrated Approach

While each of the three lenses of the triple bottom line is discussed separately, in reality they are interdependent. For example, the region’s economy depends not only on the natural wealth of the environment, but also on the productivity of the community in which people have the opportunity to pursue fulfilled and healthy lives.

Table 1 summarizes the relationships between the three lenses and the priority actions in Going Beyond Green, highlighting their interconnectedness and pointing out where priority actions can result in triple wins. A priority of Going Beyond Green is to ensure that all three lenses are at least considered in implementing each action, even for those priority actions that do not have a direct impact on all three lenses.

Table 1 – Triple Bottom Line Lenses: Relationship for Each Going Beyond Green Priority Action

Priority Actions		Climate Change	Equity	Economic Health
<p>Water Quality & Supply (page 23)</p>	<p>**Develop a comprehensive, County-wide plan to protect and improve the quality of fresh water in the County’s rivers and lakes.</p>			
	<p>**Create a Green Infrastructure Portfolio Standard to expand the use of more natural ways to manage water that runs off our streets and other paved areas.</p>			
	<p>Develop resources to encourage cities, residents, and businesses to work together and share ideas on water issues.</p>			
<p>Land & Natural Resource Use (page 26)</p>	<p>Protect more land for our region’s wildlife and unique plant life, targeting urban and coastal areas along Lake Erie and building off the work done in the Oak Openings region.</p>			
	<p>Develop a way for City Parks, Metroparks, and any other agencies to share ideas and practices to make the best use of parks, wildlife habitats, and other green spaces for the community.</p>			
	<p>Support farmers in adopting best practices to help their farms remain productive while protecting the health of nearby lands and waters.</p>			
<p>Healthy, Active, & Safe Communities (page 31)</p>	<p>**Encourage a “Complete Streets” transportation policy to increase options for biking and walking, and provide access to safe and affordable ways for people to travel around the region.</p>			
	<p>Develop better ways to encourage growing, distribution, and access to locally grown and nutritious food throughout the region, with a particular focus on areas where access to nutritious food is most limited – sometimes called food deserts.</p>			
	<p>Increase the level of education and outreach about local, healthy food to develop greater interest in and demand for local food.</p>			
<p>Education, Engagement, & Empowerment (page 34)</p>	<p>Develop programs to foster the development of strong youth/community leaders.</p>			
	<p>Support, enhance, and expand the community’s arts and cultural resources and strengthen industries that support individual creativity and innovation.</p>			
	<p>Support and grow the Aspire Initiative, which is working to improve education opportunities from cradle to career.</p>			
<p>Community Vitality (page 39)</p>	<p>Develop programs and policies that encourage connecting neighborhoods to nearby businesses and open spaces with walking and/or biking trails or sidewalks.</p>			
	<p>Work with community groups to develop neighborhood Going Beyond Green plans and encourage grassroots implementation and ownership.</p>			
	<p>Develop a regional Climate Action Plan.</p>			
<p>Infrastructure Investments (page 42)</p>	<p>Expand and build on the BetterBuildings program which provides financing for energy efficiency technology.</p>			
	<p>Decrease the amount of energy businesses and governments use while increasing the amount of energy they get from renewable sources such as solar and geothermal.</p>			
	<p>Develop tools and programs to encourage more people to ride public transportation.</p>			
	<p>Support the solid waste management programs being implemented for residential, commercial and industrial entities decreasing reliance on landfilling while encouraging recycling and reaching waste reduction goals.</p>			
<p>Economy & Workforce Development (page 45)</p>	<p>**Support and grow locally-owned businesses and encourage local governments to shift purchasing to locally-produced products and services.</p>			
	<p>Align programs aimed at growing job skills for residents with current and emerging needs of the region’s primary industry clusters, with a particular focus on developing high-skilled careers.</p>			
	<p>Enhance job training to preserve local manufacturing industries while also helping the region remain globally competitive as it transitions to industries such as advanced manufacturing technologies.</p>			

**Catalyst Project: Priority action that will be the main focus for plan implementations in 2014-2015

= Minimal correlation = Some correlation = Strong correlation

Benefits from Improved Sustainability

In total, implementing Going Beyond Green will create the following benefits for the Toledo-Lucas County region:

- Reduced GHG emissions
- Reduced nutrient loading in waterways
- Increased open space throughout the County
- Reduced income disparity
- Improved health
- Lower crime rates
- Higher high school graduation rates
- Increased median household incomes
- More affordable housing and transportation
- Improved infrastructure
- Reduced unemployment rates

The actions leading to these benefits will have many co-benefits, such as improved air quality, more jobs, and personal health benefits, all of which contribute to increased quality of life. Perhaps most importantly for driving change, each of these benefits also translates to an economic benefit for the region. Table 2 summarizes the estimated economic impact from implementing Going Beyond Green. Achieving all 10 key indicator goals will cost the region an estimated \$10 billion. But with an annual economic benefit of \$4 billion these costs would be recovered within 3 years of full implementation. More details on this analysis can be found in the Endnotes and Assumptions section at the end of this document.

Table 2 – Economic Costs and Benefits from Achieving Going Beyond Green Goals by 2030

Benefits from Implementing Going Beyond Green	Quantitative Goal (% change from 2012 baseline)	Estimated ANNUAL Economic Benefit from Reaching Goal	Estimated Implementation Cost
Reduced GHG emissions	-15 MT CO ₂ e per capita (40% reduction)	\$300 million/yr	\$6 billion
Reduced nutrient loading in waterways (phosphorus)	-1,026 MT total annual (39% reduction) -472 MT total spring (37% reduction) -105 MT DRP Spring (41% reduction)	\$30 million/yr	-
Increased open space (% of total land area)	+7,500 acres (33% increase)	\$7 million/yr	\$80 million
Reduced income disparity	-27% average disparity (50% reduction)	-	-
Improved health and safety (County Health Ranking and Crime Rate)	+36 health rank score (50% increase) -478 violent crimes (50% reduction) -1,784 robberies (50% reduction)	\$400 million/yr	\$70 million
Improved high school graduation rates	+7% high school graduation (8% increase)	\$20 million/yr	\$20 million
Increased median household income	+21% median household income as % of US Average (27% increase)	\$2 billion/yr	-
More affordable housing and Transportation	-11 Housing and Transportation Index points (15% reduction)	\$700 million/yr	\$800 million
Improved infrastructure	+21% infrastructure grade (36% increase)	\$300 million/yr	\$4 billion
Lower unemployment rates	-4% unemployment (50% reduction)	\$700 million/yr	\$200 million
Improved Sustainability Index	+29 sustainability index points (71% increase)	\$4 billion/yr	\$10 billion

¹ Implementation costs are accounted for in the annual cost savings

² Cost and benefits not quantified, assume some of the impact are accounted for elsewhere in this analysis

MT = metric tons

CO₂e= carbon dioxide equivalent

DRP = dissolved reactive phosphorus



Natural Systems




Natural Systems include the natural environment and resources within the Toledo-Lucas County region, such as plant and animal species, air, water, land, and minerals. Going Beyond Green Natural Systems are organized into two focus areas:

**Water Quality and Supply and
Land and Natural Resource Use**





Going Beyond Green Sustainability Index

Indicator	Baseline Condition	2030 Target
 GHG Emissions per Capita	37 Metric Tons CO ₂ e	22 Metric Tons CO ₂ e
 Phosphorus Loading	2,623 Metric Tons Total Annual 1,275 Metric Tons Total Spring 255 MT DRP Spring	1,600 Metric Tons Total Annual 800 Metric Tons Total Spring 150 Metric Tons DRP Spring
 % of Land Area as Open Space	6% of land area	8% of land area

2014- 2015 Implementation Plan



Winter - Spring 2014

Organize all organizations participating in the Source Water Action Plan catalyst project to identify an approach moving forward.

Establish a Green Infrastructure Portfolio Standard task force and conduct training meetings.

Identify Green Infrastructure Portfolio Standard project areas and possible pilot projects.



Spring - Summer 2014

Secure funding and develop scope/ approach for a regional Source Water Action Plan.

Develop 5-year list of Green Infrastructure Portfolio Standard projects and identify sources of funding.



Fall 2014 - 2015

Execute on development of a Source Water Action Plan for the region.

Implement Green Infrastructure Portfolio Standard pilot projects, track and report progress.

Identify and leverage existing collaboration programs.



Spring - Summer 2014

Organize focus area working group.

Build on the Swan Creek Balanced Growth Plan to develop a spatially distributed target for open space in the region.



Fall 2014 - 2015

Organize land preservation and restoration committee focusing on coastal lands.

Organize committee consisting of members from the Oak Openings Green Ribbon Initiative, the Swan Creek Balanced Growth Initiative, the City of Toledo, and other towns to begin regional coordination.

Organize regional committee to create plan for training farmers about best management practices related to land conservation and nutrient reduction.



Water Quality and Supply



Together We Can:

- Restore 150,000 miles of rivers
- Conserve clean water
- Support green infrastructure

That's Going Beyond Green

Since 2002 the Toledo Waterways Initiative (TWI) has been dedicated to managing and improving Toledo's rivers and streams. TWI's Long-Term Plan provides a framework for an 18-year sequence of improvements to the City's storage facilities and sewer systems to minimize the release of raw sewage into the region's watersheds. Before 2020, the City intends to plan, design, and implement dozens of projects that will address combined sewer overflows into the Maumee River, Ottawa River, and Swan Creek.

To date, over \$200 million worth of improvements have been completed. One such TWI project increased the wet weather capacity of the Bay View Water Reclamation Plant from roughly 200 million gallons per day to 400 million gallons per day. Since project completion in 2006 there have been no untreated overflows of sewage from the plant into the Maumee River. TWI will undertake several more projects through 2020 as it continues to improve the region's water quality by reducing the frequency and volume of sewage overflows.



toledowaterwaysinitiative.com



Water Quality and Supply

Effectively manage the region’s watersheds, incorporating regional, national, and international best practices to improve water quality throughout the region.

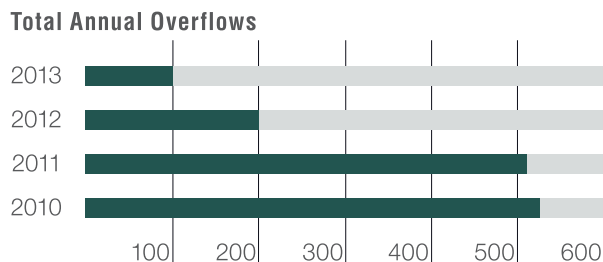
Current Conditions In the Region

Intensive agricultural activities as well as urban nonpoint sources (e.g., construction sites, residences, commercial and industrial facilities, roads, and other transportation infrastructure) contribute pollutants such as sediment and fertilizers to waterways throughout the Toledo-Lucas County region. The U.S. Environmental Protection Agency (EPA) estimates that half of all phosphorus entering Lake Erie from the U.S. side of the lake comes from the Maumee River watershed. The result is harmful algal blooms in the lake that cause additional drinking water treatment expenses, swim advisories, and beach closures every year^[ix]. Total phosphorous loading in the Maumee River was over 1,600 metric tons in 2012^[ij]. The region’s watersheds are so degraded that the U.S.-Canada Great Lakes Water Quality Agreement collectively designated them as the Maumee Area of Concern^[k].

In addition to the water quality issues from nutrients and algal blooms, combined sewer overflows also significantly impact water quality from bacterial contamination. In 2012, the City of Toledo experienced 192 combined sewer overflows (Figure 2). Municipalities are required to reduce the contamination of stormwater runoff to comply with the Federal Clean Water Act. Lucas County and the City of Toledo have dedicated stormwater utilities that are encouraged to collaborate whenever possible. The City of Toledo is implementing the Toledo Waterways Initiative at a cost of \$521 million to reduce combined sewer overflows through separation and storage. Improved stormwater management will also reduce flooding throughout the region and slow runoff via pervious pavement, rain gardens, etc^[kl].



Figure 2. Annual number of combined sewer overflows in the City of Toledo



Going Beyond Green Terminology

Combined sewer systems are sewers that collect rainwater runoff and sewage in the same pipe and deliver that water to a sewage treatment plant. During periods of heavy rainfall or snowmelt this combined volume can overwhelm the sewer system resulting in combined sewer overflows that discharge untreated sewage directly to local water bodies.

Green infrastructure uses vegetation and soil to manage rainwater where it falls as opposed to more traditional gray infrastructure that uses pipes to carry rainwater away from a site. This reduces the stress on sewer systems and treatment plants during storm events by allowing rainwater to infiltrate into the ground naturally.



Going Beyond Green Lenses Impact



Climate Change: Because vegetative, green infrastructure features allow rainwater to infiltrate the ground naturally rather than being piped to the wastewater treatment plant, significant energy savings can be realized from reduced water pumping and treatment. Additionally, increased green space can reduce building heating and cooling energy requirements (heat island effect). Both of these outcomes are effective climate mitigation strategies. These activities will also provide water quality and urban flooding benefits that are critical to an overall climate adaptation strategy. Conversely, the region will have to consider the impact that a warmer climate will have on water quality, such as more frequent algal blooms and changes in habitat for aquatic, terrestrial, and avian creatures.



Equity: Similar to other types of infrastructure, it will be important that water infrastructure receives equitable levels of investment throughout the region to ensure all community members have access to high quality, reliable water for drinking, recreating, and other uses.



Economic Health: Improved water quality and watershed health will lead to increased property values and recreational opportunities and ultimately to increased economic development and vitality for the region. Achieving goals related to water quality and watershed health may require creative approaches and technologies that could establish the region as an innovator.

Priority Actions

1. Develop a comprehensive, County-wide plan to protect and improve the quality of fresh water in the County's rivers and lakes. **
2. Create a Green Infrastructure Portfolio Standard to expand the use of more natural ways to manage water that runs off our streets and other paved areas. **
3. Develop resources to encourage cities, residents, and businesses to work together and share ideas on water issues.

** This action has been identified as a Catalyst Project targeted for implementation in 2014-2015. See the Catalyst Projects section of this document for more information, including implementation plan details

Getting Involved – Everyday Actions

- **Clean Your Stream** – participate in local waterway cleanup projects.
- **Drains are for Rain** – dispose of liquids (paint, motor oil) properly rather than dumping down storm drains, which lead directly to local waterways without being treated.
- **Use Water Wisely** – turn off the tap while you brush your teeth, take shorter showers, and check for leaks in your home.
- **Install your own green infrastructure feature** – volunteer to install a rain garden, green roof, or some porous pavement on your property to help demonstrate and develop enthusiasm around these projects.

Land and Natural Resource Use



Together We Can:

- Conserve 6,000 acres of land
- Build high quality recreational spaces
- Protect vital ecosystems in one of the “200 last great places on Earth”

That’s Going Beyond Green

The Nature Conservancy has listed the Oak Openings region as “one the of 200 last great places on Earth” due to its globally distinct oak savannah and wet prairie ecosystem, which houses more rare species of plants and animals than any other area of Ohio. The Oak Openings Green Ribbon Initiative was established in 2000 as a partnership of local, regional, state, and national conservation groups working together to preserve, enhance, and restore critical areas in the Oak Openings Region of Northwest Ohio and Southeast Michigan. The key is to conserve approximately 6,000 acres of high-quality, contiguous land running like a ribbon through the area. Important members of this initiative include Toledo Metroparks, The Nature Conservancy, Black Swamp Conservancy, The Olander Park System, Oak Openings Conservancy, Ohio Department of Natural Resources, Toledo Zoo, Toledo Botanical Garden, and U.S. Fish and Wildlife Service.

To learn more about the Oak Openings Region visit oakopenings.org





Land and Natural Resource Use

Networks of conservation non-governmental organizations (NGOs), government agencies, and home owners/private land owners collectively work to conserve, restore, and interconnect habitats and ecosystems between public and private lands.

Current Conditions the Region

Currently 6% of land area is conserved for open space in Lucas County (Figure 3). As part of the Swan Creek Watershed Balanced Growth Plan, additional acreage identified as a priority conservation area would increase the total conserved land in the watershed to 8%^[xii]. A target for the entire region has not been set, but the 2014 implementation plan includes spatial analysis to support this effort.

The eastern portion of Lucas County contains the largest stretch of undeveloped coastline in Ohio along Lake Erie, which has the greatest biological diversity and fish production of all the Great Lakes. The Nature Conservancy, a land conservation organization, has listed the Oak Openings region, located in the western part of the County, as “one of the 200 last great places on Earth” due to its globally distinct oak savannah and wet prairie ecosystem. This area houses more rare species of plants and animals than any other area of Ohio^[xiii].

Another important consideration throughout the region is the vacant land being created by housing demolitions, particularly in urban areas. Identifying creative ways to use these newly created spaces will be a focus of Going Beyond Green.

Going Beyond Green Lenses Impact



Climate Change: Keeping land in its natural form (forests, prairies, etc.) has the ability to sequester carbon which helps to mitigate climate change by removing carbon dioxide from the atmosphere. Additionally, increasing the amount of open space in the Toledo-Lucas County region will make the region more resilient to climate change

Figure 3. Lucas County Established Parks and Natural Areas



impacts such as flooding. Conversely, an increasingly warmer climate will have an impact on terrestrial and aquatic ecosystems as habitat ranges shift due to changing temperatures.



Equity: As part of Going Beyond Green, considerations will be made to ensure that the costs and benefits of conserving, restoring, and interconnecting habitats and ecosystems are equitably shared across socio-economic sectors and the various parts of the region.



Economic Health: Healthy, interconnected ecosystems and habitats will lead to improved watershed health and increased recreational opportunities across the region while reducing infrastructure costs and increasing economic development and vitality for the region. Additionally, targeted open space conservation can enable focused development efforts and reduce costs associated with development by guiding it toward less ecologically sensitive and expensive places to build.

Going Beyond Green Terminology

Carbon Sequestration: is the process by which carbon dioxide is removed from the atmosphere and stored long-term in either natural (e.g., trees) or human made (e.g., injection wells) carbon sinks.



Priority Actions

1. Protect more land for wildlife and unique plant life, targeting urban and coastal areas along Lake Erie and building off the work done in the Oak Openings region.
2. Develop a way for City Parks, Metroparks, and other agencies to share ideas and practices to make the best use of parks, wildlife habitats, and other green spaces for the community.
3. Support farmers in adopting best practices to help their farms remain productive while protecting the health of nearby lands and waters.

Getting Involved – Everyday Actions

- **Enjoy regional open spaces** – get outside and enjoy the natural areas in the region.
- **Landscape wisely** – learn about native plants and how to ecologically manage invasive species.
- **Educate your friends and family about open spaces** – you are the best advocate for continuing and expanding the network of natural areas in the region.
- **Encourage friends and family to get outdoors** – help build a critical mass supporting natural areas preservation and connection.
- **Volunteer your time and/or donate to your favorite local conservation group** – our natural areas managers need your support to provide high quality recreation experiences and habitat for plants and animals.



Social Systems




Social systems consider the human dimension of sustainability and the interrelationships among individuals, groups, and institutions. Going Beyond Green Social Systems are organized into two focus areas:

Healthy, Active, and Safe Communities and Education, Engagement, and Empowerment

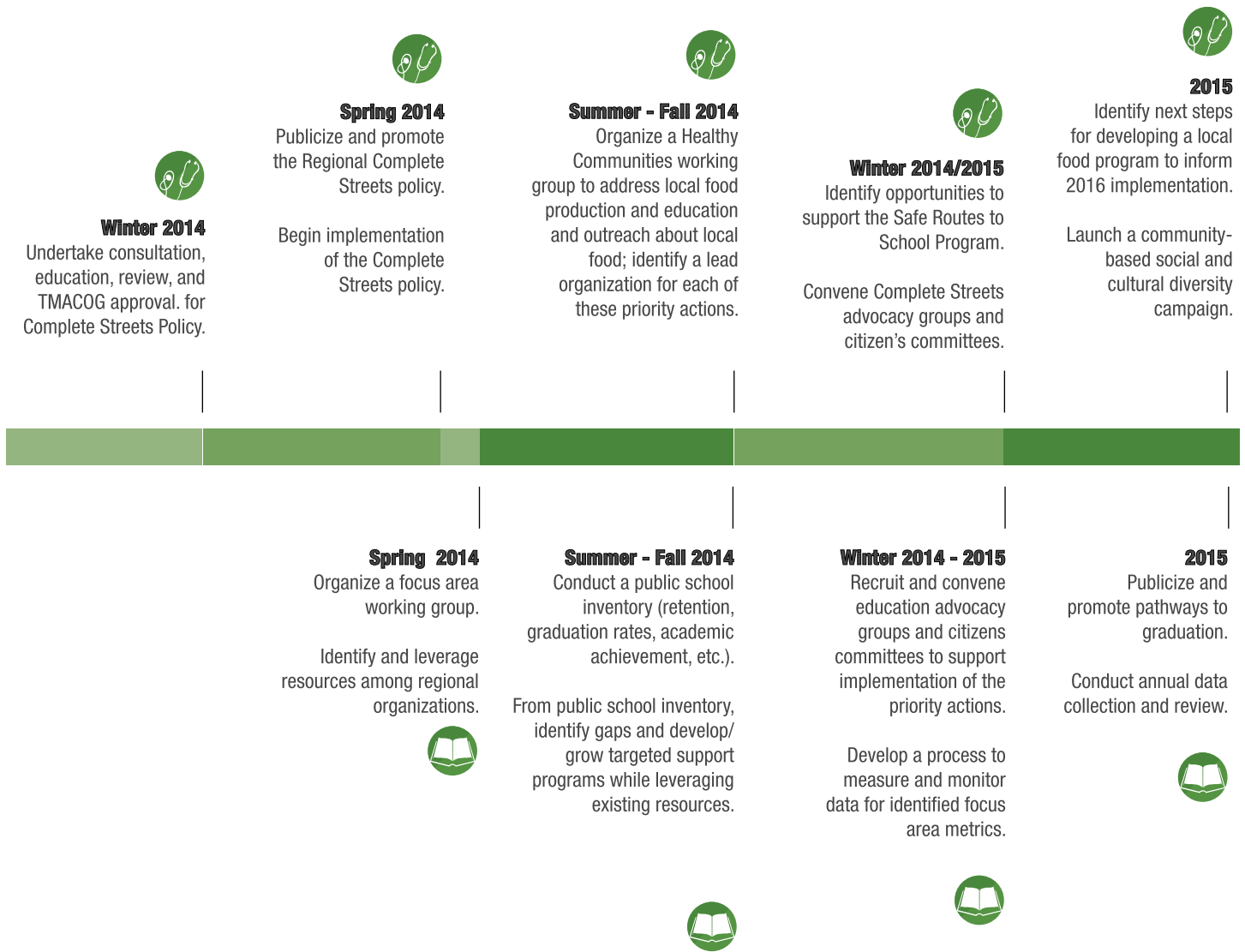




Going Beyond Green Sustainability Index

Indicator	Baseline Condition	2030 Target
 Income Disparity (gender, race, region)	53%	27%
 County Health Ranking (1 = healthiest) Crime Rates (violent/property per 100,000 people)	72 out of 88 956 / 3,568	36 out of 88 478 / 1,784
 High School Graduation Rate (weighted average)	83%	90%

2014-2015 Implementation Plan



Healthy, Active, and Safe Communities



Together We Can:

- Increase physical activity
- Improve access to healthy food
- Build safe routes for our kids to bike and walk to school

That's Going Beyond Green

Live Well Greater Toledo is a collaboration of community leaders and organizations working together to promote policy, systems, and environmental change for a healthier community in concert with a state-wide network of organizations advocating for improved nutrition and physical activity. By offering opportunities in underserved areas of the community, Live Well aims to increase physical activity and improve access to healthier foods, leading to improved health and well-being. One of the key initiatives of Live Well is Toledo Safe Routes to School.

Safe Routes to School is a federally funded program that has been implemented by various communities throughout Ohio, including the Toledo-Lucas County region. The program targets elementary and middle schools and aims to make walking and biking to school a safe and encouraged form of transportation. There is a School Travel Plan initiative underway as part of Safe Routes to School that will evaluate current modes, routes, safety, and best available routes for school children to encourage physical activity before and after school. This plan will be finalized in 2014.



To learn more about Live Well Greater Toledo visit livewelltoledo.org



Healthy, Active and Safe Communities

Advance policies, systems, and infrastructure that promote the availability of nutritious food and opportunities for physical activity and improved security, and enhance the experience of the individuals who live and work here.

Current Conditions in the Region

In 2010 there were 360 active farms in Lucas County and in 2007, 54 Lucas County farms sold food directly to consumers^[xiv]. The number of farmers' markets in the County increased from 2 in 2009 to 7 in 2010. However, nearly 17% of Lucas County residents had lower than average access to traditional grocery stores in 2007^[xv]. There is approximately 0.15 grocery store per 1,000 people, lower than the regional average of 0.31^[xvi]. And in 2011, about 19% of all Lucas County residents received Supplemental Nutrition Assistance Program (SNAP) support^[xvii]. This is the same percentage of County residents that are considered food insecure. In Lucas County over 12,000 low income older adults participate in the Senior Farmers Market Nutrition Program (through the farm bill) and over \$600,000 is brought into the county through this program, annually.

Over 80% of Lucas County residents perceive their health as good or excellent (Figure 4)^[xviii]. This could be slightly optimistic when compared to the City of Toledo's obesity rate of almost 30%. Lucas County residents with higher^[xix]

incomes were more likely to rate their health as excellent or very good while lower income and minority residents were most likely to rate their health as fair or poor. While residents may perceive overall good health, only 56% feel safe in their daily activities (Figure 5)^[xx]. While property crime in Lucas County is only slightly higher than the national average, violent crime is more than double the national average^[xxi].

Going Beyond Green Terminology

Supplemental Nutrition Assistance Program (SNAP)^[xv] is a federal program that provides eligible, low-income individuals and families with food assistance while also providing economic support to communities.

Food insecurity is defined by lack of consistent access to adequate food due to money or other resource limitations at times during the year.

Food deserts are parts of the community void of fresh fruits, vegetables, and other healthful whole foods. Food deserts are usually found in impoverished areas. This is largely due to a lack of grocery stores, farmers' markets, and healthy food providers

Complete Streets is a transportation policy and design approach that requires streets to be planned, designed, operated, and maintained to allow for safe travel by all modes - walking, bicycling, driving, riding public transportation, other mobility devices such as wheelchair locomotion, or delivering goods.

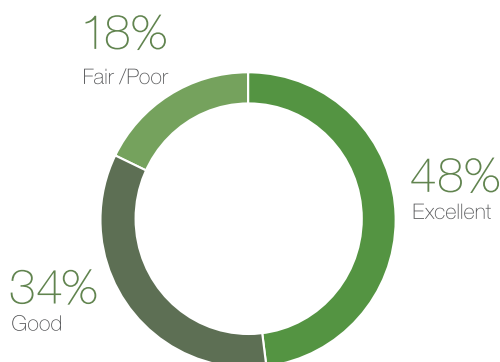


Figure 4. Personal Perception of Health

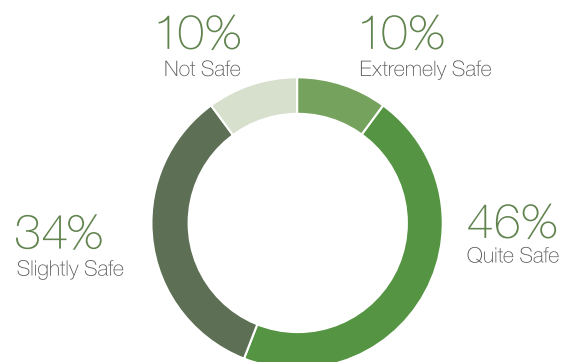


Figure 5. Personal Perception of Safety



Going Beyond Green Lenses Impact



Climate Change: Focusing attention on local food production and sourcing will reduce fuel used for transportation and offer greater regional resilience to climate change impacts on national and global food production. Also, more biking and walking will reduce vehicle miles traveled and related GHG emissions.



Equity: While some areas may have abundant food sources and access to safe infrastructure, consideration should be given to ensuring that these same resources are available in areas with fewer opportunities for both healthy food and safe physical activities.



Economic Health: Generating a demand for local food will create jobs both directly and indirectly. In addition, economic vitality will increase in many areas as crime is reduced and infrastructure is improved.

Priority Actions

1. Encourage a “Complete Streets” transportation policy to increase options for biking and walking, and provide access to safe and affordable ways for people to travel around the County. **
2. Develop better ways to encourage growing, distribution, and access to locally grown and nutritious food throughout the region with a particular focus on areas where access to nutritious food is most limited – sometimes called food deserts.
3. Increase the level of education and outreach about local, healthy food to develop greater interest in and demand for local food.

** This action has been identified as a Catalyst Project and will be implemented in 2014-2015. See the Catalyst Projects section of this document for more information, including implementation plan details.

Getting Involved – Everyday Actions

- **Shop Local** – support farmers’ markets in the community.
- **Seek Out Local/Regional Food** – look for and request locally grown or produced products at traditional groceries or restaurants.
- **Eat an Apple** – integrate healthy snacks into your daily diet.
- **Take up an Active Hobby** – organize a group walk or ride in your area; take advantage of the region’s abundant local waterways to kayak, swim, or row.
- **Become a Community Emergency Responder** – volunteer to become a certified responder for your area; the Federal Emergency Management Agency provides training on basic disaster response skills, such as fire safety and disaster medical operations.
- **Join a Live Well Work Group or Action Team** - Live Well has work groups focused on providing the region access to healthy food and physical activity.

Education, Engagement, and Empowerment



Together We Can:

- Increase graduation rates
- Empower communities to self-organize
- Build a foundation for our youth to become future leaders

That's Going Beyond Green

Promoting cradle to career support for all students in the Toledo-Lucas County region, Aspire is a network made up of pre K-16 schools, researchers, content experts, medical professionals, health and human service agencies, and children's programming providers along with businesses, local government, and philanthropic organizations. Aspire invests in best practices and programs that empower children to reach their full potential coupled with a data-driven accountability system that drives to better results.

Aspire is still in the development stage but is largely based on the national Strive Together Network.





Education, Engagement, and Empowerment

Create a vibrant, creative, and educated community where our diversity is celebrated and anyone can achieve success.

Current Conditions in the Region

In 2011, Lucas County schools had an average 83% high school graduation rate, comparable to the state average and slightly higher than the national average^[iv]. Of County residents over the age of 25, 31% have a post-secondary degree, which is comparable to the state average (Figure 6). Over 92% of County residents over the age of 18 are registered to vote – much higher than the national average of approximately 70%^[xix]. Lucas County is home to a range of cultural organizations including music and art schools, festivals, museums, and a flourishing arts community. The 2007 Economic Census reported that Lucas County had approximately 4,360 individuals employed in the arts, culture, and recreation sector.

Going Beyond Green Lenses Impact

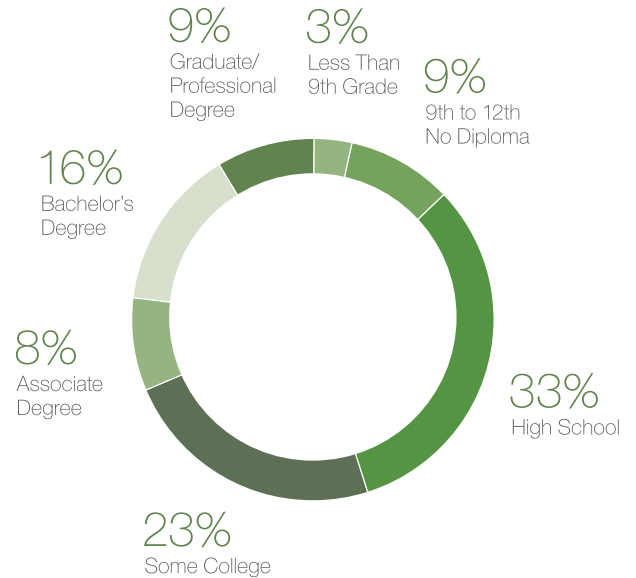


Climate Change: As the Toledo-Lucas County region strives to improve educational performance outcomes and civic engagement, programs specific to climate issues can be incorporated into schools and community empowerment initiatives. An environmentally literate community will self-organize and build programs such as local gardens, recycling programs, and civic campaigns for pro-environment policies. Education empowers citizens to be guardians of their natural world.



Equity: Increasing equitable access to education provides all members of the region with a solid foundation for job-readiness and the opportunity for upward mobility. Reducing educational and cultural disparities among disadvantaged populations empowers communities throughout the Toledo-Lucas County region to self-organize and remove barriers, such as indifference or cultural distrust, and can encourage active participation in public decision-making processes.

Figure 6. Lucas County Education Attainment



Economic Health: Employment gaps persist along lines of educational attainment. The Toledo-Lucas County region can increase its own competitive advantage by recognizing these cracks in information access and by fostering cradle-to-career initiatives. Continuing to promote and grow the region's cultural and arts programs can also boost the local economy and help to define the region as a tourism destination for culture and the arts, which would ultimately contribute to the region's economic vitality.





Priority Actions

1. Develop programs to foster the development of strong youth/community sustainability leaders.
2. Support and enhance cultural resources in order to strengthen industries that support individual creativity and innovation.
3. Support and grow the Aspire Initiative, which is working to improve education opportunities in Lucas County from cradle to career.

Getting Involved – Everyday Actions

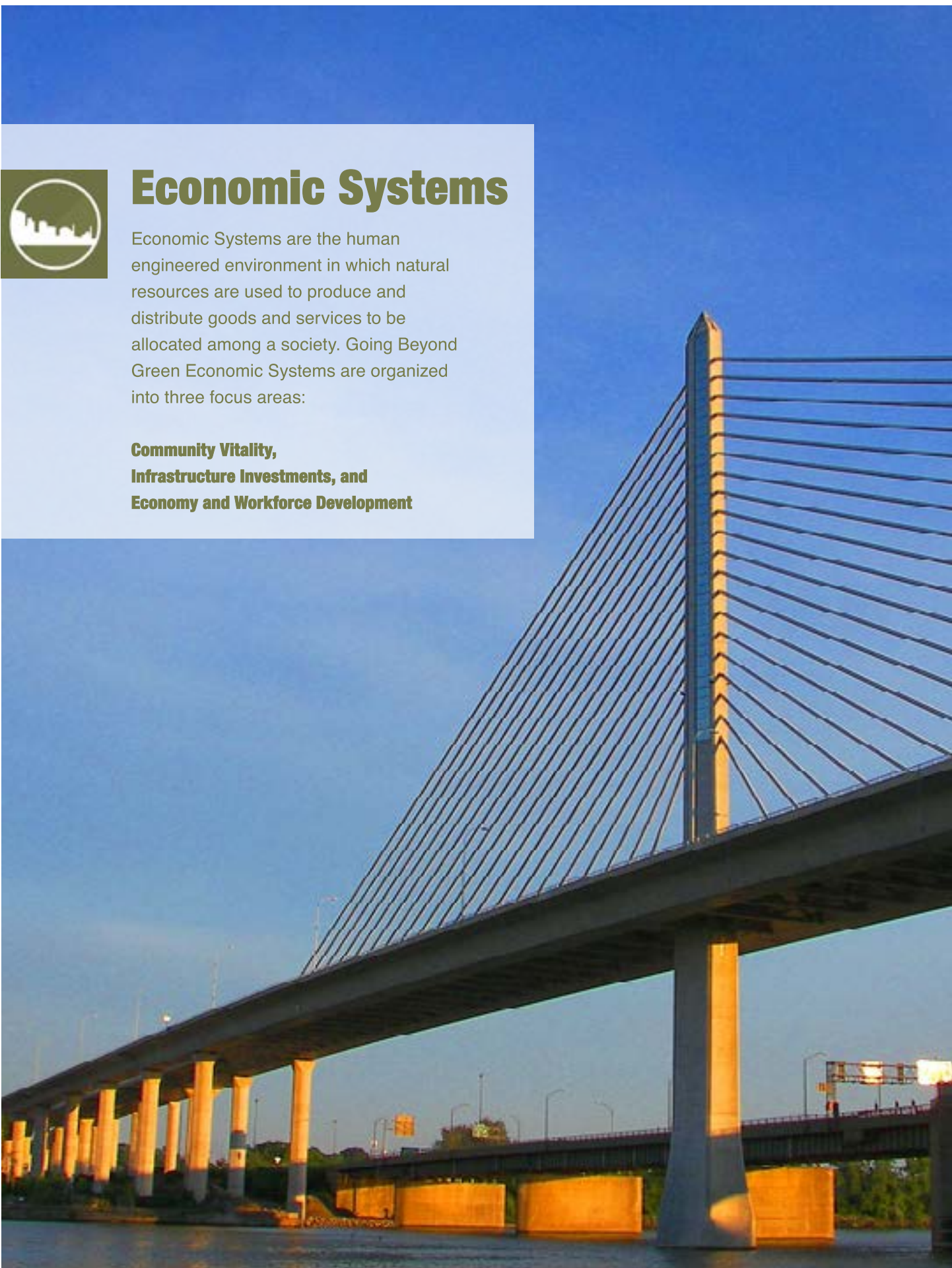
- **Be an advocate** – start or join advocacy groups encouraging arts in education and after school programs.
- **Engage in discussion** - recruit mentors, advocates, and leaders. Pursue a broad range of opportunities for public dialogue, including free public lectures, panel discussions, and structured settings for small-group dialogues.
- **Encourage youth** – support and encourage the youth in your community – they are the next generation of leaders.
- **Get involved** – support or volunteer in a local civic, social, or religious group; voice your opinion via print or electronic media; join your neighborhood or community block group; run for office; participate in local government meetings.



Economic Systems





Economic Systems are the human engineered environment in which natural resources are used to produce and distribute goods and services to be allocated among a society. Going Beyond Green Economic Systems are organized into three focus areas:

**Community Vitality,
Infrastructure Investments, and
Economy and Workforce Development**

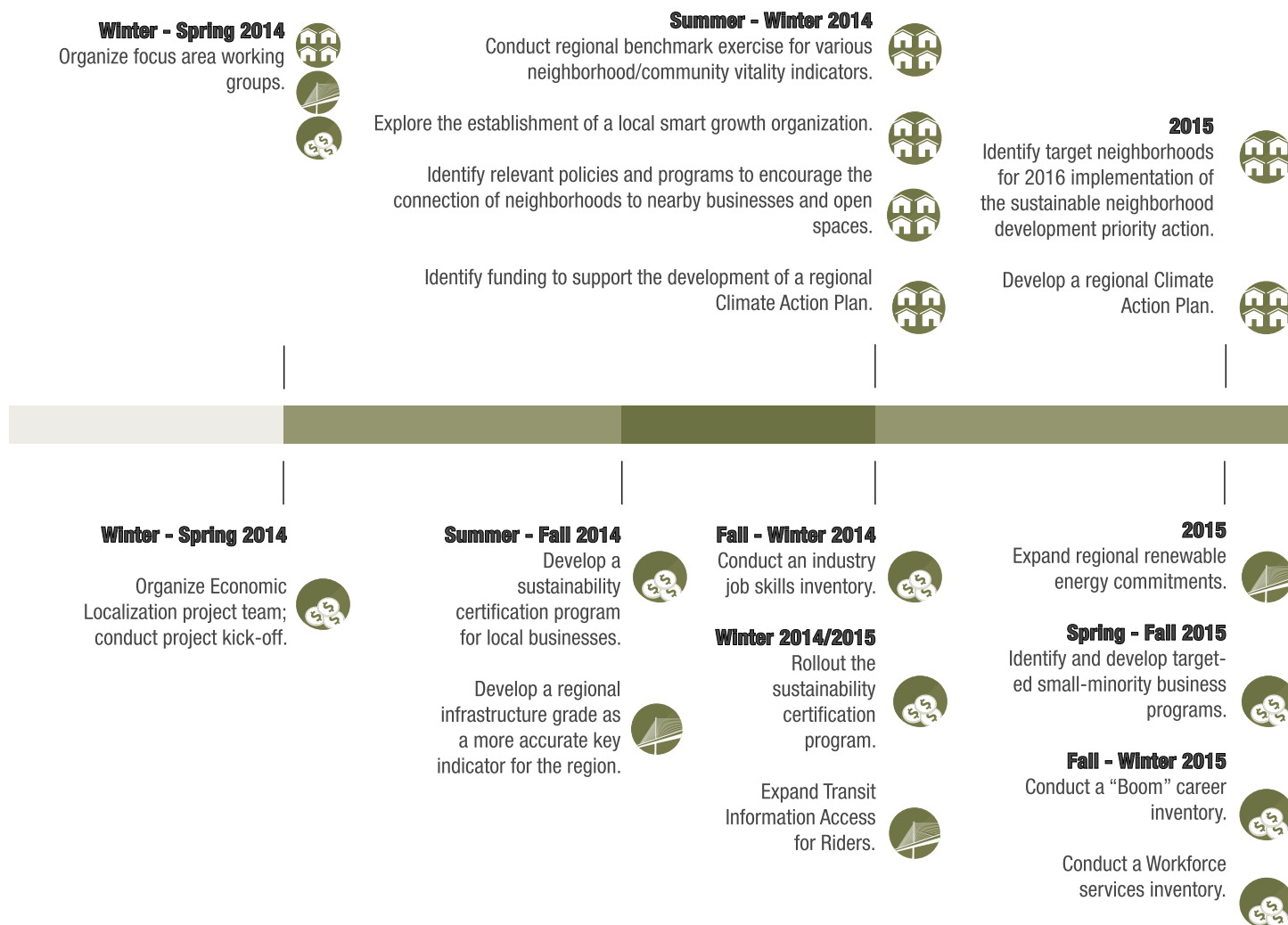




Going Beyond Green Sustainability Index

Indicator	Baseline Condition	2030 Target
 Median Household Income (% of US average)	79%	100%
 Household Expenditures for Housing & Transportation	53%	45%
 Infrastructure Grade	C-	B+/A-
 Unemployment Rate	8%	4%

2014-2015 Implementation Plan



Community Vitality



Together We Can:

- Invest in safe, sustainably built communities
- Protect land and water quality while embracing growth
- Build affordable housing and foster connected communities

That's Going Beyond Green

The EPA Building Blocks for Sustainable Communities grant program offers quick, targeted technical assistance to selected local governments to stimulate discussion about growth and development and strengthen local capacity to implement sustainable approaches.

In early 2013, Toledo completed a sustainable neighborhood assessment of Overland Industrial Park and the Old West End neighborhood with technical assistance from the Building Blocks for Sustainable Communities Grant Program and Global Green USA. The assessment provides recommendations for increasing sustainability while supporting revitalization and smart growth. This assessment focuses on a specific neighborhood, but the process and principles can be applied to other areas of the Toledo-Lucas County region.

To learn more about the EPA's Building Blocks program visit :

epa.gov/dced/buildingblocks.htm





Community Vitality

Use smart growth principles to develop or redevelop our buildings, neighborhoods, and transportation for sustainability - conserving, connecting, and engaging the community.

Current Conditions in the Region

Housing and transportation expenses consume 53% of household income in Lucas County (Figure 7), which is higher than the 45% considered affordable^[vi]. Lucas County has an aged building stock with 50 to 60% of residential housing having been built before 1960 – double the national average^[xj]. There are 735 people per square mile in Lucas County; Toledo is the most dense community in the County at 3,376 people per square mile. Electricity consumption in Lucas County averages 13.7 megawatt-hours per capita, which is comparable to the Ohio and national averages.

Going Beyond Green Lenses Impact



Climate Change: Energy and water efficiency improvements to buildings will help reduce GHG emissions. Transit-oriented smart growth has the potential to reduce vehicle miles traveled and the associated GHG emissions. Community redevelopment and smart growth is also an opportunity to implement climate change adaptation strategies such as not building in flood zones and considering temperature impacts in infrastructure design. .

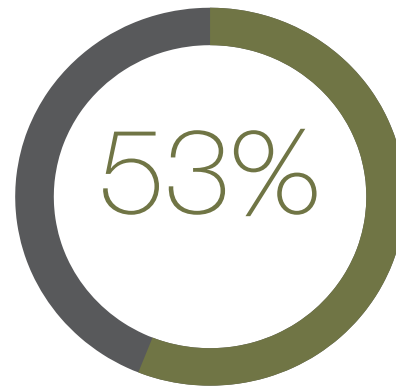


Equity: Smart growth can be used to provide affordable housing, increase mobility and access to jobs, improve health, and help reduce poverty. Energy efficiency upgrades can reduce and stabilize utility costs, which can have a positive impact in particular for small businesses and low-income populations.



Economic Health: Smart growth strategies can reduce housing and transportation costs, support local businesses, and create construction jobs.

Figure 7. Housing and Transportation Expenses*



*As a percent of total household income

Going Beyond Green Terminology

Smart Growth means building urban, suburban, and rural communities with housing and transportation choices near jobs, shops, and schools. The Smart Growth Network developed a set of 10 basic principles:

1. Mix land uses
2. Take advantage of compact building design
3. Create a range of housing opportunities and choices
4. Create walkable neighborhoods
5. Foster distinctive, attractive communities with a strong sense of place
6. Preserve open space, farmland, natural beauty, and critical environmental areas
7. Strengthen and direct development toward existing communities
8. Provide a variety of transportation choices
9. Make development decisions predictable, fair, and cost effective
10. Encourage community and stakeholder collaboration in development decisions



Priority Actions

1. Develop programs and policies that connect neighborhoods to nearby businesses and open spaces with walking and/or biking trails or sidewalks.
2. Work with community groups to develop neighborhood Going Beyond Green plans and encourage grassroots implementation and ownership.
3. Develop a regional Climate Action Plan

Getting Involved – Everyday Actions

- **Support smart growth principles** – live, work, and shop at developments in your community that follow smart growth principles, such as smaller housing units and denser developments.
- **Conserve energy** – Change out your light bulbs for more efficient options, turn off appliances when not being used, and improve the insulation in your house.
- **Reduce, reuse, recycle** – use only what you need, reuse products rather than throwing them away, and take advantage of your neighborhood’s recycling offerings.
- **Practice Going Beyond Green at home** – use green practices when renovating your home or landscaping your yard.
- **Keep the Toledo-Lucas County region beautiful** – participate in efforts to revitalize and beautify your community or neighborhood.
- **Consider alternative transportation options** – walk, bike, and use public transportation.
- **Take advantage of utility energy efficiency programs** – both First Energy and Columbia Gas offer programs and financial rebates for their customers to reduce home or business energy use.



Together We Can:

- Boost economic results from private and public development investment
- Reduce emissions through access to public and alternative transportation
- Increase access to clean, affordable energy

That's Going Beyond Green

The Toledo Zoo is transforming a 22-acre plot of vacant land into its latest green investment – a 2-megawatt solar array. This repurposed brownfield will now house a 28,000-panel solar array that will provide the Zoo with roughly 30% of its power, making it one of the nation's largest solar arrays to supply power to a zoo.

The Toledo Zoo is quickly becoming an exemplar of green infrastructure investments. Beyond its most recent solar installation, in 2010 the Zoo put in a SolarWalk – over 1,400 solar panels that snake along the perimeter of the zoo parking lot to the entrance. In 2012 the SolarWalk generated just under 100 megawatt-hours of electricity. In addition to its solar projects, the Zoo installed a wind turbine to generate power for its parking booths, uses geothermal wells to help heat aquariums, and has implemented a variety of energy saving measures.

To learn more about sustainability initiatives at the zoo visit:
toledozoo.org/site/page/sustainability_initiatives





Figure 8.

Infrastructure Investments

Have a world class and well maintained infrastructure grid for water, energy, transportation, waste management, and knowledge/communications.

Current Conditions in the Region

In 2010, the American Society of Civil Engineers rated the condition and performance of Ohio's infrastructure a C- (Figure 8) – slightly higher than the overall U.S. rating of D+[vii]. Lucas County's infrastructure is aging – some of its roads and pipes date back to the 1800s. There were 365 sewer main breaks in the City of Toledo in 2012, down from 442 in 2010. Renewable energy makes up 1.5% of total County energy supply with less than 0.1% from solar. The average County resident drives 22 miles per day and 88% of commuting is by car_[vii]. The Lucas County Solid Waste Management District had a residential and commercial waste reduction and recycling rate of 24% in 2012. An energy special improvement district was created in 2011 with the support of the Toledo-Lucas County Port Authority, the City of Toledo, and Lucas County that enables commercial property owners to make energy efficiency improvements to their buildings that are paid back through a special assessment on the property billed by the County. The energy savings realized by the property owners provide the cash to pay back the assessment.

Going Beyond Green Lenses Impact



Climate Change: Investments to improve the efficiency of infrastructure and lower GHG emissions by reducing the use of fossil fuels are critical. Energy efficiency, renewable energy, and a smart grid lessen electricity, coal, and natural gas use; transportation alternatives cut down the need for gasoline use in personal vehicles; water system efficiency lowers electricity use for pumping and treatment; and broadband access can make travel less necessary by allowing individuals to work from home and businesses to conduct meetings and other activities online. Improving infrastructure quality and right-sizing also will make the region more resilient to climate change impacts, such

State of Ohio Infrastructure Report Card

Report Card	
Subject	Grade
Aviation	C-
Dams	C
Education	C
Energy	C+
Parks	C-
Rail	C
Roads	D
Wastewater	C-
2010 STATE REPORT CARD GRADE	
	C-

as high heat days, intense storms, and increased flood events.

Equity: Water, energy, transportation, access to jobs, and internet access are all essential for day-to-day life in the region. It will be important that this infrastructure receives equal levels of investment throughout the region. Improving the region's infrastructure will create jobs and help lower utility bills. Increasing access to work can expand household earning potential.



Economic Health: Infrastructure investment provides a platform for economic development by improving transportation efficiency, increasing broadband connectivity and speeds, providing high quality water and energy services, and reducing the cost of doing business.



Going Beyond Green Terminology

Smart Grid refers to a class of technologies that utilizes communications and information systems to coordinate efficient electrical utility production and distribution.

Complete Streets is a transportation policy and design approach that requires streets to be planned, designed, operated, and maintained to allow for safe travel by all modes - walking, bicycling, driving automobiles, riding public transportation, or delivering goods.



Going Beyond Green Terminology

Property Assessed Clean Energy (PACE) refers to a new energy efficiency and renewable energy financing tool that enables commercial property owners to make improvements to their buildings through an energy special improvement district and pay for those improvements through the cash provided by the energy savings. The property owner is billed through a line item on their County property tax duplicate. BetterBuildings is the Port Authority financing program offered in conjunction with the Northwest Ohio Advanced Energy Improvement District. Buildings of all types and sizes can achieve energy savings of 20-50%. The program is offered to all types of businesses, not-for-profits, governments, and school buildings and enables the installation of a wide variety of energy efficiency and renewable energy technologies while creating positive local job impacts. The energy improvement district is one of the largest and most active in the country providing \$30 million in funding for 80 projects. Over \$100 million of additional projects are targeted for hundreds of buildings in the region.

Priority Actions

1. Expand and build on the BetterBuildings program which provides financing for energy efficiency technology.
2. Decrease the amount of energy businesses and governments use while increasing the amount of energy they get from renewable sources such as solar and geothermal energy.
3. Develop tools and programs to encourage more people to ride public transportation.
4. Support the solid waste management programs being implemented for residential, commercial and industrial entities decreasing reliance on landfilling while encouraging recycling and reaching waste reduction goals.

Getting Involved – Everyday Actions

- **Leave Your Car at Home** – try walking, biking, carpooling, or taking transit to work or school one day a week; advocate for the infrastructure you need on your route like bike racks and sidewalks; and organize a neighborhood walk or bike caravan to school.
- **Clean up Your Power** – explore installing high energy efficiency equipment, LED lighting, solar technology, or purchasing renewable energy for your home or business. Contact BetterBuildings at 419.720.1102 for more information.
- **Drive Smarter** - how you drive can affect your car's fuel efficiency and keeping up with car maintenance saves on fuel costs.
- **Reduce, Reuse, Recycle** - minimize the waste you produce by buying reusable instead of disposable products, recycle, and compost your food scraps.

Economy and Workforce Development



Together We Can:

- Buy local and spur the economy
- Enhance job training and compete with industries on a global scale
- Increase employment rates

That's Going Beyond Green

Investing in locally-owned, independent businesses is a great way to spur the local economy. For every \$100 spent in a locally-owned business, \$73 stay in the local economy as compared to \$43 for a non-locally owned business. Toledo Choose Local is a volunteer organization dedicated to supporting locally-owned businesses in the Toledo area. By providing a directory of member businesses and speaking at events throughout the community, Toledo Choose Local acts as a resource for community members to learn more about the buy local movement and easily identify local businesses to support in Toledo.

To learn more about Toledo Choose Local visit: toledochooselocal.org





Economy and Workforce Development

Develop an environment where business, government, academia, and non-profits work together for economic health, sustainable growth, and economic opportunity.

Current Conditions in the Region

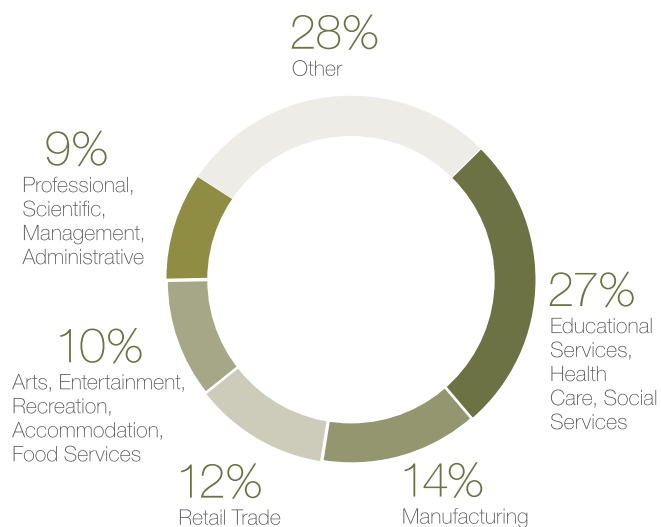
There are almost 9,800 business establishments in Lucas County with the Educational, Health Care, and Social Services sectors employing over 25% of the workforce (Figure 9)^[xii]. The County median household income was \$40,529 in 2012 – 20% below the national average. Annual unemployment in 2012 was 8% - in line with the national average. Historically, the Asian and American Indian communities have had the lowest unemployment in the County, while African Americans have had the highest^[v].

Going Beyond Green Lenses Impact



Climate Change: As the Toledo-Lucas County region continues to develop its workforce and economy, considerations should be made for attracting businesses that have a positive impact on climate change either through the products/services offered or their internal business practices. Additionally, efforts should be made to encourage growth of regional workforce capabilities in sectors such as clean energy that are focused on addressing climate change.

Figure 9. Lucas County Workforce by Industry



Equity: Recognizing the disparity in unemployment rates by race as well as the differences in employment opportunities for different subsets of the region's population, it will be important to consider how best to address this disparity, ensure services are reaching undeserved populations, and provide opportunity to all members of the region.



Economic Health: Identifying opportunities to spur economic growth within the region will have a positive impact on employment rates and income in the region.

Going Beyond Green Terminology

Clusters are geographic concentrations of interconnected companies who work closely with each other, local suppliers, infrastructure providers, educational institutions, and other relevant agencies.

As summarized by the University of Toledo, **cluster-based development** is based on the premise that a company (and its region) can realize higher levels of competitiveness when it looks beyond its own limited capacity and strategically partners with other companies and support institutions to address challenges and solve problems that it is unable to solve when operating as an isolated entity.



Priority Actions

1. Support and grow locally-owned businesses and encourage local governments to shift purchasing to locally produced products and services.**
2. Align programs aimed at growing job skills for residents with current and emerging needs of the region's primary industry clusters, with a particular focus on developing high-skilled careers.
3. Enhance job training to preserve local manufacturing industries, while also helping the region remain globally competitive as it transitions to industries such as advanced manufacturing technologies.

** This action has been identified as a Catalyst Project and will be implemented in 2014-2015. See the Catalyst Projects section of this document for more information, including implementation plan details.

Getting Involved – Everyday Actions

- **Shop Local** – support the businesses and other organizations in your community.
- **Enroll in a Class** - take advantage of the various job skills and continuing education programs offered in the region as an opportunity to advance your career.
- **Take on an Apprentice** - train the next generation so they will have a unique set of skills and can become a contributing member of the local workforce.



Catalyst Projects

- Source Water Action Plan
- Green Infrastructure Portfolio Standard
- Complete Streets
- Economic Localization
- Better Buildings

Source Water Action Plan

The health of a watershed is predominantly determined by the quality of the water it produces. Many watersheds lack protection or planning to mitigate harmful pollutants and bacteria from contaminating source water. Though local utilities treat water before it is delivered to residents, protecting a region's watershed from pollution reduces risk factors to public health and ecosystems. A Source Water Action Plan (SWAP) provides guidelines at all levels (municipalities, businesses, residents) on how to effectively manage the region's watersheds, incorporating regional, national, and international best practices for watershed management. Developing a SWAP will protect the region's watersheds by providing government, water utilities, and community members with a road map to successfully address source water contamination and protect local watersheds.

Project Vision and Objectives

Implementing a SWAP in the Toledo-Lucas County region means more than just properly disposing of motor oil. Providing a foundation for community education and involvement will empower citizens to become advocates for their community's water supply, including safe drinking water, healthier wildlife habitats and fewer beach closures, improved water quality in local streams, reduced water treatment-related energy use and cost, and increased property values across the region. All these benefits will make the region a more attractive and sustainable place to live, enhancing social and economic sustainability. At the same time, local businesses and residents will learn about the importance of exemplary water management and land practices and enjoy the benefits of improved water quality.

Collaboration and Partnerships

There are a number of organizations that have already been engaged in regional source water protection and all will be essential in advancing this catalyst project:

- American Rivers
- City of Toledo (e.g., Division of Engineering Services, Environmental Services, Sewer and Drainage, Utilities Administration)
- Environment Ontario, Canada
- Great Lakes Restoration Initiative
- Lake Erie Waterkeeper
- Lucas County Soil and Water Conservation District
- Ohio Environmental Protection Agency
- Swan Creek Watershed Balanced Growth Plan
- The State of Ohio's Lake Erie Commission
- Toledo-Lucas County Plan Commission
- Toledo Metropolitan Area Council of Governments
- Toledo Regional Chamber of Commerce
- Toledo Waterways Initiative

Going Beyond Green Terminology

Source water is untreated water from streams, rivers, lakes, or underground aquifers that is used to provide public drinking water as well as to supply private wells used for human consumption.

Combined sewer systems are sewers that collect rainwater runoff and sewage in the same pipe and deliver that water to a sewage treatment plant. During periods of heavy rainfall or snowmelt this combined volume can overwhelm the sewer system resulting in combined sewer overflows that discharge untreated sewage directly to local water bodies.

Progress to Date

In early 2013, Carroll Township was forced to shut down its drinking water distribution system due to high toxin levels in West Lake Erie. Since then, treatment managers from the Western Basin have started to organize and engage elected officials in a discussion on the importance of source water protection. Assembling and implementing a regional SWAP is likely to require continued support from various groups and leaders, including elected officials.

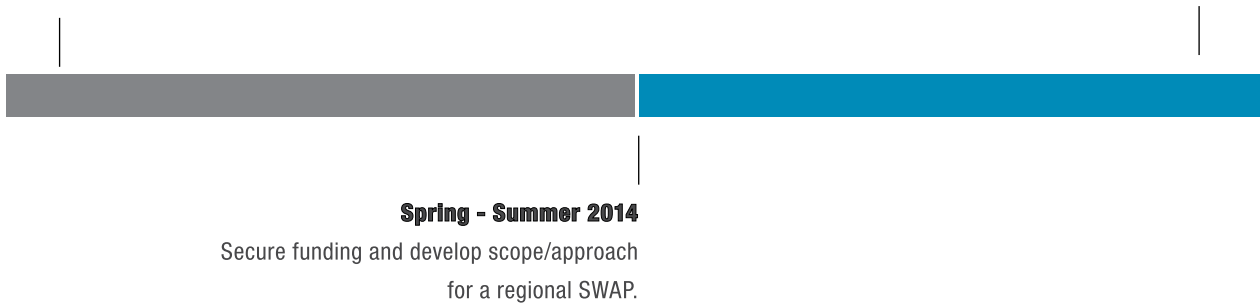
2014 - 2015 Implementation Plan

Winter - Spring 2014

Organize all participating organizations to identify an approach moving forward.

Fall 2014 - 2015

Execute on development of a SWAP for the region.



Spring - Summer 2014

Secure funding and develop scope/approach for a regional SWAP.

SWAP and Going Beyond Green

Recognizing the breadth of a regional SWAP initiative, success will require the involvement of a number of organizations. As part of a larger team, Going Beyond Green and the Toledo-Lucas County Sustainability Commission will serve as advocates for the SWAP, providing an avenue for education and outreach to the community about the importance of source water protection and water quality.

Looking through the Going Beyond Green Lenses



Climate Change



Equity



Economic Health

An increasingly warmer climate will have negative impacts on water quality (e.g., more frequent algal blooms) and habitat for aquatic, terrestrial, and avian creatures. A SWAP will help the region better adapt to these impacts.

The costs and benefits of improved water quality and watershed protection should be equitably shared across socio-economic sectors and the various parts of the region to ensure that all members of the community benefit.

Improved water quality and watershed health will lead to increased property values, recreational opportunities, and ultimately increased economic health and vitality. Creative solutions needed to improve watershed health could establish the region as an innovator.

Green Infrastructure Portfolio Standard

A defining characteristic of urban communities is the quantity and density of impervious surfaces that prevent rain from being absorbed by the ground and plants. The volume of and pollution contained in stormwater runoff from these surfaces adversely affects the quality of local water bodies and increases property flooding. To address these problems, urban communities have attempted to restore the natural water cycle by adopting standards for developers to use more of green infrastructure (GI) techniques that help rain water infiltrate the ground, use it to irrigate plants, or collect it for reuse. Such practices help minimize the volume and pollutant loads discharged directly into the sewer systems and streams.

The Green Infrastructure Portfolio Standard (GIPS) is an effective approach for planning and organizing how to retrofit the developed landscape with GI in a manner that allows urban communities to focus resources in select neighborhoods, set annual retention goals, track progress, and evaluate and report the results on a regular basis. To address its surface water quality and local flooding issues, the Toledo-Lucas County region has decided to establish a GIPS that, if successful, will continue to motivate and guide the installation of GI projects over a period of 5 to 10 years or more, providing multiple benefits to the community.

Project Vision and Objectives

Implementing a GIPS program in the Toledo-Lucas County region means more than just installing plants to clean up the water. The gradual and deliberate scaling up of GI over several years will provide many benefits, including cleaner air, reduced energy use and costs, more wildlife habitat and recreational open space, more attractive and comfortable downtown walking and parking areas, improved water quality in local streams, reduced property flooding, and increased property values across the region. All these benefits will make the region a more attractive and sustainable place to live, enhancing social and economic stability. At the same time, local businesses and residents will learn about the importance of maintaining a balance between impervious and previous landscaping and enjoy the appearance of a more vegetative landscape.

Progress to Date

The GIPS catalyst project has not moved much beyond the concept stage in the Toledo-Lucas County region. A critical early step will be to engage with and obtain the support of senior management in the City and County. Assembling the task force and scheduling regular meetings is likely to require a directive and continued support from these leaders; without it the initiative is less likely to succeed.

Going Beyond Green Terminology

Impervious surfaces are typically manmade surfaces, such as sidewalks, streets, and rooftops, that are covered by impenetrable materials such as asphalt, concrete, brick, and stone.

Green infrastructure (GI), uses vegetation and soil to manage rainwater where it falls as opposed to more traditional gray infrastructure which uses pipes to carry rainwater away from a site. GI reduces the stress on sewer systems and treatment plants during storm events by allowing rainwater to infiltrate the ground naturally.

Heat island effect occurs in urban areas when buildings, roads, and other infrastructure replace open land and vegetation. Surfaces that were once permeable and moist become impermeable and dry, forming an island of higher temperatures in the landscape.

Collaboration and Partnerships

In setting up the GIPS catalyst project, the first step is to establish a task force with representation from several government departments and members of the public. For example, the following departments and other entities should be invited to participate:

- American Rivers
- City of Toledo (e.g. Division of Engineering Services, Environmental Services, Sewer and Drainage, Utilities Administration)
- Lucas Soil and Water Conservation District
- Toledo-Lucas County Rain Garden Initiative
- Toledo-Lucas County Plan Commission
- Toledo Metropolitan Area Council of Governments
- Toledo Regional Chamber of Commerce
- Toledo Waterways Initiative

2014 - 2015 Implementation Plan

Winter - Spring 2014

Establish task force, conduct training meetings; identify project areas and possible pilot projects.

Fall 2014 - 2015

Implement pilot projects; track and report progress.



Spring - Summer 2014

Develop 5-year list of projects and identify sources of funding.

GIPS and Going Beyond Green

Going Beyond Green and the Toledo-Lucas County Sustainability Commission will help the GIPS project by identifying funding opportunities, applying for and administering grants, facilitating GIPS Task Force meetings, and convening regular educational workshops on GI.

Looking through the Going Beyond Green Lenses



Climate Change



Equity



Economic Health

GI reduces energy use and GHG emissions through reduced building heating and cooling loads (heat island effect) and reduced water pumping and treatment requirements. Increasing the capacity of drainage systems to respond to moderate and large storms will also improve climate resiliency in the region.

Targeting a diverse range of sites throughout the County for GI projects will ensure that all members of the community benefit from the GIPS program.

GI features can be installed by locally-owned, independent businesses, contributing to a thriving local economy. By reducing energy use, GI provides potentially significant cost savings for the community. The improved aesthetic GI brings could also increase patronage of local businesses near GI projects.

Complete Streets – A Safe and Active Region

A key element of a vibrant and thriving region is a safe and accessible roadway infrastructure for all users, including drivers, transit riders, bicyclists, and pedestrians. The City of Toledo passed a complete streets policy in 2010 that requires transportation planning, design, construction, and improvements to accommodate all types of users. The opportunity and challenge now is to move from policy to action and to encourage regional collaboration that enables multi-modal improvements and accessibility throughout the region.

Project Vision and Objectives

The Complete Streets catalyst project is working toward the goal of a safe and active Toledo-Lucas County region, where travelers of all ages are able to use the infrastructure with whichever mode they choose in a safe and convenient way. This goal includes increasing opportunities for bicycling and walking – an opportunity to be healthier and more sustainable – while also improving auto safety and connecting communities. The Complete Streets catalyst project will:

- Move Toledo from policy to action by engaging the community as well as and transportation engineers and developers to ensure projects are meeting Complete Streets principles.
- Encourage other communities in the region to adopt complete streets policies and practices that will link areas and opportunities for citizens.
- Educate communities about multi-modal options and codes for safety.
- Work with the City of Toledo and local schools to develop Safe Routes to School.

Collaboration and Partnerships

There are a number of organizations that are essential to the success of our transportation infrastructure and will need to be involved in advancing this catalyst project:

- Toledo Metropolitan Area Council of Governments Pedestrian and Bikeways Committee
- Toledo Area Regional Transit Authority
- Growth Strategies Council
- City of Toledo
- Live Well Greater Toledo
- Metroparks of the Toledo Area
- University of Toledo
- Lucas, Wood, and Monroe Counties
- Neighborhood groups in areas experiencing change
- Ohio Department of Transportation

Progress to Date

The Toledo Complete Streets policy has been in effect since 2010 and many streets have already seen improvements. Examples include new crosswalks and sidewalks near the University of Toledo, paths on Summit Street near the Craig Street Bridge, and many other bike lanes. Other key accomplishments include:

Going Beyond Green Terminology

Complete Streets is a transportation policy and design approach that requires streets to be planned, designed, operated, and maintained to allow for safe travel by all modes - walking, bicycling, driving automobiles, riding public transportation, or delivering goods.

Safe Routes to School is a national and international movement to create safe, convenient, and fun opportunities for children to engage in active transportation such as bicycling and walking to and from schools.

- A Growth Strategies Council that coordinates land use planning across the region.
- A regional sidewalk policy that promotes best practices for developers, builders, and planners.
- A multi-modal needs assessment conducted in 2011, with updates planned for 2014, that considers balance and integration among transportation modes and needs.
- A concerted effort to have Complete Streets incorporated into regional long-range planning, efforts. Currently, Toledo Metropolitan Area Council of Governments is drafting a revised Complete Streets Policy that will address growth, sidewalks, transportation modes, and planning.
- A Safe Routes to School 2013-2014 Travel Plan.

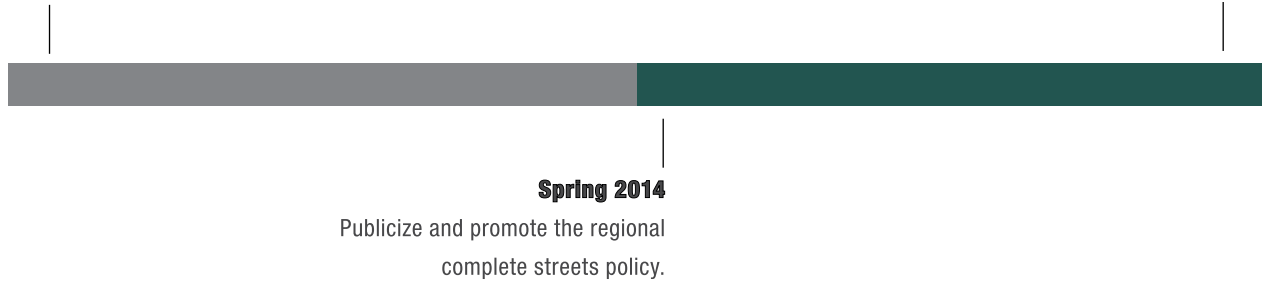
2014 - 2015 Implementation Plan

Winter 2014

Undertake consultation, education, review, and TMACOG approval.

Spring 2014 - 2015

Implementation policy (workshops, pilot projects, etc.)



Spring 2014

Publicize and promote the regional complete streets policy.

Complete Streets and Going Beyond Green

Going Beyond Green and the Toledo-Lucas County Sustainability Commission will provide support to the Growth Strategies Council to encourage policy makers to implement a more stringent Complete Streets policy at the County level. Also, Going Beyond Green representatives will provide input to initiatives and participate on committees. An example is the Bikeshare Initiative currently underway at the University of Toledo designed to evolve into the greater community. Furthermore, Going Beyond Green representatives will offer support for education/outreach and highlight underserved areas of the community in terms of equal access. In addition Going Beyond Green will help identify funding for projects, encourage timely implementation of Complete Streets initiatives, and ensure that any regional efforts align with the framework and objectives of Going Beyond Green.

Looking through the Going Beyond Green Lenses



Climate Change



Equity



Economic Health

Making it safer and easier for people to choose to walk, bike, or take transit around the region will reduce gasoline use and GHG emissions while saving households money.

Complete streets make transportation safer and more accessible for all, including seniors, children, and disabled residents. They also help everyone safely access work, school, and other destinations without the expenses of a car.

Increasing foot and bike traffic is good for local business. Safe, low-cost access to jobs is a benefit for employers and employees alike. The local economy will also profit from reducing the amount of money sent outside of the region for fuel purchases.

Economic Localization – Toledo Choose Local

An important part of ensuring a vibrant and thriving region is the success of locally-owned independent businesses in the region. Local, one-of-a-kind businesses help to preserve the character of a place and strengthen communities by sustaining vibrant town centers. Additionally, local business owners tend to make decisions in the best interest of the communities in which they live and typically reinvest a larger share of their revenue into the local economy. Toledo Choose Local is spearheading the economic localization movement in the Toledo-Lucas County region.

Project Vision and Objectives

Toledo Choose Local envisions a vibrant, vital, and collaborative local economy that reflects the region's unique culture and contributes to a healthy ecosystem where local businesses thrive. Dedicated to supporting locally-owned independent businesses, Toledo Choose Local aims to accomplish the following:

- Raise awareness of the benefits of locally-owned, independent businesses.
- Encourage local purchasing by consumers, businesses, and government agencies.

Collaboration and Partnerships

There are a number of business organizations partnering with Toledo Choose Local and other groups in the region that will collaborate to advance this catalyst project:

- Byrne Heatherdowns Business Association
- Lucas County Economic Development Corporation
- Reynolds Corners Merchants Association
- Sylvania Area Chamber of Commerce
- Toledo Warehouse District Association
- United North
- University of Toledo Minority Business Development Center
- UpTown Association
- Uptown Maumee

Progress to Date

Toledo Choose Local has been in operation since 2011 advancing localism in the Toledo-Lucas County region. The organization supports locally-owned businesses and promotes organization members located within a 45-mile radius of downtown Toledo. A Speakers Bureau has also been developed and is available to speak about the benefits of being a locavore and/or the history of the local movement at events throughout the region.

Going Beyond Green Terminology

Locavore is a person who eats primarily food that is grown or produced locally.



2014 - 2015 Implementation Plan

Winter - Spring 2014

Organize project team;
conduct project kick-off.

Winter 2014/2015

Roll out sustainability
certification program.

Spring - Fall 2014

Develop a sustainability certification
program for local businesses.

Spring - Fall 2015

Identify and develop targeted small and
minority business programs.

Economic Localization and Going Beyond Green

Going Beyond Green and the Toledo-Lucas County Sustainability Commission will help to ensure that any economic localization efforts in the region align with the framework and objectives of Going Beyond Green. As an example, Going Beyond Green will play a vital role in the sustainability certification effort which will bring attention to local businesses, advancing sustainability and the Going Beyond Green mission.



Looking through the Going Beyond Green Lenses



Climate Change



Equity



Economic Health

A sustainability certification for local businesses will provide visibility to businesses while also encouraging environmental stewardship and reduction in GHG emissions. The ClimateWise program in Fort Collins, Colorado is an example of this at work.

Advancing targeted programs that support and advance small and minority businesses such as those offered by University of Toledo's Minority Business Development Center, will help all members of the community succeed and thrive.

Successful locally-owned independent businesses tend to reinvest revenue in the communities where they live, contributing to a thriving local economy.

BetterBuildings Program of Northwest Ohio

According to the U.S. EPA the potential to reduce energy consumption in existing and new commercial buildings is enormous and that on average 30% of the energy used is wasted. The combined greenhouse gas generation of commercial and industrial facilities is 45% of the total in the US. In 2010, with the support of local partners and the Department of Energy, the Toledo Lucas County Port Authority Expanded its business financing programs to include energy efficiency and alternative energy and launched the BetterBuildings program to provide funding to all kinds of businesses from small to large for retrofits to existing buildings to save energy.

In 2011, the Port Authority along with the City of Toledo also established an energy efficiency special improvement district that enables businesses to complete improvements on their properties that are paid back by a special assessment on the property or what is known as Property Assessed Clean Energy or PACE. This PACE district is now known as the NW Ohio Advanced Energy Improvement District and covers all of Toledo and is expanding throughout Lucas County.

Project Vision and Objectives

The vision of the BetterBuildings program is to enable the transformation of energy use and conservation among local businesses creating healthier and more productive business environments and while stimulating job creation. The program has the goal of achieving at least 20% energy savings per project with many projects that are whole building retrofits averaging from 30% to 50%. BetterBuildings also has the objective of removing market barriers for businesses to complete energy efficiency projects, the largest of which is the lack of available funding or capital budgets. Its financing programs offer 100% financing of all project costs, with no upfront out of pocket expense to the business. The program has the long range goal of completing \$100,000,000 worth of projects for hundreds of businesses. The Port Authority and the City of Toledo are also BetterBuildings President's Challenge Partners committing to achieve 20% energy savings on 7.5 million square feet of buildings by 2015.

Collaboration & Partnerships:

We have received collaboration, support and partners from numerous professional, governments, for profit and not for profit organizations among which includes and will continue to be important to future program growth:

- Toledo Lucas County Port Authority (which sponsored and maintains the BetterBuildings program)
- NW Ohio Bond Fund (also sponsored & supported by TLCPA)
- City of Toledo (e.g. Environmental Services, Economic Development, Facilities)
- NW Ohio Advanced Energy Improvement District
- Toledo Regional Architects, Contractors, and Engineers (TRACE) members and many similar firms
- Lucas County Economic Development Corporation
- The University of Toledo
- City of Oregon
- Toledo Regional Chamber of Commerce
- Jobs Ohio
- Many local and regional economic development agencies including NORED
- DiPerna Economic Development, Bricker & Eckler, and Williams Allwein & Moser
- Our Project Building Owner Advocates

Progress to Date

Since its inception that program has completed 80 buildings with a project value of energy conservation measures (ECMS) of over \$30,000,000. The program has become one of the largest and most highly recognized PACE districts in the country. This progress is a good start and provides the foundation to build and rapidly expand upon that success. More outreach and applications are occurring each day and the BetterBuildings Program should stretch to add another \$30,000,000 by 2015.

2014 - 2015 Implementation Plan

Winter - Spring 2014

Aggressive outreach and training to professional organizations, engineering, contractors, architects, economic development agencies & local government

Fall 2014 - 2015

Continue to expand project completions and meet President's BetterBuildings Challenge Goal.

Spring - Fall 2014

Continue to identify, build and complete project pipeline. Establish new program with Toledo Regional Chamber and expand PACE district

BBNWO and Going Beyond Green

Going Beyond Green Stakeholders and the Toledo-Lucas County Sustainability Commission can continue to support the long term growth of BetterBuildings through business referrals and project identification and active participation in local energy efficiency and alternative energy forums.

Going Beyond Green Terminology

ECMs or Energy Conservation Measures are the energy efficiency improvements that building owners complete for their projects. These can typically include lighting, building system controls, high efficiency HVAC, boilers, chillers, air handlers and building envelope such as insulation, roof, windows and air sealing. It can also include using renewable energy.

Energy Efficiency Savings are the amount of electricity (kWh) and natural gas (ccf) or other forms of energy saved over current consumption (previous 12-36 months) and expressed both in dollars saved as well as a percentage.

PACE or Property Assessed Clean Energy is a new financing tool that is rapidly growing across the US. It was added in Ohio in 2009 and 2010 as amendments to Ohio's special improvement district laws that enables improvements such as water, sidewalks, streetlights and sewers. Unlike those improvements, the energy improvements are voluntary projects that are identified and brought forward by the building owner.

Looking through the Going Beyond Green Lenses



Climate Change



Equity



Economic Health

Going Beyond Green Stakeholders and the Toledo-Lucas County Sustainability Commission can continue to support the long term growth of BetterBuildings through business referrals and project identification and active participation in local energy efficiency and alternative energy forums.

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Tracking Progress



Going Beyond Green Sustainability Index

With a comprehensive sustainability plan like Going Beyond Green that addresses a wide array of topics - from water quality and land use to health and education to infrastructure and economic health - it can be difficult to efficiently and effectively set goals, track progress, and communicate progress to decision makers and the public. To merge these topics and related indicators together, a comprehensive Going Beyond Green Sustainability Index was developed as a way to translate complex information into one clear benchmark that can be tracked over time. This index includes 10 key indicators, one for each of the 3 triple bottom line systems/lenses and one for each of the 7 focus areas. By comparing the performance of each indicator to an identified target and normalizing the indicators on a 1 to 100 scale, the Toledo-Lucas County region will be able to track the individual performance of each regional priority but also integrate performance into one comprehensive Sustainability Index. Table 3 summarizes the 2012 baseline performance for each indicator. The overall Going Beyond Green Sustainability Index was 41 (out of 100) in 2012 with natural and social systems having slightly lower scores than economic systems. Of all the focus areas water quality and supply has the greatest opportunity for improvement. By implementing Going Beyond Green, the goal is to increase the Index to 70 by 2030.

The goal is to increase the Going Beyond Green Sustainability Index to 70 by 2030 - a 60% increase over current conditions.

Table 3 – 2012 Baseline Going Beyond Green Sustainability Index Results

Indicator	Description	Baseline	Goals	Report Card
Greenhouse Gas Emissions per Capita	A measure of pollution contributing to climate change.	37 MT CO ₂ e	22 MT CO ₂ e	
Phosphorus Loading ^[i]	A measure of how clean our streams and lakes are.	2,623 MT Total Annual 1,275 MT Total Spring 255 MT DRP Spring	1,600 MT Total Annual 800 MT Total Spring 150 MT DRP Spring	
% of Land Area as Open Space^{1 [xii]}	A measure of how much land we've protected for plants and wildlife.	6% of land area	8% of land area	
Income Disparity (Gender, Race, Region) ^[v]	The difference in income among different groups in the County.	53%	27%	
County Health Ranking ^[ii]; Crime Rates (per 100,000 people) ^[iii]	Measures how healthy we are and how much crime is reported in the County.	72 out of 88 956 violent crimes 3,568 property crimes	36 out of 88 478 violent crimes 1,784 property crimes	
High School Graduation Rate (weighted average) ^[iv]	Percentage of high school students graduating.	83%	90%	
Median Household Income (% of US Average) ^[v]	The average income households in Lucas County earn each year.	79%	100%	
Household Expenditures for Housing and Transportation ^[vi]	Percentage of income households spend on housing and transportation.	53%	45%	
Infrastructure Grade ^{2[vii]}	Regional infrastructure performance (water, energy, transportation, etc.).	C-	B+/A-	
Unemployment Rate ^[v]	The number of people without jobs in Lucas County.	8%	4%	
GOING BEYOND GREEN SUSTAINABILITY INDEX				

¹ Only includes Swan Creek Watershed due to available data. Refinements to the indicator will occur during plan implementation

²American Society of Civil Engineers average grade for the state of Ohio. A regional grade will be developed during plan implementation.

MT = metric tons

CO₂e = carbon dioxide equivalents

DRP = dissolved reactive phosphorus

1 Icon = Poor, 2 Icons = Fair, 3 Icons = Good, 4 Icons = Very Good, 5 Icons = Excellent

Progress Reports and Updating the Plan

To ensure Going Beyond Green remains relevant and a helpful tool for advancing sustainability in the Toledo-Lucas County region, the Toledo-Lucas County Sustainability Commission will update the plan every two years. In these updates, progress on the Sustainability Index will be evaluated to inform where targeted efforts may need to be focused for the following two year planning cycle.

Getting Involved

There are many ways to participate and help create a sustainable and vibrant Toledo-Lucas County region. Opportunities for civic engagement include being a community leader, volunteering for various positions, getting involved in educational campaigns, and philanthropic giving. Active participation across all sectors and demographics of the region is vital to the long-term success of Going Beyond Green.



How Can You Go Beyond Green?

Be a part of the community planning process. Citizens of the region have a host of opportunities to get involved with Going Beyond Green. Volunteering for an issue you are passionate about can be rewarding and fun. If you are interested in your local ecosystems, volunteer your time with a local conservation group. If health and wellness is your passion, carve out time to organize a campaign to increase the level of education and outreach about local, healthy food throughout the community. Find a topic you are excited about and reach out to local non-profits to see how you can help make a change. For specific volunteer opportunities and organizations involved with Going Beyond Green, visit **LucasCountyGreen.com**.

Going Beyond Green Working Groups

Volunteer your time and ideas with one of the Going Beyond Green Working Groups to advance sustainability in the Toledo-Lucas County region. One of the first implementation steps for Going Beyond Green is to develop working groups for each of the seven focus areas. These groups will provide an opportunity for people with similar interests to get together and discuss, lobby, promote, and advance sustainability initiatives throughout the region's natural, social, and economic systems.

Toledo-Lucas County Sustainability Commission Website

A concise summary of Going Beyond Green, including focus areas, priority actions, catalyst projects for the 2014-2015 implementation phase, and the Going Beyond Green Sustainability Index for tracking progress, can be found at **LucasCountyGreen.com**. The website provides residents and businesses opportunities to get involved and communicate their ideas. Additionally, the website allows residents to monitor the progress of Going Beyond Green and the creation of a more vibrant, sustainable community.



Glossary of Terms

CARBON SEQUESTRATION

The process by which carbon dioxide is removed from the atmosphere and stored long-term in either natural (e.g., trees) or human made (e.g., injection wells) carbon sinks

CLIMATE

A measurement in patterns of weather over long periods of time

CLIMATE CHANGE

Climate change refers to any significant change in the measures of climate lasting for an extended period of time - including major changes in temperature, precipitation, or wind patterns among other effects - that occur over several decades or longer.

COMBINED SEWER SYSTEMS

Sewers that collect rainwater runoff and sewage in the same pipe and deliver that water to a sewage treatment plant.

COMPLETE STREETS

A transportation policy and design approach that requires streets to be planned, designed, operated, and maintained to allow for safe travel by all modes - walking, bicycling, driving automobiles, riding public transportation, or delivering goods.

CLUSTERS

Geographic concentrations of interconnected companies who work closely with each other, local suppliers, infrastructure providers, educational institutions, and other relevant agencies.

FOOD DESERTS

Parts of the community void of fresh fruits, vegetables, and other healthful whole foods. Food deserts are usually found in impoverished areas. This is largely due to a lack of grocery stores, farmers' markets, and healthy food providers

FOOD INSECURITY

Lack of consistent access to adequate food due to money or other resource limitations at times during the year.

FOSSIL FUELS

Fuels that come from non-renewable energy sources such as gasoline and oil

GREENHOUSE GASES (GHGs)

Gases such as carbon dioxide that trap the Earth's heat, contributing to climate change (usually measured in tons)

GREEN INFRASTRUCTURE (GI)

GI uses vegetation and soil to manage rainwater where it falls as opposed to more traditional gray infrastructure which uses pipes to carry rainwater away from a site.



Glossary of Terms

HEAT ISLAND EFFECT

Occurs in urban areas when buildings, roads, and other infrastructure replace open land and vegetation. Surfaces that were once permeable and moist become impermeable and dry, forming an island of higher temperatures in the landscape.

IMPERVIOUS SURFACES

Typically manmade surfaces, such as sidewalks, streets, and rooftops, that are covered by impenetrable materials such as asphalt, concrete, brick, and stone.

METRIC TONS CO₂e

Equivalent metric tons of carbon dioxide, a standard measure for greenhouse gases

RENEWABLE ENERGY

Energy that comes from non-fossil-fuel-based sources, that do not run out, such as wind and solar

SAFE ROUTES TO SCHOOL

A national and international movement to create safe, convenient, and fun opportunities for children to engage in active transportation such as bicycling and walking to and from schools.

SMART GRID

A class of technologies that utilizes communications and information systems to coordinate efficient electrical utility production and distribution.

SMART GROWTH

Building urban, suburban, and rural communities with housing and transportation choices near jobs, shops, and schools.

SOURCE WATER

Untreated water from streams, rivers, lakes, or underground aquifers that is used to provide public drinking water as well as to supply private wells used for human consumption.

SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM (SNAP)

A federal program that provides eligible, low-income individuals and families with food assistance while also providing economic support to communities.

SUSTAINABILITY

Meeting the needs of the present without compromising the ability of future generations to meet their own needs.

SYSTEMS NOT SILOS

A planning method that ensures a community's plans, codes, capital projects, permitting, budgeting, strategic planning, employee training, and everything else are all aligned and working toward common desired outcomes

TRIPLE BOTTOM LINE

Commonly referred to as People, Planet, and Profit, the triple bottom line is an expansion of traditional business accounting to consider the social and environmental performance of an activity in addition to its financial performance.

Endnotes

[i] Ohio Lake Erie Phosphorus Task Force II Final Report, October 2013. lakeerie.ohio.gov/Portals/0/Reports/Task_Force_Report_October_2013.pdf

[ii] County Health Rankings and Road Maps. www.countyhealthrankings.org

[iii] Uniform Crime Reporting Statistics. www.ucrdatatool.gov/Search/Crime/Local/LocalCrime.cfm

[iv] Ohio Department of Education. ilrc.ode.state.oh.us

[v] United States Census Bureau www.census.gov

[vi] Center for Neighborhood Technology. Housing and Transportation Affordability Index. htaindex.cnt.org

[vii] American Society of Civil Engineers. Infrastructure Report Card. www.infrastructurereportcard.org

[viii] Toledo-Lucas County Green Town. www.greentownconference.com/toledo-lucas-county-ohio

[ix] Environmental Protection Agency. www.epa.gov

[x] Maumee Area of Concern. www.epa.gov/glnpo/aoc/maumee

[xi] Toledo Waterways Initiative. www.toledowaterwaysinitiative.com

[xii] Swan Creek Watershed Balanced Growth Plan. Due to lack of data, a target for the entire county has not been set, but the 2014 implementation plan includes consideration for a spatial analysis exercise to support this effort.

[xiii] The Oak Openings Region. www.oakopenings.org

[xiv] Ohio Department of Agriculture, 2010 Annual Report

[xv] Northwest Ohio Food Council. foodcouncil419.org/#/our-food-system

[xvi] North Central Region, Wisconsin County Food Systems Profiles Portal, www.foodsystems.wisc.edu

[xvii] Healthy Lucas County: 2011 Health Assessment. www.hcno.org/pdf/counties/Lucas%20County%20Final%20Report%202-13-12.pdf

[xviii] Center for Disease Control. www.cdc.gov/obesity/data/

[xix] Ohio Department Services Agency. development.ohio.gov/files/research/C1049.pdf

[xx] City of Toledo. Analysis of Impediments to Fair Housing, 2010. toledo.oh.gov/media/32024/WorkingAnalysisdraft.pdf

[xxi] Regional Growth Partnership. County Data. www.rgp.org/datacenter/counties-data/

Assumptions

Reduced GHG emissions

Source: Assume comparable costs and savings to Cleveland CAP

\$46 per MT CO₂e average annual cost savings

\$840 per MT CO₂e total implementation cost

Reduced nutrient loading in waterways (phosphorus)

Source: Preliminary Economic Analysis of Water Quality Trading Opportunities in the Great Miami River Watershed, Ohio

\$23.37 per pound of phosphorus removed from point source

\$4.09 per pound of phosphorus removed using best management practices

3:1 ratio of best management practice phosphorus reduction needed to achieve point source reduction target

Increased open space (% of total land area)

Source: Toledo MetroParks 2012 Annual Report

\$10,138 per acre to purchase land (one-time costs)

\$1,143 per acre to manage lands (annual costs)

Source: Economic Benefits of Clean Ohio Fund, The Economic Value of Protected Open Space

\$2,056 total annual economic benefit of open space per acre per year

Reduced income disparity

No cost estimates included

Improved health and safety (County Health Ranking and Crime Rate)

Health:

Source: Panel Surveys (MEPS)

\$1,429 per person cost savings

Assume a point decrease in obesity results in an equal increase in health rank

Source: Trust for American's Health 2008 study

\$10 per person implementation cost (applied to total County population)

Safety:

Source: Center for American Progress. The Economic Benefits of Reducing Violent Crime

10% reduction in violent crime could reduce government costs by an average of \$160 per resident per year

\$800 savings per resident per year to reduce violent crime rate 50%

Improved high school graduation rates

Source: Alliance for Education Excellence. Saving Futures, Saving Dollars

\$3,175 net benefit per year per graduate assuming a 40 year work career

Each \$1 invested results in \$1.45 of savings

Increased median household income

Assume cost savings are equal to the difference in County MHI and US average MHI multiplied by the County population

Assumptions

More affordable housing and transportation

- \$24,162 current average housing and transportation costs per household
- \$20,546 average housing and transportation costs per household if achieve target

Source: Rocky Mountain Institute. **VMT Reduction Strategies**

- \$4,281 cost per household to reduce VMT
 - o 20% US VMT reduction via Smart Growth
 - o 6% US VMT reduction via system efficiency
 - o 2% US VMT reduction from Carpooling
 - o 2% US VMT reduction from Carsharing

Improved infrastructure

Source: American Society of Civil Engineers. **Infrastructure Report Card**

- \$16,106 per capita implementation costs for infrastructure improvements (\$186 billion in total investment required for state)
- Assume 50% of implementation costs required to get from C- to B+/A- target

Source: American Progress. **Meeting the Infrastructure Imperative**

- Assume there is \$1.44 of economic activity generated per \$1 of investment

Reduced unemployment rates

Source: **Return on Investment in Workforce Development Programs**

- \$12,496 implementation cost per new person employed
- Assume all newly employed people would be coming in at median household income level to quantify projected economic benefit to the region

Toledo-Lucas County Sustainability Commission

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