



# 2015 GTLC Annual Report

for Appleton's participation in the Sustainability Component of the Green Tier Legacy Communities Charter

## **MISSION STATEMENT:**

*The City of Appleton is dedicated to meeting the needs of our community and enhancing the quality of life.*

## **STRATEGIC PLAN (KEY STRATEGIES):**

#6 – Encourage Sustainability

### **TRANSPORTATION**

- Added over two miles of new bike lanes as part of the City's On-Street Bike Lane Plan.
- Added one mile of sidewalk where it currently did not exist along Glendale Avenue and various other locations.
- Implemented second year of City's new Sidewalk Poetry Program.
- Purchased new style garbage truck chassis that is more fuel efficient.
- Implemented an automatic idle reduction program for all heavy trucks (Class 7& 8).
- Bike Federation Audit conducted in October, 2015.

### **LAND USE**

- Implemented first year of our Urban In-fill Tree Planting Program.
- Compost Project - The City of Appleton continued a composting demonstration project. This year the project utilized 10,000 yards of yard waste (e.g., brush and leaves) from curbside collections. The yard waste is a good source of carbon. In order to compost, nitrogen is needed (i.e., 2,500 tons) which can be found in the wastewater treatment plant biosolids. The mixture of yard waste and biosolids was placed into windrows and allowed to compost. The material is turned and ultimately reaches temperatures in excess of 160 degrees F. The finished compost was used by landscapers, the highway department, contractors and public giveaways.
- Remediated buckthorn on Trails and in Telulah Park.
- Expanded GIS mapping to include flood reported locations.

### **ENERGY**

- Wastewater Treatment Plant – A project was developed to construct an alternate mode of mixing for the (2) 2.2 million gallon digesters. The tanks currently require a significant amount of energy. The project, when complete in 2016, will result in sliding vane compressors with valve and gas metering upgrades and all of which is projected to reduce energy consumption by 1,300 kWh/day.
- Water Plant - Ultraviolet Light Process Project – the city's water treatment plant has completed a \$5.8 million dollar project to upgrade the water treatment facility with an ultraviolet light process. The process effectively reduces water borne pathogens and eventually will replace the ultrafiltration process. These upgrades will be transitioned to in 2016. The reduced electrical consumption is estimated to be 21.2 kW in a peak water production scenario.
- Purchased and are currently replacing all wall packs with LED lighting throughout thirty park sites.
- Replaced all exterior wall packs and street pole lighting throughout the Wastewater Plant with LED lighting.
- Installed LED lighting at skateboard park parking lot.

- Completed pilot project to retrofit existing High Pressure Sodium light fixtures with energy efficient LED lights in a portion of the Green Ramp while utilizing existing housings to reduce installation costs.
- Worked with ADI to purchase LED bulbs for Christmas decorations.

## **WATER**

- Phosphorus Reduction Project – An engineering study of wastewater treatment capacity to treat phosphorus and suspended solids was completed in 2015. The engineering study bench tested iron salts and polymers prior to a full scale demonstration project. The study also evaluated a number of “outside the plant” alternatives to in plant treatment. The wastewater treatment plant performed well in these phosphorus tests often meeting the future, more stringent, limit of 0.2 mg/L.
- Staff from the Department of Public Works participated in Fox River Cleanup Day held on Saturday, April 25, 2015.
- Appleton’s first full year installing Advanced Metering Infrastructure system for water meter reading and residential cross connection survey.
- Relayed over 3 miles of old, leaking watermain.

## **WASTE**

- Purchased 10 additional automated recycling carts for College Avenue in Downtown Appleton.
- Worked with a company to exchange our wood chips for their labor and equipment to screen our pile of stump grinding material providing a nice top soil type material for use on city projects.

## **LEGACY COMMUNITIES SUSTAINABLE STRATEGIES**

A copy of the Legacy Communities Sustainable Strategy Spreadsheet (aka Appendix 3 of the Legacy Communities Charter) is included as an attachment to this report for years 2011, 2015 and 2016 (goal). The baseline year (2011) was ~152 out of 322 points. We increased to 230 points in 2015. Our adjusted goal for 2016 is 241 points.

**Wisconsin Legacy Communities Strategy Options**  
 (Last Revised 12-29-2015 by Dean Gazza)

The purpose of the strategy options matrix is to provide a broad list of best management practices that encompass several elements of sustainability including transportation, energy, land use, water, and waste. This list is not inclusive. Prospective signatories should use the strategy options to gauge environmental performance and then use this baseline to strive for superior results.

Superior environmental performance may be achieved when municipalities use the strategy options to develop a sustainability plan that reduces their overall negative impact on the environment.

\*Please note that these numbers are estimates made by Dean Gazza, Director of Parks, Recreation and Facilities Management, Paula Vandehey, Public Works Director and Karen Harkness, Community Development Director on Oct. 12, 2011 for initial comparisons against other Green Tier Legacy Communities. Please do not cite these numbers without first consulting Dean Gazza at (920) 832-5572 or dean.gazza@appleton.org

**TRANSPORTATION DEMAND MANAGEMENT:**

Transportation demand management strategies aim to reduce GHG emissions and VMT by influencing change in individual behavior. These strategies encourage walking, bicycling, and transit as modes of transportation within a community and seek to curb the number and length of trips by vehicle.

T R A N S P O R T A T I O N	<u>Bicycle and Pedestrian Programs/Projects</u>					
	2	Require bike parking for all new non-residential and multifamily uses.	0	0	2	
	1	Set standards for placement and number (as function of intensity of use) for bike parking spaces.	0	1	1	
	3	Commuter bike routes identified and cleared.	3	3	3	
	5 to 10	League of American Bicyclists certification. (Bronze 5, Silver 7, Platinum 10)	0	5	5	
	3	Funded and operating SRTS program (or functional equivalent) covering at least 10 percent of students.	0	3	3	
	1	Conduct annual survey of students' mode of transport to school.	0	0	1	
	<u>Employer-Based Programs</u>					
	5	Require large employers seeking rezoning to set a price signal (cash-out or charge).	0	0	0	
	5	Require large employers seeking rezoning to provide subsidized transit.	0	0	0	
	5	Require large employers seeking rezoning to provide a TDM plan that would reduce trips by 20 percent over business as usual.	0	0	0	
	<u>Traffic Volume</u>					
	3	Track VMT or traffic counts and report on efforts at reduction (including those on this list).	1	2	2	
	3	Eliminate parking minimums from non-residential districts.	0	0	0	
	5	Set parking maximums at X per square feet for office and retail uses.	0	0	0	
5	Scheduled transit service at basic level (hour peak service within half-mile of 50 percent of addresses).	0	0	0		
10	Scheduled transit service at enhanced level (half-hour peak service within 75 percent of addresses).	0	0	0		

**TRANSPORTATION SYSTEM MANAGEMENT:**

Transportation system management strategies aim to reduce GHG emissions and VMT by improving the overall performance of a transportation system. These strategies improve existing infrastructure, introduce new technology, and plan for the future of the system.

T R A N S P O R T A T I O N	<u>Preservation and Improvement</u>					
	3	Develop and fully fund comprehensive maintenance program for existing roads.	3	3	3	
	1 to 5	Charge impact fees for new roads.	0	2	2	
	5	Calculate lane-miles per capita for arterials and collectors, and show reductions	5	5	5	
	5	Prepare a plan identifying disconnections in bike and pedestrian networks, prioritizing fixes and identifying potential funding sources for the most important projects.	3	5	5	
	5	Any proposal to add lanes to a two-lane roadway shall be evaluated for a center turn lane, the preferred option over an expansion to four lanes.	0	5	5	
	3	Identify four-lane roadways with fewer than 20,000 vehicles per day (AADT) and evaluate them for "road diets" with bike lanes or on-street parking	2	3	3	
	<u>Electric Vehicles</u>					
	1	Allow NEVs on appropriate roadways.	1	1	1	
	2	Provide public charging stations	0	0	1	
Z O N I N G	<u>Vehicle Idling</u>					
	2	Ban idling (more than 5 minutes) with local government vehicles.	2	2	2	
	5	Ban idling (more than 5 minutes) community-wide.	0	0	2	

**ZONING AND DEVELOPMENT:**

Zoning and development strategies work toward improving the overall environmental, economic, and social health of a community by promoting mixed-use and infill development, walkable neighborhoods, and an overall sustainable lifestyle.

Z O N I N G	<u>Infill Development</u>					
	5	Identify priority areas for infill development, including those eligible for brownfields funding.	5	5	5	
	1	Create land bank to acquire and assemble priority infill sites	0	0	0	
1	Develop an inventory of known contaminated properties for reuse planning, with possible GIS application	1	1	1		

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<b>Walkscore</b>				
10	Measure Walkscore at 10 random residential addresses per Census tract, compute average, and improve upon overall score	0	5	5
<b>Zoning</b>				
5	Adopt traditional neighborhood design ordinance (if population is less than 12,500)	0	5	5
5	Zoning for office and retail districts permits floor-area ratio > 1, on average.	3	3	3
8	Zoning for office and retail districts requires floor-area ratio > 1, on average.	0	0	0
5	Zoning code includes mixed use districts	10	10	10
8	Mixed-use language from Smart Code TBA.	0	5	5
<b>NATURAL RESOURCE MANAGEMENT</b>				
Natural resource management strategies seek to conserve, preserve, protect and promote a community's greenspace, wildlife, wetlands and waterways for this and future generations by promoting pervious surfaces and adequate setbacks.				
<b>Canopy</b>				
3	Adopt tree preservation ordinance per GTLC standards.	0	3	3
4	Set a tree canopy goal and develop a management plan to achieve it	1	3	3
2	Require trees to be planted in all new developments	2	2	2
2	Certification as Tree City USA	2	2	2
<b>Mowing</b>				
2	Local government rights of way mown or cleared only for safe sightlines and/or to remove invasive species.	1	2	2
<b>Water Protection</b>				
10	Establish 75-foot natural vegetation zone by surface water.	10	10	10
5	Inventory wetlands and ensure no net annual loss.	2	5	5
<b>COMMUNITY ENERGY USE</b>				
Community energy use strategies encourage energy efficiency and the use of renewable fuels to reduce total energy consumption throughout the community				
<b>Community Energy Use Policies</b>				
6	Use PACE financing	0	0	0
1	Watt meters available to the public	1	1	1
10	Adopt Residential Energy Conservation Ordinance (time-of-sale certification and upgrades).	0	0	0
<b>Measuring Community Energy Use</b>				
4	Work with local utilities to calculate total electricity and natural gas consumption annually, beginning with the fifth year before entering the program.	4	4	4
1	State of Wisconsin Energy Independent (EI) Community designation.	0	1	1
<b>MUNICIPAL ENERGY USE</b>				
Municipal energy use strategies encourage municipal employees to conserve energy, preserve the environment, and decrease greenhouse gas emissions from municipal facilities, services, and vehicle fleets.				
<b>Government Energy Use Policies</b>				
5	Include transportation energy/emissions as criterion in RFPs for purchases of goods over \$10,000.	0	0	3
3	Develop list of lighting, HVAC and shell improvements to raise Energy Star Portfolio Manager or LEED EBO&M score	3	3	3
3	Reduce motor fuels use for non-transit activities --	1	3	3
6	Provide transit passes at 50 percent or more off the regular price and/or provide parking cash-out options for local government employees.	0	0	0
5	Streetlights operate at 75 lumens/Watt or higher	5	5	5
3	Stoplights are LED or functional equivalent	3	3	3
5	Municipal electricity purchases are at least 5 percentage points higher in renewable content than the statewide renewable portfolio standard requires. Calculation may include self-generated power and purchased offsets.	0	3	3
<b>Measuring Government Energy Use</b>				
5	Complete EPA Energy Star Portfolio Manager spreadsheet for government energy use. Or score existing buildings with LEED EBO&M.	0	3	5
2	Calculate annual government fleet use of motor fuels, in gallons of petroleum and biofuels, beginning with the fifth year before entering the program.	1	2	2
10	All new and renovated municipal buildings must meet LEED Silver or greater.	0	0	0
<b>WATER USE CONSERVATION</b>				
Water Conservation strategy options set baselines and goals for water and energy performance in municipalities. They measure progress and promote water conservation by the government, business, and the community at-large.				
<b>Water Conservation</b>				
5	Track water and sewer use annually, beginning with fifth year before entering program, and develop plan for reductions.	5	5	5
4	Develop a water loss control plan with targets below the 15% required by the state and include a system-wide water audit implementation and time table	4	4	4
2	Join EPA's WaterSense Program for water utilities or the Groundwater Guardian Green Sites program and promote them to local business.	2	2	2
6	Use block rates and flat rates to encourage water conservation among residential, commercial, and industrial users.	5	5	5
1	Financial assistance for sewer lateral replacements.	0	0	0
2 to 6	Upgrade water utility equipment (e.g., variable frequency drive motors) to achieve energy efficiency.	6	6	6
3	Infiltration and inflow reduction by 10%	3	3	3
5	Wastewater biogas captured and used in operations.	5	5	5

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5	Plan for replacing all toilets using > 1.6 gpf and annual progress sufficient to reach 90 percent replacement in 10 years.	3	5	5
	<b>Local Government Use</b>			
2	Install waterless urinals in men's restrooms at municipal facilities (city hall, parks, etc.)	0	0	0
3	All outdoor watering by local government, excluding parks and golf courses, from rain collection.	2	3	3
4	Develop a water efficiency and conservation plan for municipal buildings	1	4	4
	<b>STORMWATER MANAGEMENT</b>			
	<b>Stormwater Management strategy options encourage the use of best management practices to achieve a reduction in the amount of harmful pollutants introduced to our streams, rivers, and lakes.</b>			
3	Develop a regular street sweeping program to reduce total suspended solids	3	3	3
3	Stormwater utility fees offer credits for best management practices such as rain barrels, rain gardens, and pervious paving	3	3	3
2	Inventory all paved surfaces (e.g., by GIS mapping), and develop a plan for reduction	2	2	2
2	Work with commercial or light industrial businesses to develop stormwater pollution plans	1	2	2
	<b>WATER AND DEVELOPMENT</b>			
	<b>Water and Development strategy options link water conservation and the preservation of land, wetlands, and wildlife habitat while promoting compact development, restoration and rehabilitation efforts, and long-term planning.</b>			
	<b>Land Development</b>			
5	Identify key green infrastructure areas during plan development and/or implement a plan to acquire and protect key green infrastructure areas	5	5	5
	<b>Waters, Wetlands, and Wildlife</b>			
1 to 6	Replace concrete channels with re-meandered and naturalized creeks, wetlands, or swales	6	6	6
3	Develop a system for identifying culverts that obstruct fish migration and install fish friendly culverts where needed	1	3	3
4	Provide incentives for protection of green infrastructure, sensitive areas, important wildlife habitat, or for the restoration or rehabilitation of wetlands or other degraded habitats such as credit towards open space or set-aside requirements	2	4	4
	<b>WASTE MANAGEMENT AND REDUCTION</b>			
	<b>Waste Management and Reduction strategy options encourage municipalities and their citizens to divert organics and recyclables from landfills and properly dispose of hazardous materials in an effort to reduce waste in a community.</b>			
3	Community waste stream monitored at least annually . Waste reduction plan prepared and updated annually	3	3	3
4	Waste and materials management plan based on "zero-waste" principles, with specific goals, prepared and updated annually	2	4	4
3	Construction/deconstruction waste recycling ordinance	2	3	3
3	Mandatory residential curbside recycling pickup that covers paper, metal cans, glass and plastic bottles	3	3	3
5	Develop a municipal collection program that encourages the diversion of food discards, yard materials, and other organics from landfills to composting or anaerobic digestion with energy recovery	2	5	5
3	Develop and promote programs that dispose of household hazardous, medical, and electronic waste	3	3	3
4	Use anaerobic digesters to process organic waste and produce energy	0	4	4
3	Implement municipal ordinances requiring manufacturer takeback for fluorescent bulbs, thermostats and other mercury-containing devices	0	1	1
2	Ordinances in place to reduce the usage of phone books as well as single-use shopping bags, styrofoam food containers and other disposable packaging	0	2	2
2	Pay-as-you-throw system implemented by municipality or required of private waste haulers	2	2	2
1	Use public education and outreach to promote recycling, backyard composting, product re-use and waste reduction	1	1	1
322		152	230	241
		47%	71%	75%

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