

City of Alliance Ohio

Sustainability and Climate Action Plan

UPDATED September 9, 2013

Green Commission voted to submit to Alliance City Council for their consideration

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INTRODUCTION

Mayor Toni Middleton and the City of Alliance signed the US Mayors Climate Protection Agreement in 2007. A citizen's task force was assembled and has been working toward helping the City fulfill its commitment under the Climate Protection Agreement. This document outlines how the City plans to meet its commitment.

The agreement is attached (Appendix A); it includes three commitments and a list of 12 possible action steps. This plan is organized around those commitments

SUSTAINABILITY

Our overall goal is to make Alliance a sustainable city. This means that we must consider all aspects of sustainability: environmental, economic and social. While this plan focuses on the environmental goal of reducing our greenhouse gas emissions, it also recognizes the need to approach the task in a way that also benefits the economic and social conditions of the city and its residents. We are relying heavily on resources developed by ICLEI-Local Governments for Sustainability.

The following chart from ICLEI provides an overview of the types of considerations that fall into each of the three pillars of sustainability.

| Environment | Economy | Society |
|--|--|--|
| <p>Natural Systems (ecosystems, habitat, water, stormwater, air quality, waste, environmental management and resource conservation)</p> | <p>Economic Development (clean technologies, green jobs, local commerce, tourism, local food, local commerce, sustainable industries)</p> | <p>Equity in Access, College Rediness, Lifestyles (education excellence, arts, culture, and community engagement)</p> |
| <p>Planning & Design (land use, transportation, mobility, parks, open space, recreation, urban design, livability, preservation, brownfields)</p> | <p>Employment & Workforce Training (Jobs creation, training, living wages, youth skills, services for economically disadvantaged)</p> | <p>Children, Health & Safety (Youth wellness, crime prevention, emergency preparedness)</p> |
| <p>Energy & Climate (energy, emissions, renewable energy, and green building)</p> | | <p>Affordability & Social Equity (affordable housing, poverty, community revitalization, services for basic needs, civil rights, race and social justice)</p> |

CLIMATE ACTION

The Mayors Climate Protection handbook suggests five milestones for the Cities for Climate Protection Campaign

1. Conduct a baseline inventory of global warming pollutants.
2. Establish a target to lower emissions.
3. Develop a local Climate Action Plan to implement actions that reduce global warming pollution.
4. Implement the local Climate Action Plan.
5. Measure, verify and report performance.

Milestone 1 - Baseline Inventory

We made progress with the first milestone and have conducted a baseline inventory of government emissions using the CACP software provided through ICLEI. Our results for the period 2005-2010 are shown in Appendix B and in Figure 1 and 2. We used the mean of the years 2005-2007 as our baseline. The inventory indicates an increase in energy use and GHG (greenhouse gas) emissions during this time.

Inventory data from the years 2009 and 2010 show an average decrease of 5.5% which meets our goal for 2012. This was achieved through efficiency improvements at the water and wastewater plants and by improved street lighting but was offset somewhat by increased vehicle and building emissions during the same period.

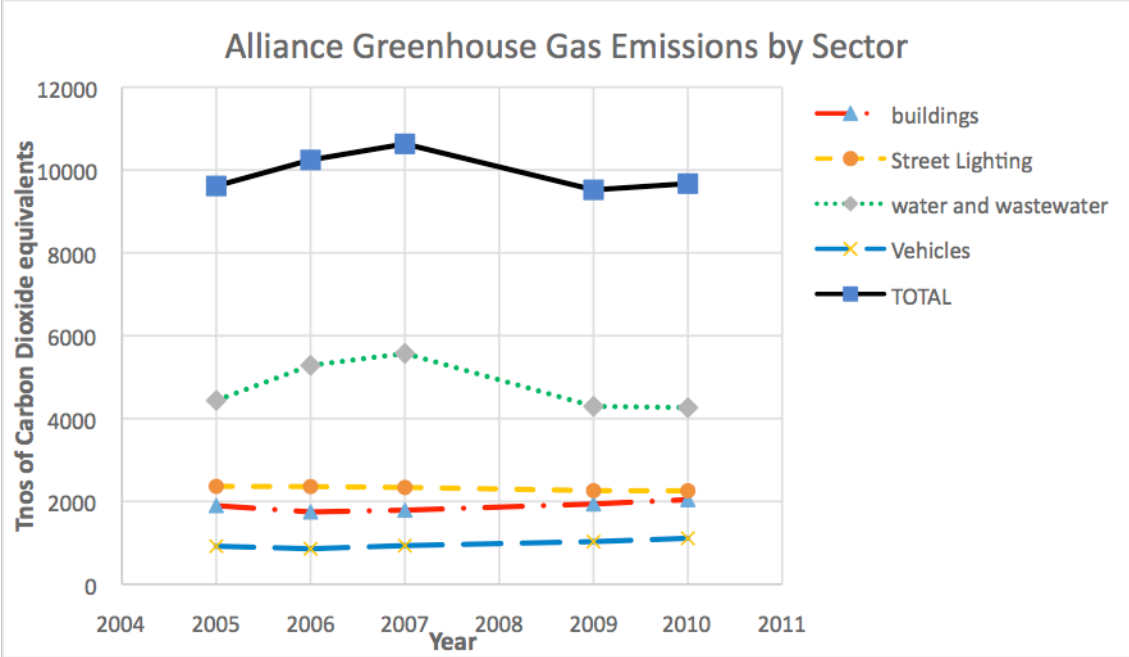


Figure 1. Greenhouse gas emissions by sector calculated using the Climate and Air Pollution Planning Assistant and the guidelines of the Local Government Options protocol developed by the California Air Resources Board. Major reduction in energy consumption by the water and waste water sectors and modes reduction by street lighting resulted in an overall reduction in years 2009 and 2010 of 5.5% compared to the 2005-2007 baseline.

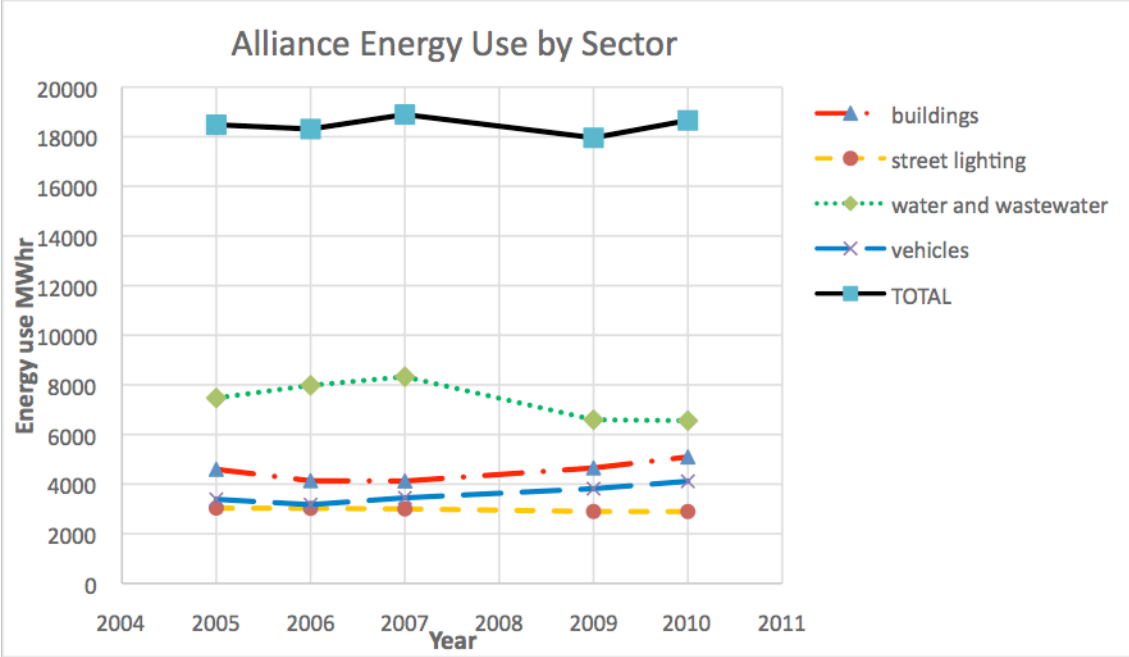


Figure 2. Energy Use by sector. Energy use was reduced in the water and wastewater sectors but was offset increases in building and fleet use. The result is a slight and statistically insignificant change in 2009-2010 relative to the baseline of 2005-2007.

Milestone 2 – Establish a target

The goal stated in the Mayors Climate Protection Agreement is to “Reduce greenhouse gas emissions to 7% below 1990 levels by 2012”.

Alliance does not know what its 1990 emissions levels were, but we can set a goal based on our recent survey.

We propose to use the three-year average for 2005-2007 as our base. Thus, our base total emissions would be 10,163 tons. Our goal then would be a reduction of 30% by the year 2030 with an interim goal of 5% by 2012.

This would amount to a reduction of 508 tons by 2012 and 3049 tons by 2030.

We propose to achieve these by focusing on conservation, efficiency and alternative energy sourcing.

Because water and sewer operations represent the largest component of energy and associated GHG emissions, that is an area that has the most potential for reductions and savings. Street lights are the second highest component.

Milestones 3, 4 and 5 – Develop, implement and evaluate a Climate Action Plan

The remaining three steps are the subject of this document.

THE PLANNING PROCESS

Eight areas of action have been identified in conjunction with the US Mayors Climate Protection Agreement, and will be used as the outline of this plan: :

Land Use Management and Urban Forestry

Transportation Planning

Green Power

Energy Efficiency

Green Building

Water and Wastewater Management

Recycling and Waste Reduction

Education and Outreach

LAND USE MANAGEMENT AND URBAN FORESTRY

History

Land Use Planning and Zoning

The City of Alliance recently adopted a new Planning and Zoning Code that improves regulations that relate to green spaces and urban revitalization. The task now will be to educate citizens about the new regulations and provide fair enforcement of the policies. In addition, it will be necessary to review and update the codes as new technologies and opportunities for more efficient housing and building become available. The concepts outlined in Stark County's 2011 "Sustainable Planning and Zoning Handbook: A Guide for Sustainable Development in Stark County," may be considered for utilization in future updates of the Alliance Planning and Zoning Code. The City may also consider integrating "Smart Growth" concepts in their planning.

Urban Forests

Alliance has a long tradition of promoting healthy urban forests. The Alliance Shade Tree Commission has been in operation for over 30 years and the City has been recognized as Tree City USA for 29 consecutive years. It is currently conducting a "1000 Trees for the City" program with the goal of planting 1000 new trees in public areas. The work has already begun with the planting of over 300 trees in areas chosen by the Commission. The Commission, in cooperation with The University of Mount Union, has completed a computerized street tree inventory that is updated annually (not including parks and public lands). Finally, an Alliance City Arboretum is under development with 100 trees identified and labeled. This will promote interest in trees in the city and provide incentives for tree planting and increased diversity. We propose to continue support of tree planting and maintenance, according to guidelines established by the Shade Tree commission.

Parks and Public Lands

Alliance Parks have extremely limited financial resources. Nevertheless, they provide open space and recreational opportunities for thousands of visitors every year. The Department of Parks, Recreation and Public Lands maintains 300 acres consisting of 24 parks and parklands, ranging from small neighborhood green spaces to the 54 acre Silver Park and the 60-acre Butler-Rodman Park Complex.

The Alliance Parks System is very fortunate to be supported by the non-profit organization, "Friends of the Parks." Annually, the "Friends of the Parks," along with many of the area's service and garden clubs, donate their time and money in support of our parks and recreation programs and projects.

Recently, a plan is unfolding to develop Maple Beech Park for improved river access and opportunities for passive recreation, including walking trails and shelters. Walking paths and fitness trails have also

been introduced at Memorial Park. The transportation section below includes proposals for bike paths that would also serve to tie together the City parks. Goals and measures:

Short term:

- Maintain Urban Forest Inventory and identify areas for removal and replacements
- Conduct an ecological analysis of city forest cover
- Identify public lands where improved forest management could increase sequestration and air pollution mitigation
- Encourage adherence to and enforcement of new city zoning regulations
- Encourage awareness of the Stark County guide “Sustainable Planning and Zoning Handbook: A Guide for Sustainable Development in Stark County”
- Encourage education and enforcement of Shade Tree Commission’s recommendations for appropriate tree planting on curb lawns
- Work with local police to levy and enforce fines against traffic accidents that involve curb lawn trees
- Re-evaluate use of small, park-maintained properties
- Develop bike trails within the public parks with spurs to connect to the future county bike trail
- Continue to explore funding sources for brown-field development

Long term:

- Identify and preserve open space
- Promote infill development
- Provide incentives for building re-use and retrofit
- Explore outdoor classrooms and wild school yards for the local school buildings

TRANSPORTATION PLANNING

History

The transportation sub-committee has concentrated on awareness of the individual's role in reducing carbon emissions through alternative transportation choices. The main vehicles for this have been the Fuel-less-Fridays program and a letter-writing campaign to install bike racks. Green Alliance also hosted a well attended public meeting on bike paths presented by Stark Parks. The transportation committee met with city council members and City employees on numerous occasions to build collaboration and understanding. The committee continues to seek out grant opportunities to further the implementation of bikeways through Alliance.

The transportation committee has been working with SARTA to make the county bus system more user-friendly. This includes shelters, better signage, availability of route schedules, and bike racks on buses. Other avenues that the committee has explored to date are: installing alternative fuels in the City, using alternative fuels for Alliance City vehicles, and encouraging police patrol on bicycles.

The Mayor's office has worked with AMTRAK to improve its facility in Alliance. SARTA has opened a transit center in Alliance that has increased the visibility of their presence, and has begun to increase ridership

Overall Goals:

- Promote safe walking and biking within the community
- Facilitate better mass transit use within the community and seek expansion of rail, bus and other alternative transportation connections with greater region and state
- Encourage the use of next generation transportation and fuels

Short Term:

Government Measures:

- Work with City and County officials to develop an integrated City walking and bike plan (with or without grant funding).
- Seek and secure funding for a City bike plan
- [see below]Develop and implement a plan to install more bike racks throughout the City
- Develop a link between the SARTA station and future bike paths

- Complete sidewalks and safe crossings at all schools and city parks
- Approach Alliance City Schools to apply for additional grants for pollution control devices for buses

Community Measures:

- Work with The University of Mount Union, the City and concerned parties to create a bike and walking path on the abandoned railroad right of way between the Mount Union campus and downtown, parallel to Union Avenue
- Continue to develop programs that encourage the use of public transit and biking or walking to work
- Develop partnerships to promote the health benefits of walking and biking
- Encourage businesses, schools, churches, parks and other facilities to install bike racks
- Develop a series of online and printable maps for walking and biking within the City
- Work with SARTA to install bus stops and make schedules accessible

Long-Term:

Government Measures:

- Encourage inter-city rail and bus service in Ohio
- Improve links between AMTRAK station, SARTA station and future bike paths
- Improve the waiting area of the AMTRAK station
- Negotiate more SARTA routes
- Improve existing sidewalks and install new ones
- Continue to replace old vehicles with increasingly more fuel efficient ones
- Consider parking and driving incentives for fuel-efficient vehicles and carpool users
- Explore requiring bike racks at area businesses that have parking lots
- Continue and expand current five minute idling policy for City vehicles

Community Measures:

- Explore ride share program to Canton
- Consider parking and driving incentives by local businesses for employees and patrons who use fuel-efficient vehicles or car-pool
- Stay informed about rapid changes in alternative fuels and make needed preparations, e.g. plug-in hybrids, hydrogen, compressed natural gas

GREEN ENERGY

History:

Historically, Alliance has not had significant access to green energy options. For a period of time, Ohio Edison offered a “green option” to customers. However, it was an option that involved burning waste coal which did not lower the carbon footprint of the energy. While AEP Energy has recently offered a plan which provides power that is 100% offset with wind energy credits, local large-scale green energy options have not yet been developed.

In the past, the City of Alliance has investigated the possibility of methane recapture at the waste water facility. At the time, the project was not considered to be cost-effective. However, the possibility is being revisited as the city considers a combined dewatering and methane recovery facility. A waste-to-energy facility has been investigated to be built northeast of town by private interests, but does not appear likely to move ahead. Natural gas has emerged as a fossil fuel source that is potentially less carbon-intensive than coal or oil, but which is still being evaluated for its long-term sustainability with regards to water resources.

Alliance’s future green energy efforts will take place in the context of State and Federal energy policy. It is expected that these policies will be in flux, and local actions will need to be tailored to the resulting context. However, Ohio’s energy policy, as delineated in Ohio SB221 and SB315, is already in place, and will be the immediate context of constraints and opportunities for the Alliance area:

- At least 25 percent of all electricity sold in Ohio to come from alternative energy resources by 2025.
- At least half of this, or 12.5 percent, must be generated by renewable sources such as wind, solar (at least 0.5 percent of electricity use by 2025), hydropower, geothermal, or biomass. At least half of this renewable energy must be generated in-state.
- The additional 12.5 percent of the overall 25 percent standard can also be met through alternative energy resources such as third-generation nuclear power plants, fuel cells, energy-efficiency programs, and clean coal technology that reduces or eliminates carbon dioxide emissions.

- The bill creates a renewable energy credit (REC) tracking system, which allows utilities to buy, sell, and trade credits to comply with the renewable energy and solar energy requirements. This means they may purchase credits from individuals and companies which have alternative energy installations.
- Electric utilities are required to achieve energy savings of 22.5 percent by the end of 2025 through energy efficiency programs.
- Utilities must implement programs to reduce peak energy demand one percent beginning in 2009, and an additional .75 percent per year through 2018.
- The Public Utilities Commission of Ohio (PUCO) is authorized to develop rules for decoupling, that is, separating utility profits from the volume of electricity sales. Court rulings have supported this right.
- The PUCO has established greenhouse-gas reporting requirements for utilities, including participation in the Climate Registry.
- Under SB 315, co-generation facilities may be considered as either meeting “energy efficiency” requirements, or “renewable energy” requirements. “Waste-heat recovery” is defined and encouraged as a method to meet requirements.
- The alternative fuel grant program is expanded under SB315

This is the current context within which the City of Alliance will be developing its green energy plans. Ohio utilities are in the process of responding to these requirements, and new opportunities are arising to conserve energy and explore new energy options.

Overall Goals:

- To increase alternative energy opportunities for the citizens of Alliance
- To explore alternative energy opportunities for the City Government of Alliance, in order to increase its resilience, to protect its citizens, businesses and industries against fluctuations in energy prices, and to reduce its carbon emissions
- To encourage regional development of alternative energy options
- To develop alternatives to traditional transportation fuels

Short Term:

Government Measures:

- Investigate solar hot water for city fire stations. Solar hot water has a shorter pay-back cycle than solar electric generation, and grants and tax incentives make this more financially feasible in the short term
- Investigate feasibility of geothermal, solar voltaics, a wind turbine, and other alternative energy in specific applications where they would be most cost-effective, and/or reduce peak loads.
- Investigate/revisit feasibility of methane recapture for waste facility (this effort is currently under way)
- Continue updating equipment with solar or alternative energy when feasible (such as “arrow board” traffic signs which were switched from gasoline to solar power)
- Investigate installation of a natural gas filling station in the city (the City is currently pursuing a grant for a small scale pilot filling station and the conversion of police cruiser to run on compressed natural gas)
- Investigate initiation of solar funding program for citizens through state grant/city tax program: the recently approved Ohio State budget enables cities to use bonds or grants to pay for the installation of alternative energy and/or energy efficiency for citizens. Residents who receive the funds then pay back the cost, plus the interest, through an assessment on their property taxes for up to 25 years (Property Assessed Clean Energy, or PACE program)

Community Measures:

- Participate in the Ohio Solar/Green Energy Tour, highlighting existing alternative energy installations in the area
- Promote energy efficiency and alternative energy use through a variety of means, including investigation of funding through a PACE Special Improvement District, as described in Ohio House Bill 1.
- Initiate discussions with local schools to institute technical classes in green energy production, management and installation
- Raise awareness regarding State and Federal incentive programs for alternative energy installations
- Strengthen ties with Green Energy Ohio
- Encourage partnerships between organizations which are using alternative energy, and educational institutions

- Provide information on local alternative energy installers and options
- Investigate and encourage installation of electric vehicle charging stations (see also Transportation section)

Long Term:

Government Measures:

- Negotiate a “green choice” program with Ohio Edison for city’s population (AEP Energy is currently offering an “Eco-Advantage” program with 100% wind offsets)
- Install solar hot water on all city buildings, consider photo-voltaics to reduce peak loads, geothermal, or other alternative energy
- Investigate feasibility of district cogeneration facility
- Encourage alternative energy installations such as wind, solar and geothermal through the building and zoning departments
- Provide incentives for businesses in Alliance that produce, maintain, or install green energy components (see also Green Building, for brochure developed for use by building department)
- Investigate brown-field (including abandoned mine and landfill areas) reuse as land for growing biomass
- Investigate using abandoned industrial sites for installation of green energy - either as energy generation sites OR as sites where green energy industries could be given incentives to establish
- Investigate establishing a compressed natural gas (CPN) filling station (the City is currently pursuing a grant for a small scale pilot filling station and the conversion of police cruiser to run on compressed natural gas)

Community Measures:

- Continue to participate in the Ohio Solar Tour, highlighting existing alternative energy installations in the area
- Research and promote alternative energy use
- Investigate solar and wind turbine installation possibilities in city region together with University and school districts
- Establish community goals for percentage of locally-generated energy (i.e., in keeping with, or exceeding, state energy portfolio goals)

ENERGY EFFICIENCY

History:

The City has taken many steps to improve the energy efficiency of its facilities, including lighting retrofits, HVAC adjustments, and behavioral changes.

Ohio Edison is required to “achieve energy savings of 22.5 percent by the end of 2025 through energy efficiency programs.” There are low-income weatherization programs in place. It is hoped that the program will be extended in the future. Currently, Ohio requires conformance to the 2006 IECC. However, changes to the Energy section of the International Building Code are in progress.

Overall Goals:

- To substantially increase City facilities’ energy efficiency
- To help facilitate the energy efficiency of residences, businesses, industry, and institutions in the City of Alliance and surrounding area
- Ultimately, to combine energy efficiency and green energy production in the area to the end that Alliance will be a net-zero energy, carbon-neutral community

Short Term:

Government Measures:

- Conduct energy audits of city buildings
- Investigate performance contracts to upgrade HVAC systems in city buildings
- Complete lighting upgrades and LED exit sign changes
- Install occupancy and light sensors
- Install efficient vending machines or “misers”
- Continue “lights out and computers off-at-night” policies
- Revise policy to purchase only Energy Star equipment and appliances
- Continue to pursue replacing all traffic signals and street lights with LED fixtures. Most city traffic light fixtures have been replaced with LED fixtures. State Street traffic lights will be replaced with LEDs as state and federal funding allows. Decorative street lights on Union near the University have

already been converted to LED fixtures. New LED decorative light fixtures will be installed along the remainder of N. Union to Gaskill, and also are being investigated for use on Main Street.

- The City is also investigating high-efficiency LED holiday decorations
- Continue to facilitate residents' access to home weatherization assistance via the Stark County Community Action Home Energy Assistance Program
- Investigate creation of a revolving fund with savings to provide capital for efficiency improvement and energy use reduction
- Develop energy dashboard to illustrate city progress in the area of energy efficiency

Community Measures:

- Facilitate residents' access to information on energy audits and home and business improvements (Stark County Community Action Home Energy Assistance Program is well established)
- Initiate an energy savings campaign "How low can you go?" or "10% a year" challenge
- Encourage community use of motion detectors and photo sensors
- Provide information on progressive building standards and codes, for voluntary use
- Encourage businesses and institutions to develop their own energy dashboards to share their progress

Long Term:

Government Measures:

- Update energy codes
- Install reflective roofing as roofs need to be repaired or replaced
- Adopt the 2030 Net Zero building goals

Community Measures:

- Encourage "Green Business" and Energy Star for Businesses program (Chamber of Commerce is currently considering the development of a sustainable business luncheon series)

- Develop map of Green businesses, alternative energy sites, etc.
- Encourage water conservation to reduce energy for pumping
- Help community to understand funding options for efficiency improvements

GREEN BUILDING

History:

The Alliance Area Habitat for Humanity currently builds Energy Star-certified buildings in town, and is developing new green building standards for its future buildings. Buckeye Village's Giant Eagle store is also Energy Star certified. The University of Mount Union has recently constructed a new Welcome Center which is Silver LEED (Leadership in Energy and Environmental Development) certified. The Green Task Force offered two seminars on green building in 2008: one for businesses, and one for homeowners. A general seminar on sustainability issues in 2007 also included information on green building topics.

The National Association of Governors and the American Institute of Architects are promoting a "green" construction code that the International Code Council has developed. The code is compatible with the American Institute of Architects' 2030 carbon-neutrality target, and is very similar to the LEED standards. It includes water, energy, air quality and safety benchmarks that states and cities may adopt and is currently available.

Members of the City of Alliance building department have been attending professional development sessions on green building, and are interested in incorporating new energy codes.

Overall Goals:

- Raise awareness of green building options and benefits
- Facilitate green building for businesses and residences in Alliance
- Adopt the Architecture 2030 goals for immediate 30% reduction of energy use in buildings, and net-zero energy use in new and renovated buildings by 2030

Short Term:

Government Measures:

- Continue to encourage building department staff to obtain their LEED or other green building certification, and be aware of the NHA Green Building Standards, and the International Green Building Code

- Implement as many Green Building or LEED design elements as is feasible in current City of Alliance building projects
- Provide copies of the Alliance Green Building Brochure at City Zoning and Engineering offices for public use. Provide an electronic version on the city website

Community Measures:

- Continue to provide green building information to the public
- Promote and support green build projects together with Habitat for Humanity and other local non-profit builders
- Participate in the Ohio Solar/Green Energy Tour to promote local green building efforts
- Promote and support the Alliance Preservation Society in conservation and adaptive reuse of existing structure

Long Term:

Government Measures:

- Provide incentives for green building
- Upgrade building code to reflect most recent energy codes, and adopt a model green building code such as the International Green Construction Code, or LEED standards
- Upgrade zoning codes to reflect green building practices (the City Engineer has developed a best practices brochure for protecting water resources)
- Upgrade city buildings to at least LEED silver level (not necessarily certified)

Community Measures:

- Continue to provide green building information to the public
- Assist in developing programs in support of green building, such as construction waste recycling, building deconstruction, building reuse, etc.
- Promote and support the Alliance Preservation Society, and encourage the preservation and reuse of viable and historic structures

WATER AND WASTEWATER

History:

The City of Alliance has already replaced two pumps with high-efficiency pumps. The Wastewater treatment plant currently recaptures some methane to heat its sludge (the remainder is flared off). The City is currently constructing a UV oxidation water treatment system to replace the activated carbon treatment. When completed, this will reduce the use of carbon, but increase the city's use of electricity. The treatment process will reduce bacteria and improve water taste and odor.

Overall Goals:

- To reduce energy use in the distribution and treatment of water in Alliance
- Increased retention of storm water to prevent peak water flow to waste water
- More efficient management of storm water
- Reduce water waste in the City of Alliance

Short Term:

Government Measures:

- Continue to improve efficiency of water pumping system
- Finalize and implement source water protection plan to increase protection of reservoirs, streams and river
- Continue to implement Storm Water Phase II NPDES Permit Program (Education, Public Involvement, Illicit Discharge Elimination, Construction activities, Post Construction, Good Housekeeping)
- Investigate changes to zoning and building codes that will increase water efficiency
- Continue Inflow and Infiltration prevention program to eliminate bypasses of the waste water treatment plant

Community Measures:

- Increase community understanding of link between water use and energy
- Promote good storm water management at residences and businesses
- Increase community understanding of source water protection

Long Term:

Government Measures:

- Explore possibility of additional methane recovery and/or anaerobic digesters and cogeneration
- Implement changes to zoning and buildings codes that will increase water efficiency
- Investigate utilizing small hydropower generator at outfall of water plant
- Investigate watershed management fee for the support and implementation of Storm Water Phase II NPDES Permit Program (Education, Public Involvement, Illicit Discharge Elimination, Construction activities, Post Construction, Good Housekeeping)

Community Measures:

- Increase community understanding of source water and receiving water protection
- Promote good storm water management at residences and businesses

RECYCLING AND WASTE REDUCTION

History:

Alliance's recycling project was started through Keep Alliance Beautiful (KAB), in 1988, with a drop-off for recyclables at Silver Park. Because of overwhelming response, KAB partnered with The University of Mount Union to have a drop off at the Union Ave. United Methodist Church parking lot. That became so well-utilized that the board of KAB and other interested parties met to discuss curbside collection of recyclables in the early 1990's. A recycling committee encouraged the city council to include curbside recycling with the next contract, and a curbside recycling program was begun in 1992 which has continued to this day. A grant from the Ohio Department of Natural Resources-Department of Recycling and Litter Prevention (ODNR-DRLP) was used for awareness and education. Quarterly collection drives at College Plaza provide access for those not served by the curbside program, such as those in multi-family housing, or living outside the collection area. These events are funded through the Joint Tri-County Solid Waste Management District (SWMD). Cell-phones are recycled through a partnership between KAB and Sprint. The Tri-County SWMD currently dictates how KAB uses funds with respects to specific recycling drives. They currently organize county-wide drives for appliances, electronics, and yard waste collection. However, these typically take place outside of the Alliance area. They also help to fund tire collection through a voucher system – however some city time and resources are still required. KAB is currently pursuing grant funds to offset these costs.

The street department collects/vacuums leaves in the fall, which are composted by a local landscaper. KAB collects data on weights of recycling and leaf collection and reports them to the SWMD as a part of the requirement for funding. Along with keeping streets clean, KAB has started a downtown cleanup to improve the beauty and aesthetics for the businesses of that area.

KAB worked in partnership with Sam’s Club to organize the “Return the Warmth” program with the Alliance elementary schools for two years – recycling plastic bottles to produce fleece jackets. KAB also partnered with Alliance High School to initiate a recycling program at the school. Rockhill Elementary School is the first elementary school to institute a comprehensive recycling program. The University of Mount Union has a recycling program, as does Stark State University’s satellite facility. The Alliance Recycling Center also provides a drop-off location for recycling, so that 100% of the citizens of the Alliance area have access to recycling.

Overall Goals:

- Continue to raise awareness of recycling opportunities and waste reduction
- Increase community recycling numbers
- Develop composting and yard waste programs (possibly seasonal, or contracted curbside)
- Long-term goal to achieve a zero-waste greater Alliance community
- Develop a community-accessible E-Waste Program

Short term:

Government measures:

- Re-energize recycling in government offices through education
- Investigate providing combination trash/recycling containers at all city parks
- Shred and recycle paper records that need disposal

Community measures:

- Encourage multi-family and business recycling through education
- Host program event to increase recycling at bars and restaurants. Partner with Chamber of Commerce to host speaker event (such as from Great Lakes Brewery or E4S) for green businesses
- Continue to work with the Carnation Festival Board to develop a waste reduction and recycling

program for Days in the Park, Rib Burn Off, and the Carnation parade

- Educate businesses and industries about state-wide materials exchange program
- Achieve waste reduction through artistic creations – i.e. bike racks, public art, etc.

Long term:

Government measures:

- Investigate providing combination trash/recycling containers on Main Street and in all city facilities
- Investigate implementing curbside organic waste collection
- Achieve zero-waste city government facilities
- Investigate new waste collection programs to reduce waste sent to landfill and encourage greater recycling and composting
- Develop plan for recycling tires citywide

Community measures:

- Work with Chamber of Commerce to develop a recycling and waste reduction plan for small businesses
- Investigate development of a community-wide home and restaurant composting program
- Work with schools to develop composting and waste reduction programs for their cafeterias
- Support the development of programs for construction waste recycling, deconstruction and building re-use

EDUCATION AND OUTREACH

History:

The Mayor's Green Task Force (now the City of Alliance Green Commission) and the non-profit Green Alliance have conducted a number of educational activities in the past years. In 2008, the Mayors Green Task Force organized an Energy Efficiency Seminar for Businesses, a Seminar for Homeowners, and a Waste-to-Energy Seminar for the public. Green Alliance launched a website, greenallianceohio.org, and held informal coffee-talks to discuss climate change issues. They have had an information table at the Carnation Festival Days in the Park, as well as at Stark Parks sustainability events. At the Days in the Park in 2008, cloth totes were distributed to the community and a drawing for a bicycle and a home-

energy audit. In 2010, Alliance City Council approved Ordinance 76-10, establishing the City of Alliance Green Commission to serve as a permanent governmental body to carry on the programs and projects initiated by the Mayor's Green Task Force. In 2011, Green Alliance was formed as the non-profit (501(c)(3)) community group to support the Green Commission in its mission, and to help carry out community-related programs and projects, including education and outreach to the community.

Many Green Alliance initiatives have had strong educational components: the establishment of the Alliance Farmers' Market and the Fuel-Less Fridays initiative, for example. Green Alliance has cooperated with the University of Mount Union to promote No Child Left Inside and with the Beech Creek Arboretum's educational community garden project. Green Alliance partnered with the University Mount Union, SARTA, the Ohio Solar/ Green Energy Tour, and other Alliance groups, to host the Sustainable Alliance Festival, beginning in 2010, 2011, and 2012. Mayor Middleton and President Giese signed a statement of cooperation in 2008 to work together to achieve their sustainability goals: "Cooperating on education with the City offering opportunities for student internships, class research projects or other educational activities such as jointly sponsored field trips, seminars, and other educational programs [and]... cooperating in public outreach through joint press releases and other public relations activities."

In the spring of 2013, the members of Green Alliance looked back at the events it had organized since its beginnings and especially since becoming a 501(c)(3) in 2011. The consensus of the members present produced the following list of the most successful of those events (the order is not significant):

- The rain barrel auction, fashion show of recycled materials, and musicians at Jupiter Studio during the first Sustainable Alliance Festival;
- The program on hydraulic fracturing ("fracking") with three speakers representing divergent views on the subject (more than 100 people attended at the University of Mount Union);
- A presentation on bike trails presented by representatives for Stark Parks;
- A watershed tour by SARTA bus led by Dr. Dean Reynolds;
- The first year of The Stark County Solar Tour;
- A quilt auction culminating in an event at Farm Girls Pub and Grub (over \$1000.00 was raised)
- A meeting at Feed My Sheep to encourage the development of community gardens

Green Alliance plans to continue to work in cooperation with the Green Commission of the City of Alliance and other interested citizens and groups to raise awareness of sustainability issues and best practices throughout the greater Alliance community.

Overall Goals:

- Create and nurture an institutional commitment to sustainability in Alliance and the region
- Create and nurture a widespread citizen commitment to sustainability in Alliance and the region

Short Term:

Government Measures:

- Encourage local institutions and businesses to develop and implement sustainability plans

Community Measures:

- Continue an annual cycle of regular educational events (ones already begun and noted in the history section above)
- Encourage local civic and social organizations, such as senior citizens groups, area church groups, area social clubs, etc., to highlight sustainability issues in their programming plans
- Plan a series of presentations and panels on sustainability issues. These presentations and panels can be the chief program events of monthly Green Alliance meetings, well planned and widely advertised in the Alliance area to encourage broad public attendance
- In July 2013, a joint meeting was held with the Green Commission, Green Alliance, Keep Alliance Beautiful, and Mount Union's Sustainability Management Advisory Committee to consider possible activities for the coming fall and spring. The major initiatives envisioned at that meeting are the following:
 - (1) Creating artistic bike racks for placement around the City;
 - (2) Organizing school classes to discuss sustainability and to engage students in sustainability projects in the City;
 - (3) Developing maps for various walks/tours in Alliance – re: historical preservation, trees or flower gardens, or the community gardens;
 - (4) Encouraging composting at the community gardens, the Farmers Market, and at homes and businesses around Alliance.

Long Term:

Government Measures:

- Encourage City of Alliance leadership and staff to participate in sustainability professional development, and to provide information on regional sustainability initiatives

Community Measures:

- Develop partnership groups of key stakeholders in the Alliance community who will work together to promote sustainability both locally and in the region
- Raise the general awareness of sustainability issues in the city and in the region so that government and business leaders will assume constituencies that will be alert and responsive to sustainability concerns
- Develop a focus on sustainability issues in the local schools through both curricular and extra-curricular activities

GRANT AND FUNDING ASSISTANCE

The recommendations presented in this Sustainability and Climate Action Plan will require financial backing in order to achieve successful implementation. The Green Commission and Green Alliance are available to assist the City in the review and assessment of the applicability of grants and funding sources in order to help with this effort. In addition, it is suggested that the city might pursue the development of a revolving fund for energy efficiency and alternative energy improvements. The city could implement those changes which would afford the earliest and most significant payback for the least cost, and then utilize the savings from those improvements to fund future energy and climate work. The city could also investigate the possibility of performance contracts for some improvements, where appropriate.

Federal, state, local, and public/private funding opportunities will be explored. A partial listing of grant agencies is provided in Appendix D.

REVIEW AND REVISION

The plan for sustainability in Alliance will need to be reviewed and updated regularly. Reviewing and updating will probably be necessary at shorter intervals of one or two years at first; but later, longer intervals may be adequate. The overall direction of the plan will likely remain the same, but specific details should be updated with each review. The first thorough review of the sustainability plan occurred the summer of 2013.

Appendix A. The U. S. Mayors Climate Protection Agreement

(as endorsed by the 73rd Annual U.S. Conference of Mayors meeting, Chicago, 2005)

A. We urge the federal government and state governments to enact policies and programs to meet or beat the target of reducing global warming pollution levels to 7 percent below 1990 levels by 2012, including efforts to: reduce the United States' dependence on fossil fuels and accelerate the development of clean, economical energy resources and fuel-efficient technologies such as conservation, methane recovery for energy generation, waste to energy, wind and solar energy, fuel cells, efficient motor vehicles, and biofuels;

B. We urge the U.S. Congress to pass bipartisan greenhouse gas reduction legislation that includes

1. clear timetables and emissions limits and
2. a flexible, market-based system of tradable allowances among emitting industries; and

C. We will strive to meet or exceed Kyoto Protocol targets for reducing global warming pollution by taking actions in our own operations and communities such as:

1. Inventory global warming emissions in City operations and in the community, set reduction targets and create an action plan.;
2. Adopt and enforce land-use policies that reduce sprawl, preserve open space, and create compact, walkable urban communities;
3. Promote transportation options such as bicycle trails, commute trip reduction programs, incentives for car pooling and public transit;
4. Increase the use of clean, alternative energy by, for example, investing in "green tags", advocating for the development of renewable energy resources, recovering landfill methane for energy production, and supporting the use of waste to energy technology;
5. Make energy efficiency a priority through building code improvements, retrofitting city facilities with energy efficient lighting and urging employees to conserve energy and save money;
6. Purchase only Energy Star equipment and appliances for City use;
7. Practice and promote sustainable building practices using the U.S. Green Building Council's LEED program or a similar system;
8. Increase the average fuel efficiency of municipal fleet vehicles; reduce the number of vehicles; launch an employee education program including anti-idling messages; convert diesel vehicles to bio-diesel;
9. Evaluate opportunities to increase pump efficiency in water and wastewater systems; recover wastewater treatment methane for energy production;
10. Increase recycling rates in City operations and in the community;
11. Maintain healthy urban forests; promote tree planting to increase shading and to absorb CO₂; and
12. Help educate the public, schools, other jurisdictions, professional associations, business and industry about reducing global warming pollution.

Appendix B. Alliance Municipal Greenhouse Gas Emissions and Energy Consumption

As of 1/26/2012 Revised from earlier values due to updated emission factors . Will be updated when data become available.

| | Year | | | | |
|----------------------|-------|-------|-------|-------|-------|
| | 2005 | 2006 | 2007 | 2009 | 2010 |
| Buildings | | | | | |
| eCO2 (tons) | 1897 | 1745 | 1788 | 1938 | 2042 |
| Energy (MWh) | 4596 | 4135 | 4123 | 4650 | 5094 |
| Vehicle Fleet | | | | | |
| eCO2 (tons) | 918 | 857 | 933 | 1029 | 1109 |
| Energy (MWh) | 3386 | 3171 | 3447 | 3815 | 4113 |
| Streetlights | | | | | |
| eCO2 (tons) | 2363 | 2358 | 2337 | 2260 | 2257 |
| Energy (MWh) | 3031 | 3023 | 2998 | 2898 | 2894 |
| Water/Sewage | | | | | |
| eCO2 (tons) | 4437 | 5284 | 5573 | 4295 | 4264 |
| Energy (MWh) | 7468 | 7980 | 8326 | 6593 | 6555 |
| TOTAL | | | | | |
| eCO2 (tons) | 9615 | 10243 | 10632 | 9522 | 9672 |
| Energy (MWh) | 18481 | 18309 | 18894 | 17956 | 18656 |

This report has been generated for Alliance, OH using STAPPA/ALAPCO and ICLEI's Clean Air and Climate Protection Software developed by Torrie Smith Associates Inc. Data provided by Alliance Auditor's Office. Data entry and management by The University of Mount Union.

Appendix C. Kyoto Protocol

The Kyoto Protocol treaty was negotiated in December 1997 at the city of Kyoto, Japan and came into force February 16th, 2005.

As of 14 January 2009, 183 countries and 1 regional economic integration organization (the EEC) have deposited instruments of ratification, accession, approval or acceptance

“The Kyoto Protocol is a legally binding agreement under which industrialized countries will reduce their collective emissions of greenhouse gases by 5.2% compared to the year 1990 (but note that, compared to the emissions levels that would be expected by 2010 without the Protocol, this target represents a 29% cut). The goal is to lower overall emissions from six greenhouse gases - carbon dioxide, methane, nitrous oxide, sulfur hexafluoride, HFCs, and PFCs - calculated as an average over the five-year period of 2008-12. National targets range from 8% reductions for the European Union and some others to 7% for the US, 6% for Japan, 0% for Russia, and permitted increases of 8% for Australia and 10% for Iceland.”

The US withdrew support for the Kyoto protocol early in 2001 and never signed the agreement.

Appendix D. Grant Sources

Federal

American Recovery and Reinvestment Act – State infrastructure projects
U.S. Department of Agriculture – Wastewater Treatment Plant Renovations
U.S. Department of Energy – EECBG Funding
U.S. Department of Energy – Energy Star Programs (www.energystar.gov)
U.S. Department of Housing & Urban Development – CDBG (Community Development Block Grants)
U.S. Department of Transportation
U.S. Environmental Protection Agency – Brownfields, Site Clean-Up

State

Clean Ohio Assistance Fund
Ohio Community Development Corporation – public policy organization for urban development
Ohio Department of Development – Ohio Energy Office
*Ohio Department of Natural Resources (www.dnr.state.oh.us/grants.htm) – recycling, parks
*Ohio Department of Transportation – highways, bikeways, bridges, culverts
*Ohio Public Works Commission – wastewater treatment plants, local roadways
School Pool Electric Program – purchase of electric power for schools
Ohio Schools Council

County

Stark County Community Action Agency – Home Weatherization Assistance Program

Private or Non-Profit

Allstate Foundation – neighborhood revitalization
Green Energy Ohio – funding for solar thermal
John S. and James L. Knight Foundation – education, economic development
Lowe's – Grants for schools (community gardens, ecological areas)
Oak Foundation – climate change
*Waste Management, Inc. (recycling)

*current or past grant awards.