



# CITY OF MONONA ANNUAL REPORT 2015

# Executive Summary

12/1/2016

This document is meant to track and benchmark quantitative and qualitative progress in sustainability as it pertains to strategies laid out in the Monona Sustainability Plan. The document takes a comprehensive approach and is a living document, meant to be updated on an annual basis to compare progress from year to year in the community's and municipality's sustainable efforts. The following is a summary of progress in sustainable accomplishments and any significant findings found by analyzing data recorded in 2015 and progress made to track data from 2016. It is important to note that between 2012 and 2014 the individual who recorded or calculated data in this report did not leave notes for any types of methodology or sources they may have used to record said archived data. Some of the 2015 recorded results that vary greatly from what was recorded earlier are highlighted and \*\* in red print to record that these differences are not accounted for or should not be used to do any type of analysis as they may be inaccurate.

## 2015 Significant findings

### General Sustainability:

- Website improvements were made by intern Jacqui.
- Partnered with Sustain Dane and produced 5 projects the City used to promote sustainability
- Partnered with Clean Lakes Alliance, Madison Area Municipal Storm Water Partnership (MAMSWAP), Yahara WINS, and Madison Metropolitan Sewerage District to promote stormwater management practices
- Monona Sustainability Plan was completed in August of 2015 and is now in implementation
- Green Purchasing Policy drafted and ready for final review
- Solar battery pack bought and ready to install on water utility vehicle

### Water Use:

- Water use in the community went down in 2015 by 10%
- Commercial and industrial use per customer went down by 55%, most likely due to the loss of the City's largest user
- Stormwater runoff of phosphorus reduced by 20% in 2015 from 2014 baseline models
- Stormwater runoff of total suspended solids reduced by 16.5% in 2015 from 2014 baseline models
- Water loss in the distribution system increased 5% from 2014 to 2015 and has increased from 5% total water loss in 2012

### Energy Use:

- Energy and natural gas use by the community decreased in 2015 from 2014 totals
- City facility energy use from MGE has been relatively steady since 2013 at the implementation of the solar facilities. Usage is rising slightly while price has decreased slightly due to rate changes

### Waste Disposal:

- Every year for the past 3 years total pounds of disposed waste has stayed relatively steady, however, recycling has slowly and steadily increased

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# GENERAL SUSTAINABILITY: COMMUNITY

## OBJECTIVE GC1: GENERAL SUSTAINABILITY, COMMUNITY RAISE THE SUSTAINABILITY AWARENESS OF MONONA RESIDENTS

### Potential strategies to help achieve this objective:

1. Improve sustainability information on the city website – include links to organizations and other websites with information about all sustainability concepts, including water conservation and pollution, energy conservation, solid waste management, sustainable transportation efforts and sustainable land use opportunities.
  - **Report 2015:** Intern Jacqu Ptacek greatly improved our website, but more can be done in 2016. Recommend keeping this for 2016.
2. Partner with organizations and programs that educate about and promote environmental issues and sustainability practices to raise awareness about sustainability and increase the percentage of residents that have implemented sustainable practices.
  - **Report 2015:** Completed on a limited basis in 2015 (e.g.Sustain Dane, Clean Lakes Alliance, Madison Area Municipal Stormwater Partnership (MaMSWaP), YaharaWINS).
3. Create an esthetically pleasing sustainability plan for outreach (sustainability committee).
  - **Report 2015:** Completed and adopted August 3, 2015
4. Make an education and marketing plan for how to spread information about general sustainability. The plan should include direction for spreading the word about all of the sustainability concepts, including water conservation and pollution, energy conservation awareness, solid waste reduction, land use impacts and sustainable transportation actions.
  - **Report 2015:** Nothing has been done for this strategy in 2015.
5. Increase the number of events at the library with sustainability theme.
  - **Report 2015:** EcoAction Tuesdays have started up again.
6. Inform the community about what the city is doing through media such as the bi-yearly newsletter, city website, signage in park shelters and articles in the local newspaper.
  - **Report 2015:** Nothing has been done for this strategy in 2015.

The evaluation of this objective will be based partly on evaluations of objectives for residents within the other five focus areas. To complement this, the outcome of each implemented strategy will be evaluated. For example, when the city’s sustainability website is updated, the number of visitors will be tracked. Another evaluation example would be to follow residents’ participation in sustainability programs and projects arranged by other organizations, such as Green Power Tomorrow. In addition, storytelling will be included as a qualitative evaluation in future reports.

Potential Evaluation Indicators and Metrics
1. Summary of evaluation of other objectives for residents within the other five focus areas
2. Number of visits to the city’s sustainability website, Facebook, Twitter
3. Number of library check-outs from the sustainability section
4. Frequency of wattmeter checkouts from the library
5. Attendance at local sustainability workshops, seminars, etc.
6. Evaluations of other initiated strategies
7. Number of Green Power Tomorrow residential participants
8. Storytelling

**Additional information and explanations:**

Wattmeter: An instrument for measuring the electric supply (in watts) of any given circuit; can be used to cut energy costs and learn which electrical appliances are worth keeping plugged in. Green Power Tomorrow: A program that allows Madison Gas and Electric customers to purchase renewable energy for their home or business.

**OBJECTIVE GC2: GENERAL SUSTAINABILITY, COMMUNITY**

**INCREASE PERCENTAGE OF RESIDENTS WHO HAVE IMPLEMENTED SUSTAINABLE PRACTICES, SUCH AS THOSE LISTED IN OTHER FOCUS AREAS WITHIN THIS PLAN**

**Potential strategies to help achieve this objective:**

*\*\* See objective GC1 above and strategies for objectives within the other five focus areas.*

This objective has a strong correlation to objective GC1 and many strategies will lead to results for both of them. Similarly to objective GC1, the evaluation of this objective will partly be based on evaluations of objectives for residents within the other five focus areas. To complement this, evaluations will be done of the outcome of implemented strategies. For example, when the city works together with other organizations to help with outreach, the number of participants will be tracked. One such collaboration, which has already been implemented but could be repeated, is energy audits through Focus on Energy. In addition, storytelling will be included as a qualitative evaluation in future reports.

Potential Evaluation Indicators and Metrics
1. Summary of evaluation of other objectives for residents within the other five focus areas
2. Number of home energy audits through Focus on Energy or MGE
3. Annual number of Focus on Energy financial incentives awarded to Monona residents*
4. Evaluations of initiated strategies.
5. Storytelling

**Additional information and explanations:**

*\*\* There were 174 Focus on Energy financial incentives awarded to Monona residents in 2013.*

Focus on Energy: offers energy efficiency rebates and programs to assist homeowners in reducing their energy use and costs.

Home energy audit: allows individuals to assess their home’s energy use and evaluate which measures to take in order to improve efficiency.

**OBJECTIVE GC3: GENERAL SUSTAINABILITY, COMMUNITY RAISE THE SUSTAINABILITY AWARENESS OF MONONA BUSINESSES**

**Potential strategies to help achieve this objective:**

1. Partner with organizations and programs that educate about environmental issues and sustainability practices.
  - **Report 2015:** This strategy was not targeted in 2015.
2. Initiate collaboration between the city and the local Chamber of Commerce on sustainability issues.
  - **Report 2015:** This was done on a limited basis, and the Monona Green Map will help with this strategy.

For this objective, similar to objective GC1 and GC2, the evaluation will partly be based on evaluations of objectives for businesses within the other five focus areas. Also for this objective, evaluations will be done of

the outcomes of implemented strategies including collaborations with other organizations. In addition, storytelling will be included as a qualitative evaluation in future reports.

<b>Potential Evaluation Indicators and Metrics</b>
1. Summary of evaluation of other objectives for businesses within the other five focus areas
2. Number of Green Power Tomorrow commercial participants
3. Evaluations of initiated strategies.
4. Storytelling

**Additional information and explanations:**

Green Power Tomorrow: A program allowing Madison Gas and Electric customers to purchase renewable energy for their home or business.

**OBJECTIVE GC4: GENERAL SUSTAINABILITY, COMMUNITY**

**INCREASE THE NUMBER OF BUSINESSES THAT HAVE IMPLEMENTED SUSTAINABLE PRACTICES, SUCH AS THOSE LISTED IN OTHER FOCUS AREAS IN THIS PLAN**

**Potential strategies to help achieve this objective:**

*\*\* See objective GC3 above and strategies for objectives within the other five focus areas.*

This objective has a strong correlation to objective GC3 and many strategies will lead to results for both of them. Similarly to objective GC1, GC2 and GC3, the evaluation will partly be based on evaluations of objectives for businesses within the other five focus areas. Also for this objective, evaluations will be done of the outcome of implemented strategies including collaborations with other organizations. In addition, storytelling will be included as a qualitative evaluation in future reports. Review ordinance that require practices contrary to sustainability (e.g. minimum parking requirements) and evaluate possibilities for changes.

**Report 2015:** This was not done, but the Monona Green map will help with this strategy.

<b>Potential Evaluation Indicators and Metrics</b>
1. Summary of evaluation of other objectives for residents within the other five focus areas
2. Number of businesses participating in Green Tier, Green Masters, MPower Champions, Travel Green Wisconsin, Main Street Green, Clean Clear Waters, Green Built Home, and other programs
3. Number of energy audits through Focus on Energy or MGE
4. Annual number of Focus on Energy financial incentives awarded to businesses (174 in 2013)
5. Evaluations of initiated strategies.
6. Story telling

**Additional information and explanations:**

*\*\* There were 174 Focus on Energy financial incentives awarded to Monona residents in 2013.*

Green Tier: A sustainable development program developed by the Wisconsin DNR; main goal is to assess environmental impacts within businesses, communities, and individuals, and then to develop strategies to eliminate causes of negative impacts.

Green Masters: Coordinated by the Wisconsin Sustainable Business Council in conjunction with the University of Wisconsin-Madison; points-based recognition program that helps to recognize leading Wisconsin sustainable businesses and to encourage continuous improvement within these businesses.

MPower: Administered by Sustain Dane; provides participating businesses with tools to reduce their energy, transportation, waste, and water use in order to save money and become more sustainable.

Travel Green Wisconsin: Initiated by the Wisconsin Department of Tourism; certification program highlighting tourism businesses that promote environmentally friendly travel practices.

Main Street Green: Coordinated by the Wisconsin Environmental Initiative (WEI); certifies and supports local businesses implementing technologies and practices that help the surrounding community and environment.

Clean Clear Waters: Administered by the Madison Area Builders Association and the WEI; recognizes homes and businesses that have made efforts to reduce runoff and erosion around Wisconsin waterways.

Green Built Home: WEI initiative that reviews and certifies new homes that meet relevant sustainable building and energy standards.

## GENERAL SUSTAINABILITY: MUNICIPALITY

### OBJECTIVE GM1: GENERAL SUSTAINABILITY, MUNICIPALITY

#### ENSURE SUSTAINABILITY IS CONSIDERED IN DECISION-MAKING, INCLUDING THE CITY BUDGET PROCESS

##### Potential strategies to help achieve this objective:

1. Develop a process/system for how sustainability should be considered/accounted for in the decision-making processes (in committees, city council and by employees).
  - **Report 2015:** This strategy was not targeted in 2015. Further develop for 2016.
2. Develop a green purchasing policy.
  - **Report 2015:** This policy was created and will be finished being implemented by the sustainability intern in 2016.
3. Create a green cleaning policy.
  - **Report 2015:** This strategy was not targeted in 2015.
4. Appoint or hire a sustainability coordinator; a part or full-time city employee to plan/manage/implement sustainability initiatives.
  - **Report 2015:** This strategy was not targeted in 2015.

Evaluation of this objective will be based on the success of implemented strategies. These strategies will be decided upon after a system has been developed to provoke accounting for sustainability in the decision-making processes of committees, city council and employees. Some potential evaluation metrics being the percentage of budget items for which a sustainable alternative was considered or number of decisions in a committee in which sustainability was evaluated.

Potential Evaluation Indicators and Metrics
1. Survey responses from committee representatives
2. Evaluations of initiated strategies

### OBJECTIVE GM2: GENERAL SUSTAINABILITY, MUNICIPALITY

#### RAISE THE SUSTAINABILITY AWARENESS OF CITIZEN REPRESENTATIVES TO CITY COMMITTEES

##### Potential strategies to help achieve this objective:

1. Give sustainability presentation to each city committee.
  - **Report 2015:** This strategy was not targeted in 2015. Retain for 2016.
2. Regularly give sustainability presentations to new citizen representatives to city committees.

- **Report 2015:** This strategy was not targeted in 2015.
3. Require that some portion of the city savings from sustainability efforts is recycled back into more sustainability efforts.
    - **Report 2015:** This strategy was not targeted in 2015, but should remain for 2016.
  4. Develop sustainability checklists-one-page-formatted to the needs of each specific committee and handed out for consideration in decisions.
    - **Report 2015:** This strategy was not targeted in 2015. Retain for 2016.
  5. Offer "green education" programs to citizen representatives to city committees.
    - **Report 2015:** This strategy was not targeted in 2015.

Evaluation of this objective will be founded on survey responses from committee representatives. In addition the evaluation of staff members' implemented strategies will be considered. Potential evaluation metrics could be the number of participants in sustainability education programs, if such were to be developed.

<b>Potential Evaluation Indicators and Metrics</b>
1. Survey responses from committee representatives
2. Evaluations of initiated strategies

### **OBJECTIVE GM3: GENERAL SUSTAINABILITY, MUNICIPALITY RAISE THE SUSTAINABILITY AWARENESS OF CITY EMPLOYEES**

#### **Potential strategies to help achieve this objective:**

1. Include sustainability in job descriptions.
  - **Report 2015:** This strategy was not targeted in 2015. Retain for 2016.
2. Include sustainability in employee policy/handbook.
  - **Report 2015:** This strategy was not targeted in 2015. Retain for 2016.
3. Include sustainability in performance reviews of city employees (especially supervisors) to assess progress towards sustainability goals.
  - **Report 2015:** This strategy was not targeted in 2015. Retain for 2016.
4. Maintain Green Team.
  - **Report 2015:** This was successful in 2015.
5. Develop and require robust sustainability training for city employees.
  - **Report 2015:** This strategy was not targeted in 2015. Retain for 2016.

For this objective the evaluation will be based on survey responses from city employees and on attendance at sustainability education programs. Some employees have already gone through a short training in The Natural Step framework; others have participated in programs through Sustain Dane. In addition to these metrics, evaluations of implemented strategies will be considered.

<b>Potential Evaluation Indicators and Metrics</b>
1. Survey responses from city employees
2. Attendance at sustainability education programs
3. Evaluations of initiated strategies

# LAND USE: COMMUNITY

## OBJECTIVE LC1: LAND USE, COMMUNITY

### INTEGRATE SUSTAINABILITY CONSIDERATIONS IN THE EVALUATIONS AND DECISIONS MADE BY PLAN COMMISSION

#### Potential strategies to help achieve this objective:

1. Develop strategies for bringing sustainability into consideration.
  - **Report 2015:** This was included in the Comprehensive Plan for 2016 and is an ongoing effort.
2. Review ordinances to find those that require practices contrary to sustainability (e.g., requiring mowing) - analyze if obstacles to sustainability can be removed.
  - **Report 2015:** This strategy was not targeted in 2015. Retain for 2016.
3. Decrease exterior surface parking and other impervious surfaces.
  - **Report 2015:** This strategy was not targeted in 2015.

Evaluation Indicators and Metrics	Baseline	2015	2025 Target
Number of “Sustainable Community Development Principles” which was addressed in each community development project decision	n/a	n/a	Increase

#### Additional information and explanations:

In the annual summary of decisions made by the City of Monona Plan Commission, an analysis will be added to evaluate each decision from a sustainability point of view. The evaluation will be based on if the following sustainability principles from the Planning Advisory Service series (PAS 567 (2012)) has been addresses or not:

1. Livable Built Environment – ensure that all elements of the built environment, including land use, transportation, housing, energy and infrastructure, work together to provide sustainable, green places for living, working and recreation, with a high quality of life.
2. Harmony with Nature – ensure that the contributions of natural resources to human well- being are explicitly recognized and valued and that maintaining their health is a primary objective.
3. Resilient Economy – ensure that the community is prepared to deal with both positive and negative changes in its economic health and to initiate sustainable urban development and redevelopment strategies that foster green business growth and build reliance on local assets.
4. Interwoven Equity – ensure fairness and equity in providing for the housing, services, health, safety, and livelihood needs of all citizens and groups.
5. Healthy Community – ensure that public health needs are recognized and addressed through provisions for healthy foods, physical activity, access to recreation, health care, environmental justice, and safe neighborhoods.
6. Responsible Regionalism – ensure that all local proposals account for, connect with and support the plans of adjacent jurisdictions and the surrounding region.

For each of these six sustainability principles several practices are given, building part of a matrix for evaluation, see [www.planning.org](http://www.planning.org). Some examples of practices are:

1. Multi-modal transportation choices
2. Natural habitat protection
3. Economic growth capacity
4. Range of housing types

5. Toxin exposure reduction
6. Local land use plans coordinated with regional transportation

**OBJECTIVE LC2: LAND USE, COMMUNITY INTEGRATE SUSTAINABILITY COMPONENTS IN ZONING CODE**

**Potential strategies to help achieve this objective:**

1. Review zoning code to find those that include practices contrary to sustainability, (e.g., requiring mowing) analyze if obstacles to sustainability can be removed (e.g., zoning regulations that prohibit or limit the installation of solar panels).
  - **Report 2015:** This strategy was not targeted in 2015. Retain for 2016.
2. Review zoning code to encourage sustainability practices (e.g. reduction of impermeable surfaces).
  - **Report 2015:** This strategy was not targeted in 2015. Retain for 2016.

<b>Evaluation Indicators and Metrics</b>	<b>Baseline</b>	<b>2015</b>	<b>2025 Target</b>
1) Number of zoning code <i>reviewed</i> to include sustainability aspects	0	0	All
2) Number of zoning code <i>revised</i> to consider sustainability aspects	0	0	Increase

**Additional information and explanations:**

Reviewing the zoning code consists of looking again into the zoning code to determine whether or not sustainability aspects need to be included. If changes do need to be made, the zoning code can be amended to make such changes.

**OBJECTIVE LC3: LAND USE, COMMUNITY INTEGRATE SUSTAINABILITY COMPONENTS IN COMPREHENSIVE PLAN**

**Potential strategies to help achieve this objective:**

1. Analyze all City of Monona Comprehensive Plan elements based on sustainability criteria.
  - **Report 2015:** This strategy was not targeted in 2015.

<b>Evaluation Indicators and Metrics</b>	<b>Baseline</b>	<b>2015</b>	<b>2025 Target</b>
1) Analysis of the increase in sustainability components from one Comprehensive Plan to the next	Existing plan from 2004	n/a	Increase

**Additional information and explanations:**

The existing comprehensive plan is from 2004, with a new one currently under development. It is expected that another update of the plan will be implemented before 2025. Each consecutive plan will be evaluated and compared to the previous to find improvements based on the scoring matrix for sustainability principles listed under LC1.

## OBJECTIVE LC4: LAND USE, COMMUNITY

### INCREASE WALKABILITY TO STORES, RESTAURANTS AND OTHER AMENITIES

#### Potential strategies to help achieve this objective:

1. Track and improve Walk Score.
  - **Report 2015:** This strategy was not targeted in 2015. UniverCity could help with this strategy.
2. Encourage mixed-use buildings/development along business corridors.
  - **Report 2015:** This strategy was not targeted in 2015.
3. Allow light commercialization in the area of community center/library/Winnequah Park.
  - **Report 2015:** This strategy was not targeted in 2015.

Walkability is a concept that determines the extent to which a built environment is friendly to walking. Walkability is commonly defined by factors such as:

- **Proximity:** the distance to stores, restaurants, mass transit access points, parks and other community amenities.
- **Connectivity:** how efficient street and walk path patterns are for walking; distance between intersections and if walking routes are direct or cumbersome (e.g. large sub- divisions with cul-de-sacs).
- **Safety:** room to walk, trip hazards, safe crossing of streets, behavior of motorists, well/dimly lit walk paths, occurrence of crime.
- **Convenience and Pleasantness:** quality of walk paths, waiting time to cross streets, obstructions, type of environment (e.g. by an interstate or a small local street, by a warehouse or a park), cleanliness, beauty of surroundings.

This objective will be evaluated through a combination of metrics for proximity and other aspects of walkability as listed above. Before deciding on the details of the measurements, different existing tools will be tested and evaluated for suitability for the City of Monona. One potential metric is Walk Score, a rating based on households' proximity to stores, restaurants, parks, schools and other amenities. Higher values indicate more walkable areas, whereas lower values indicate more car dependent areas. See [walkscore.com](http://walkscore.com). A walk audit is a tool for evaluating walkability aspects other than proximity. To perform a walk audit, first, several walks are done, preferable by two or more people, originating from households at a variety of points in the community and ending at community amenities. The walks are then evaluated using an index of walkability based on factors such as those listed above.

See <http://www2.epa.gov/smart-growth/walkability-checklist>.

Potential Evaluation Indicators and Metrics	2012 Baseline	2015	2025 Target
1) Walk Score rating for a number of households distributed over a grid of Monona	n/a	n/a	Increase
2) Percentage of households within 0.25mi and 0.5mi of mass transit access point, stores, restaurants, library, park and other community amenities	n/a	n/a	Increase
3) Walk audits for a number of households distributed over a grid of Monona	n/a	n/a	Improve

### Additional information and explanations:

Walkability is partly covered by other objectives in the MSP both under the land use and transportation focus areas. However, walkability has been included in the MSP as a separate objective due to its multi-faceted impact on the community. Listed below are some areas where positive impacts have been identified by research:

- **Environment:** Walking as an alternative to motorized transportation lowers the negative environmental impact both on a global scale (e.g. less greenhouse gas emissions) but also on a local scale with less air pollution.
- **Health:** walking, like other forms of physical activity, results in significant health benefits. It has been found that residents living in walkable neighborhoods are at less risk of being obese or overweight, and there are higher levels of physical activity in children. It has also been shown that walking contributes to a reduction of cancer.
- **Community Engagement:** neighborhood walkability leads to enhanced levels of social and community engagement. People that live in walkable neighborhoods are more likely to know their neighbors, participate politically, trust others, have an increased sense of pride, show increased volunteerism and be socially engaged.
- **Social Justice:** A highly walkable community ensures that people who cannot drive are not restricted and it makes it possible to avoid the expensive costs of private transportation.
- **Safety:** walkable neighborhoods have been linked with decreased crime rates.
- **Economics:** the presence of sidewalks and other walking facilities is shown to increase property value and promote tourism. A highly walkable community will also increase economic activity due to the higher probability of residents using local businesses.

## LAND USE: MUNICIPALITY

### Objective LM1: LAND USE, MUNICIPALITY

#### MAINTAIN PROTECTION AND RESTORATION OF NATURAL HABITATS INCLUDING WETLANDS

#### Potential strategies to help achieve this objective:

1. Update the City of Monona Wetland Management Plan.
  - **Report 2015:** This strategy was not targeted in 2015.
2. Inventory natural habitats.
  - **Report 2015:** This strategy was not targeted in 2015.
3. Identify culverts that obstruct fish migration and install fish friendly culverts where needed.
  - **Report 2015:** The city successfully replaced culverts at Winnequah Park and Summer Lagoons.
4. Implement an invasive species management plan for public lands that includes controlling aquatic invasive species.
  - **Report 2015:** This strategy was not targeted in 2015. No strategies planned for 2016.

Evaluation Indicators and Metrics	2012 Baseline	2015	2025 Target
1) Square miles of land reserved for natural habitat	260*	260	Increase by 8%
2) Square miles of land restored to natural habitat	0	0	20

*\*Aldo Leopold Nature Center (40 acres) and the Wetland Conservancy (220 acres)*

**Additional information and explanations:**

Land reserved for natural habitat consists of space that is protected from development projects, human influence, etc. Land restored to natural habitat consists of space that has been reconstructed from a previous condition to support natural life. In addition to large parcels of land set aside, this could include having areas with natural/indigenous plants and trees in existing parks and open spaces in support of wildlife. Probable areas for this would be; Winnequah Park shoreline restoration, wetland restoration in Three Meadows Park and pockets in other parks switched to no-mow, native plantings.

**OBJECTIVE LM2: LAND USE, MUNICIPALITY INTEGRATE SUSTAINABILITY IN LANDSCAPE MANAGEMENT**

**Potential strategies to help achieve this objective:**

1. Set a tree canopy goal and develop a management plan to achieve it.
  - **Report 2015:** This strategy was not targeted in 2015.
2. Assess current landscape management practices.
  - **Report 2015:** This strategy was not targeted in 2015.
3. Develop a sustainable landscape management plan.
  - **Report 2015:** This strategy was not targeted in 2015.
4. Develop a pest management plan that limits the use of insecticides, fungicides, and rodenticides to applications needed to avoid significant ecological or public health damage and that prohibits use of pesticides for aesthetic purposes.
  - **Report 2015:** This strategy was not targeted in 2015.

This objective would be evaluated by a combination of metrics, all of which need to be assessed before a target can be set.

<b>Evaluation Indicators and</b>	<b>2012 Baseline</b>	<b>2015</b>	<b>2016</b>	<b>2025 Target</b>
<b>1) Acres of city land planted with native plant species</b>	n/a	n/a	Aldo/Woodland	n/a
<b>2) Pounds per year used on city land:</b> <ul style="list-style-type: none"> <li>• synthetic fertilizer,</li> <li>• pesticides</li> <li>• herbicides used on city land</li> </ul>	n/a	n/a	Coming Soon	n/a
<b>3) Number of trees planted per year (new plantings and replacements)</b> <ul style="list-style-type: none"> <li>• in parks and open spaces</li> <li>• in terraces (right of way)</li> </ul>	15 new and replacement	37	Coming soon	n/a
<b>4) Irrigation with potable water (not including rainwater or lake water)</b>	n/a	n/a	Coming soon	n/a

**OBJECTIVE LM3: LAND USE, MUNICIPALITY MAINTAIN PERCENTAGE OF LAND DEVOTED TO OPEN SPACE/PARKS/RECREATION**

**Potential strategies to help achieve this objective:**

1. Inventory present land devoted to open space/parks/recreation.
  - **Report 2015:** This strategy was not targeted in 2015.
2. Identify key green infrastructure areas during plan development and/or implement a plan to acquire

and protect key green infrastructure areas.

- **Report 2015:** This strategy was not targeted in 2015.

Evaluation Indicators and Metrics	2010 Baseline*	2015	2016	2025 Target
1) Outdoor recreation area, developed (acres)	427.5	427.5	Coming Soon	Keep at same or above
2) Woodlands (acres)	16.0**	16.0	Coming Soon	Keep at same or above
3) Wetland (acres)	27.6***	27.6	Coming Soon	Keep at same or above
4) Open space/park/recreation land per resident	0.07	0.06	Coming Soon	Keep at same or above
5) Open space/park/recreation land as percentage of total Monona land area	23%	23%	Coming Soon	Keep at or above 23%

**Additional information and explanations:**

\*\* Evaluation of land use data for Monona was done in 2010 and therefore this year is used instead of 2012 as baseline for this Objective. The numbers in the table comes from Capital Area Regional Planning Commission (CARPC)

\*\*Aldo Leopold Nature Center (40 acres) is not included in this number.

\*\*\* The Wetland Conservancy (220 acres) is not included in this number, but is included in the “Outdoor recreation area, developed (acres)” inventory.

The City is hoping to undertake a comprehensive inventory of the street trees and trees in its parks in an effort to verify the baseline of the tree canopy. Moving forward, this updated inventory will allow us to manage data about the tree canopy using the City’s GIS programming.

## WATER: COMMUNITY

### OBJECTIVE WC1: WATER, COMMUNITY

#### INCREASE WATER EFFICIENCY AND CONSERVATION BY RESIDENTS

**Potential strategies to help achieve this objective:**

1. Arrange educational events.
  - **Report 2015:** This strategy was not targeted in 2015.
2. Develop an incentive program for citizens to encourage conservation. E.g. incentives for low flow toilets, faucets, showerheads, and water softeners.
  - **Report 2015:** This strategy was not targeted in 2015.
3. Develop a smart water metering system for assessment and consumer feedback.
  - **Report 2015:** This strategy was not targeted in 2015.

Evaluation Indicators and Metrics	2012 Baseline	2013	2014	2015	2025 Target
1) Absolute household residential water use (thousand gallons/year)	132,909	115,142	151,859	137,413	*

1a) Water use intensity (thousand gal/resident/year)	17.6	15.3	20.1	17.5	Reduce by 20%
1b) Water use intensity (thousand gal/household/year)	34.1	29.5	39.0	35.3	*

\*Data from the Public Service Commission of Wisconsin, WEGS Annual Report.

\*This metric has been included for background information, not for the purpose of target setting.

**Additional information and explanations:**

A portion of Monona residents are served by the Madison Water Utility. The water usage by these households has been estimated based on the water usage of those served by the Monona Water Utility.

Base year for target setting: Because water usage fluctuates with the average temperature and precipitation it is difficult to accurately choose a base year, compare water usage over several years and set a target for reduction. Using the actual data for the baseline and target years could produce skewed results if those years happen to be extreme weather years. Using five-year averages would make it difficult to see any results from implemented strategies to lower water consumption. A two-year average might be the best option, however we suggest making the decision on an annual basis about which years, or averages, to compare with which and to track actual yearly water usage for the duration of the MSP so that patterns and irregularities can be recognized.

**OBJECTIVE WC2: WATER, COMMUNITY**

**INCREASE WATER EFFICIENCY AND CONSERVATION BY COMMERCIAL AND INDUSTRIAL PROPERTIES**

**Potential strategies to help achieve this objective:**

1. Promote EPA's WaterSense Program for water utilities or the Groundwater Guardian Green Sites program to local business.
  - **Report 2015:** This strategy was not targeted in 2015.
2. Educate hotels and other high-volume users.
  - **Report 2015:** This strategy was not targeted in 2015.

Evaluation Indicators and Metrics	2012 Baseline	2013	2014	2015	2025 Target
1) Absolute commercial/industrial water use (thousand gallons/year)*	122,512	124,551	153,799	69,156	***
2) Water use intensity (thousand gallons/customer)	378	383	479	216.1	Decrease by 10%
3) Water use intensity (thousand gallons/sq ft commercial building area)**	10.92	10.74	8.7	3.9	***

\* Data from the Public Service Commission of Wisconsin, WEGS Annual Report.

\*\*This number has not been estimated for 2012 and 2013.

\*\*\* This metric has been included for background information, not for the purpose of target setting.

**Additional information and explanations:**

For a discussion about how to choose base year and absolute or average values, see Objective WC1. Similar to residential customers there are some commercial customers in Monona served by Madison Water Utility, however they represent a negligible percentage of commercial water use.

## OBJECTIVE WC3: WATER, COMMUNITY DECREASE QUANTITY OF STORMWATER RUNOFF TO LAKES

### Potential strategies to help achieve this objective:

1. Create private-public partnerships for stormwater reduction initiatives.
  - **Report 2015:** This was successful – Clean Lakes Alliance, MAMSWaP, YaharaWins, Dane County Rain barrel program
2. Provide incentives to businesses and industries for implementing best management practices that exceed regulations in reducing impervious surfaces and increasing infiltration.
  - **Report 2015:** This strategy was not targeted in 2015.
3. Offer stormwater utility fee credits to residents for best management practices such as rain barrels, rain gardens and pervious paving.
  - **Report 2015:** This strategy was not targeted in 2015.

This objective will be evaluated in the same way, and has the same baseline and target as objective WM3: Decrease quantity of stormwater runoff to lakes, see below.

## OBJECTIVE WC4: Water, Community

### DECREASE POLLUTANTS AND DEBRIS IN STORMWATER RUNOFF

#### Potential strategies to help achieve this objective:

1. Improve leaf containment and collection processes to reduce the amount of leaves entering lakes and streams.
  - **Report 2015:** This strategy was not targeted in 2015.
2. Work with commercial or light industrial businesses to develop stormwater pollution plans.
  - **Report 2015:** This strategy was not targeted in 2015.
3. Develop a website or other media to publicize methods by which the public can report spills, leaks, discharges, or other contamination events.
  - **Report 2015:** City installed four new sediment removal devices throughout the City this summer. These devices will significantly reduce the discharge of pollutants such as sediment, phosphorous and garbage into the water way. (Retain as a project for 2016)

**\*\* This objective will be evaluated in the same way, and have the same baseline and target, as objective WM4: decrease pollutants and debris in stormwater runoff, see below.**

Evaluation Indicators and Metrics	2014 Baseline	2015	2016 *	2025 Target
1) Pounds per year of phosphorus in effluent at stormwater outfalls	1,370	1,097	Coming Soon	Reduce by 40%
2) Pounds of total suspended solids in effluent at stormwater outfalls	294,808	246,298	Coming Soon	Reduce by 50%

\*Taken from biennial report and SLAMM modeling

# WATER: MUNICIPALITY

## OBJECTIVE WM1: WATER, MUNICIPALITY

### INCREASE WATER EFFICIENCY, CONSERVATION BY MUNICIPALITY

#### Potential strategies to help achieve this objective:

1. Develop a water efficiency and conservation plan for municipal buildings.
  - **Report 2015:** This strategy was not targeted in 2015.
2. Encourage the installation of low-flow faucets, urinals, sink aerators, and toilets in all public facilities.
  - **Report 2015:** This strategy was not targeted in 2015.
3. Encourage outdoor watering by local government using rainwater.
  - **Report 2015:** This strategy was not targeted in 2015.

Evaluation Indicators and Metrics	2012 Baseline	2013	2014	2015	2025 Target
1. Absolute water use for municipality (thousand gallons/year)	3,454	3,034	4,601	4,016	20%

\*Data from the Public Service Commission of Wisconsin, WEGS Annual Report.

#### Additional information and explanations:

Similar to energy use, it will be important to track water use per facility to see the impact of implemented strategies.

## OBJECTIVE WM2: WATER, MUNICIPALITY

### MAINTAIN PERCENTAGE OF WATER LOST IN DISTRIBUTION SYSTEM

Evaluation Indicators and Metrics	2012 Baseline	2013	2014	2015	2016	2025 Target
1. Percentage of water lost in distribution system	5%	5%	7%	12%	Coming Soon	Keep under 5%

\*Data from the Public Service Commission of Wisconsin, WEGS Annual Report.

## OBJECTIVE WM3: WATER, MUNICIPALITY DECREASE QUANTITY OF STORMWATER RUNOFF TO LAKES

#### Potential strategies to help achieve this objective:

1. Increase landscaping on municipal land that uses plants which minimize need for irrigation (Xeriscaping).
  - **Report 2015:** This strategy was not targeted in 2015.
2. Decrease impermeable surfaces, increase permeable. (E.g. decrease exterior surface parking, increase parking structure density).
  - **Report 2015:** This strategy was not targeted in 2015.

## OBJECTIVE WM4: WATER, MUNICIPALITY

### DECREASE POLLUTANTS AND DEBRIS IN STORMWATER RUNOFF

#### Potential strategies to help achieve this objective:

1. Improve leaf containment and collection processes to reduce the amount of leaves entering lakes and streams.
  - **Report 2015:** This strategy was not targeted in 2015.
2. Improve regular street sweeping programs to reduce total suspended solids.
  - **Report 2015:** This strategy was not targeted in 2015.
3. Develop a plan for handling hazardous material on municipal properties including a map of hazmat storage and handling facilities and inspections for safety. Provide municipal staff, including office staff, with contact lists for emergency water contamination issues.
  - **Report 2015:** This strategy was not targeted in 2015.

Evaluation Indicators and Metrics	2014 Baseline	2015	2016	2025 Target
1) Pounds per year of phosphorus in effluent at stormwater outfalls	1,370	1,097		Reduce by 40%
2) Pounds of total suspended solids in effluent at stormwater outfalls	294,808	246,298		Reduce by 50%

#### Additional information and explanations:

Effluent is liquid waste that is discharged into a waterway, and depending on the source can be treated or untreated. High phosphorus levels in waterways contribute to high algal growth and thus to lower water quality. Suspended solids are small particles that remain suspended in stormwater. Pollutants are often carried on the surface of these particles, and thus levels of suspended solids can also serve as an indicator of water quality.

## OBJECTIVE WM5: WATER, MUNICIPALITY

### CONTINUE PARTICIPATION IN THE WISCONSIN WATER STAR PROGRAM AND IMPROVE MONONA'S SCORE AND RANKING

#### Potential strategies to help achieve this objective:

1. Analyze the current status of WI Water Star application annually, and plan for improvements.
  - a. **Report 2015:** This strategy was not targeted in 2015. Will Re-apply for Silver in 2016.

Evaluation Indicators and Metrics	2012 Baseline	2013	2015	2016	2017*	2025 Target
1. City of Monona Water Star score and ranking	"Bronze" ranking	"Bronze" ranking	"Bronze" Ranking	"Bronze" Ranking	Reapplication*	"Silver ranking"

\*Data from Water Star Wisconsin.

#### Additional information and explanations:

The Wisconsin Water Star Program guides, inspires, and recognizes communities taking exemplary actions to improve their local water supply. Depending on the actions taken, communities can be designated as a Bronze, Silver, or Gold Water Star Community.

# ENERGY: COMMUNITY

## OBJECTIVE EC1: ENERGY, COMMUNITY

### INCREASE ENERGY EFFICIENCY AND CONSERVATION BY RESIDENTS

#### Potential strategies to help achieve this objective:

1. Encourage new homes to meet ENERGY STAR home standards.
  - **Report 2015:** This strategy was not targeted in 2015.
2. Work with MG&E to develop smart electricity and gas metering for assessment and consumer feedback.
  - **Report 2015:** This strategy was not targeted in 2015.
3. Continue collaborating with Focus on Energy to offer energy efficiency programs.
  - **Report 2015:** This strategy was not targeted in 2015.
4. Utilize Property Assessed Clean Energy (PACE) financing.
  - **Report 2015:** This strategy was not targeted in 2015.

Evaluation Indicators and Metrics	2012 Baseline	2013	2014	2015	2025 Target
1) Total annual residential electricity use (kWh/year)*	27,565,470	26,782,039	26,378,171	25,950,353	**
1a) Electricity use intensity (kWh/resident/year)	3,660	3,560	3,502	3,302	**
1b) Electricity use intensity (kWh/household/year)	7,127	6,869	6,613	6,657	10% decrease
2) Total annual residential natural gas use (therm/year)*	1,782,869	2,337,857	2,550,697	2,108,945	**
2a) Nat. gas use intensity (therm/resident/year)	237	311	339	268	**
2b) Nat. gas use intensity (therm/household/year)	461	600	654	541	10% decrease

\*Data from Madison Gas and Electric

\*\* This metric has been included for background information, not for the purpose of target setting

## OBJECTIVE EC2: ENERGY, COMMUNITY

### INCREASE ENERGY EFFICIENCY AND CONSERVATION BY COMMERCIAL AND INDUSTRIAL PROPERTIES

#### Potential strategies to help achieve this objective:

1. Collaborate with the local Chamber of Commerce to increase energy efficiency and conservation, and encourage renewable energy.
  - **Report 2015:** This strategy was not targeted in 2015.
2. Work with MG&E to develop smart electricity and/or gas metering.
  - **Report 2015:** This strategy was not targeted in 2015.

Evaluation Indicators and Metrics	2012 Baseline	2013	2014	2015	2025 Target
1) Total commercial electricity consumption (kWh/year)*	66,619,143	66,586,465	64,264,343	63,111,995	**
1a) Electricity use intensity (kWh/sq ft*year)	3.78	3.78	3.65	23.47**	10% decrease
2) Total commercial natural gas consumption (therm/year)*	2,002,676	2,476,697	2,677,251	2,302,118	**
2a) Nat. gas use intensity (therm/sq ft*year)	1.49	1.85	1.99	.85	10% decrease

\*Data from Madison Gas and Electric.

\*\* This metric has been included for background information, not for the purpose of target setting.

# ENERGY: MUNICIPALITY

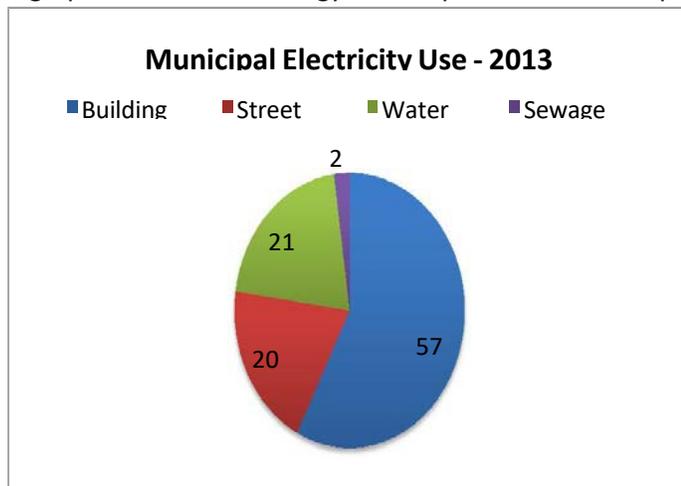
## OBJECTIVE EM1: ENERGY, MUNICIPALITY

### INCREASE ENERGY EFFICIENCY AND CONSERVATION OF MUNICIPAL FACILITIES AND SERVICES

#### Potential strategies to help achieve this objective:

- Complete energy audits of all city facilities.
  - Report 2015:** This strategy was not targeted in 2015.
- Upgrade water utility equipment (e.g. variable frequency drive motor) to achieve energy efficiency.
  - Report 2015:** This was completed in 2015.
- Complete EPA Energy Star Portfolio Manager spreadsheet for government energy use or score existing buildings with LEED green building certification.
  - Report 2015:** EPA Energy Star Portfolio has been updated for five properties, including all properties with solar arrays on them.
- Develop list of lighting, HVAC and shell improvements to increase Energy Star Portfolio Manager score or LEED green building certification credits.
  - Report 2015:** This strategy was not targeted in 2015.
- Ensure streetlights are directed where light is needed, are full cut-off, operate at 75 lumens/Watt or higher and are LED or the functional equivalent.
  - Report 2015:** Streetlights have been upgraded to LED.

The graph below shows energy consumption for different parts of the municipality.



**\*\* New pie chart to come in 2016 along with other graphics from benchmarking efforts Electricity**

Evaluation Indicators and Metrics	2012 Baseline	2013	2014	2015	2025 Target
1) Grand total annual municipal electricity use (kWh/year)*	2,000,827	1,970,302	1,784,148	2,832,882	n/a
1a) Total annual city building electricity use (kWh/year)	1,455,232	888,679	733,475	1,151,358	20% decrease
1b) Annual street lighting electricity use (kWh/year)	545,595	515,170	515,579	155,194**	50% decrease
1d) Annual public works lighting	n/a	n/a	n/a	39,155	n/a
1d) Annual utility electricity use (kWh/year)	Data missing	566,453	535,144	443,242	n/a
2) Intensity of city building electricity use (kWh/sq ft*year)	14.6	n/a	n/a	9.9	20% decrease

### Natural Gas

Evaluation Indicators and Metrics	2012 Baselines	2013	2014	2015	2025 Target
3) Total annual municipal nat. gas use (therm/year)*	57,802	72,847	86,015	66,325	20% decrease
4) Intensity of city building natural gas use (therm/sq ft*year)	0.6	0.7	n/a	.6	20% decrease

\*Data retrieved from Madison Gas and Electric.

\*Data entered for 2015 Electricity use includes newly entered street lighting data.

\*Data entered for 2015 Natural Gas use includes all properties now.

\*1b includes only Street Lighting for 2015

## OBJECTIVE EM2: ENERGY, MUNICIPALITY

### INCREASE PERCENTAGE OF ENERGY CONSUMPTION FROM RENEWABLE SOURCES

#### Potential strategies to help achieve this objective:

1. Install more solar cells.
  - **Report 2015:** This strategy was not targeted in 2015.
2. Consume less energy.
  - **Report 2015:** This strategy was completed for 2015.
3. Install solar water heaters.
  - **Report 2015:** This strategy was not targeted for 2015.

Evaluation Indicators and Metrics	2012 Baseline	2014	2015	2025 Target
1) Energy generated from renewables (kWh/year)	0	163,030	171,338	*
1a) Renewable energy as percentage of total municipal electricity use (kWh from RE/total municipal kWh per year)	0 %	8 %	6%	25 %
2) Installed renewable energy capacity (kW)	0	157	157	*

\*Data from the City of Monona's own renewable energy tracking system.

\* This metric has been included for background information, not for the purpose of target setting.

## OBJECTIVE EM3: ENERGY, MUNICIPALITY

### DECREASE FUEL CONSUMPTION AND EMISSIONS FROM WORK RELATED (CITY BUSINESS) TRANSPORTATION AND MOTOR DRIVEN EQUIPMENT

#### Potential strategies to help achieve this objective:

1. Retrofit city fleet vehicles for CNG (compressed natural gas).
  - **Report 2015:** This strategy was not targeted in 2015.
2. Train employees in eco-friendly driving techniques that conserve fuels, release fewer emissions, and prolong vehicle life.
  - **Report 2015:** This strategy was not targeted in 2015.
3. Upgrade to more efficient motor driven equipment.
  - **Report 2015:** This strategy was not targeted in 2015.

Evaluation Indicators and Metrics	2014 Baseline	2015	2025 Target
1) Total fuel consumed per department (gal/year)	* See table below		Decrease
2) Total emissions from city vehicles.	2016 Benchmark	2016 Benchmark	

#### 2014 Fuel Consumption Divided by Department and Fuel Type:

Department	Number of Vehicles /Equipment	Number of Gasoline Vehicles/ Equipment	Gallons Gasoline	Diesel Vehicles/ Equipment	Gallons Diesel
Police	11	11	6,807	0	0
Fire	8	2	1,506	6	720
Public Works	29	17	8,687	12	6,020
Total	48	30	17,000	18	6,740

#### Additional information and explanations:

\*Targets will have to be set after further analysis. New metric to be recorded for 2015

## TRANSPORTATION: COMMUNITY

### OBJECTIVE TC1: TRANSPORTATION, COMMUNITY

#### INCREASE PERCENTAGE OF RESIDENTS USING ALTERNATIVE TRANSPORTATION TO DESTINATIONS WITHIN MONONA (E.G. LIBRARY, POOL, CITY HALL, COMMUNITY CENTER, STORES, RESTAURANTS)

#### Potential strategies to help achieve this objective:

1. Prepare a plan that identifies disconnections in bike and pedestrian networks, prioritizes fixes, and identifies potential funding sources for the most important projects.
  - **Report 2015:** This strategy was not targeted in 2015.
2. Provide bike racks at municipal buildings and other city operated destinations, e.g. parks.
  - **Report 2015:** This strategy was not targeted in 2015. Retain for 2016.
3. Evaluate which transportation options are currently subsidized by the community and where those subsidies promote sustainable transportation choices.
  - **Report 2015:** This was successful in 2015 and the transit committee is actively reviewing this. Retain for 2016.

Potential Evaluation Indicators and Metrics	2012 Baseline	2014	2015	2016	2025
1) On-site survey of visitors to community destinations (i.e. library area, stores)	n/a	n/a	n/a	implement	
2) Ratio of bikes to cars at community destinations-observation study (i.e. library area, stores)	n/a	n/a	n/a	implement	
3) Bus ridership (number rides/year) (Monona Lift )	6,972	6,415	5,849	5,883	
4) Bus ridership (number rides/year) Monona Express)	7,715	8,469	9,396	9,283	

### 3. Measures of potential: Bike Score

2016	2017	2018	2025*
Benchmark**			

3\* Look up report cord, provide link

#### Additional information and explanations:

Monona Lift is a handicapped-accessible bus service that meets the needs of the elderly and disabled, as well as the general public. The bus has six scheduled daily loops: four through Monona and downtown Madison, and two within Monona. Bike Score is similar to the Walk Score in that it measures how feasible a given location is for biking. The score is based on a scale of 0-100, and is based on the presence of four components: bike lanes, hills, destinations and road connectivity, and bike commuting road share.

## OBJECTIVE TC2: TRANSPORTATION, COMMUNITY INCREASE PERCENTAGE OF STUDENTS (K-12) USING ALTERNATIVE TRANSPORTATION

#### Potential strategies to help achieve this objective:

1. Arrange biking education for children and parents.
  - **Report 2015:** This strategy was not targeted in 2015.
2. Fund and operate a Safe-Routes-to-School (SRTS) program (or functional equivalent) covering at least 10 percent of students.
  - **Report 2015:** This strategy was not targeted in 2015.
3. Initiate carpool programs at Monona schools.
  - **Report 2015:** This strategy was not targeted in 2015.

For this objective, baselines and potential targets would have to be evaluated before strategies are implemented.

Potential Evaluation Indicators and Metrics
1. Survey of students reporting mode of transportation (walk/bike/bus/car)

#### Alternative – Observation Study

Ia. School bus ridership/year
Ib. Number of bicycles parked at schools (observation)
Ic. Number of autos dropping off/picking up at schools (observation)
Id. Number of students walking (observation)

## OBJECTIVE TC3: TRANSPORTATION, COMMUNITY

### INCREASE PERCENTAGE OF RESIDENTS USING ALTERNATIVE TRANSPORTATION FOR COMMUTING

#### Potential strategies to help achieve this objective:

1. Track bus stops/routes/times that are most crowded and increase trips or range to meet/grow demand.
  - **Report 2015:** This strategy was not targeted in 2015.
2. Promote transit services.
  - This strategy was implemented in 2015.
3. Collect more comprehensive data on what residents want in mass transit.
  - **Report 2015:** This was accomplished in 2015.
4. Reroute some of the bus lines to make more parts of the city and surrounding areas more accessible via bus.
  - **Report 2015:** This strategy was not targeted in 2015.
5. Establish additional stop locations to make more parts of the city and surrounding areas more accessible via bus.
  - **Report 2015:** This strategy was not targeted in 2015.
6. Work with neighboring local governments to coordinate regional public transit opportunities including mass transit, shuttle buses, carpooling and vanpooling, bicycle and pedestrian infrastructure.
  - **Report 2015:** This strategy was not targeted in 2015.

Evaluation Indicators and Metrics	2012 Baseline	2013	2015	2025 Target
1) Percentage commuting by car, truck or van -- drove alone	85.0%	82.0%	81.9%	75.0%
2) Percentage commuting by car, truck or van -- carpoled	5.4%	6.9%	7.4%	*
3) Percentage commuting by public transportation (excluding taxicab)	3.8%	3.8%	2.8%	*
4) Percentage commuting by walking	0.9%	1.8%	2.0%	*
5) Percentage commuting by other means (assumed to mainly be bicycles, but this also includes motorcycles, taxi etc.)	2.4%	3.1%	2.5%	*
6) Percentage who worked at home	2.6%	2.4%	3.3%	*

\*Data is for workers over age 16, taken from the American Community Survey, executed by the same entity as the US Census.

\* This metric has been included for background information, not for the purpose of target setting

## TRANSPORTATION: MUNICIPALITY

### OBJECTIVE TM1: TRANSPORTATION, MUNICIPALITY INCREASE PERCENTAGE OF CITY EMPLOYEES USING ALTERNATIVE TRANSPORTATION FOR COMMUTING

#### Potential strategies to help achieve this objective:

1. Encourage participation in regional transit.
  - **Report 2015:** This strategy was not targeted in 2015.

2. Keep city vehicles well maintained to ensure efficient performance (tire pressure, regular tuning, etc.)
  - **Report 2015:** This strategy was implemented in 2015.
3. Encourage walking and biking for those living near place of employment.
  - **Report 2015:** This strategy was not targeted in 2015.
4. Provide transit passes at 50 percent or more off the regular price.
  - **Report 2015:** This strategy was not targeted in 2015.

<b>Evaluation Indicators and Metrics</b>
1) Vehicle miles traveled (VMT/per city employee*year) - intensity.
2) Percentage of city employees reporting alternative transport (bike, walk, carpool, bus)

**OBJECTIVE TM2: TRANSPORTATION, MUNICIPALITY  
DECREASE GREENHOUSE GAS EMISSIONS FROM WORK RELATED (CITY BUSINESS)  
TRANSPORTATION**

**Potential strategies to help achieve this objective:**

1. Ban idling (more than five minutes) with local government vehicles/city vehicles.
  - **Report 2015:** This strategy was not targeted in 2015.
2. Make electric cars available to city employees for work transportation.
  - **Report 2015:** This strategy was not targeted in 2015.
3. Create a bicycle fleet for employees to use for local work-related trips, improving employee health and air quality, and reducing fleet vehicle costs.
  - **Report 2015:** This strategy was not targeted in 2015.
4. Install solar-powered battery pack to run safety flashers on water utility trucks to reduce idling.
  - **Report 2015:** Bob Jacobs has researched product items and will possibly purchase one in 2016.

<b>Evaluation Indicators and Metrics</b>	<b>2014 Baseline</b>	<b>2015</b>	<b>2016 Benchmark</b>	<b>2025 Target</b>
1) Total GHG emissions for city fleet (CO <sub>2</sub> e/year)	n/a	n/a	In Progress	Decrease
1a) Total miles driven city fleet & per department (miles/year)	n/a	n/a	In Progress	Decrease

**Additional information and explanations:**

Targets will have to be set when baseline data have been established (miles driven have not previously been tracked). Greenhouse gas emissions will be calculated based on miles driven for each separate vehicle.

# SOLID WASTE: COMMUNITY

## OBJECTIVE SC1: SOLID WASTE, COMMUNITY DECREASE TOTAL SOLID WASTE COLLECTED

### Potential strategies to help achieve this objective:

1. Use public education and outreach to promote product re-use and waste reduction.
  - **Report 2015:** This strategy was not targeted in 2015.
2. Introduce pay-as-you-throw system.
  - **Report 2015:** This strategy was not targeted in 2015.

Evaluation Indicators and Metrics	2012 Baseline	2013	2014	2015	2025 Target
1) Absolute residential waste (pounds/year)	4,870,580	5,250,600	5,372,400	5,311,440	*
2a) Intensity (pounds of waste/household*year)	1,260	1,347	1,378	1,362	*
2b) Intensity (pounds of waste/resident*year)*	647	698	713	676	Decrease by 10%

\* Data from the City of Monona, in conjunction with Advanced Disposal.

\* This metric has been included for background information, not for the purpose of target setting.

## OBJECTIVE SC2: SOLID WASTE, COMMUNITY INCREASE PERCENTAGE OF SOLID WASTE BEING RECYCLED (OR OTHERWISE DIVERTED)

### Potential strategies to help achieve this objective:

1. Offer more public recycling receptacles in public places and at events (i.e. parks, community center, and libraries).
  - **Report 2015:** This strategy was successful in 2015. Retain for 2016.
2. Increase the types of materials that can be recycled.
  - **Report 2015:** This strategy was not targeted in 2015.
3. Develop a city-wide collection program that encourages the diversion of food scraps, yard materials and other organics from landfills to composting or anaerobic digestion.
  - **Report 2015:** This strategy was not targeted in 2015.
4. Use public education and outreach to promote recycling and backyard composting.
  - **Report 2015:** This strategy was not targeted in 2015.

Evaluation Indicators and Metrics	2012 Baseline	2013	2014	2015	2025 Target
1) Annual residential recycling rate (percent)	32%	32%	32%	45%	45%

### Eventual addition when infrastructure exists:

2) Annual compost/digester rate (percent)	n/a	n/a	n/a	n/a	?
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**Additional information and explanations:**

Annual residential recycling rate per year currently calculated by pounds of residential recycling material at processing plant/pounds of residential waste

Annual compost/digester rate per year calculated by pounds/year of compost received at designated facilities / pounds residential waste

**OBJECTIVE SC3: SOLID WASTE, COMMUNITY**

**INCREASE PERCENTAGE OF MATERIALS FROM CONSTRUCTION AND DECONSTRUCTION DIVERTED FROM LANDFILL**

**Potential strategies to help achieve this objective:**

1. Create construction/deconstruction waste recycling outreach program.
  - **Report 2015:** This strategy was not targeted in 2015.
2. Require construction/deconstruction waste management plans and calculate reuse and recycling.
  - **Report 2015:** This strategy was not targeted in 2015.
3. Require construction/deconstruction reuse and recycling.
  - **Report 2015:** This strategy was not targeted in 2015.
4. Adopt a construction/deconstruction
  - **Report 2015:** This strategy was not targeted in 2015.

Evaluation Indicators and Metrics	2012 Baseline	2015	2025 Target
1) Residential deconstruction/construction waste reuse and/or recycle rate (percent of pounds diverted/pounds total waste*year)	n/a	n/a	70%
2) Commercial deconstruction/construction waste reuse and/or recycle rate (percent of pounds diverted/pounds total waste*year)	n/a	n/a	75%

\*Data is still being assessed.

**Additional information and explanations:**

While reuse involves any activity that extends the life of an item and recycling includes reprocessing of an item into a new raw material, these indicators and metrics combine reuse and recycle into one rate.

Information about current rates for deconstruction/construction reuse and recycling does not exist for Monona. As a first step working towards this objective, an ordinance could be implemented requiring reuse and recycling plans and reports from deconstruction/construction, without a required rate.

**OBJECTIVE SC4: SOLID WASTE, COMMUNITY**

**INCREASE SAFE DISPOSAL OF WASTE PRODUCTS NOT INCLUDED IN CURB PICK-UP, SUCH AS MEDICAL, HAZARDOUS AND ELECTRICAL WASTE**

**Potential strategies to help achieve this objective:**

1. Develop programs that dispose of household hazardous, medical, and electronic waste.
  - **Report 2015:** This strategy was not targeted in 2015.
2. Promote existing programs that dispose of household hazardous, medical, and electronic waste.
  - **Report 2015:** This strategy was not targeted in 2015.

Evaluation Indicators and Metrics
1) Number of material types collected
2) Number of drop-off events & drop-off sites per year (available days/year)
3) Mass (pounds/year) of material brought to designated pick up locations

## SOLID WASTE: MUNICIPALITY

### OBJECTIVE SM1: SOLID WASTE, MUNICIPALITY DECREASE TOTAL SOLID WASTE COLLECTED

#### Potential strategies to help achieve this objective:

- Develop a waste and materials management plan based on zero-waste principles, with specific goals, prepared and updated annually.
  - Report 2015:** Research has been done, but nothing has been implemented in 2015.
- Develop a green purchasing policy.
  - Report 2015:** A green purchasing policy has been developed and is nearly finished being implemented.
- Develop a green printing policy.
  - Report 2015:** This strategy was not targeted in 2015.

Evaluation Indicators and Metrics	2012 Baseline	2015	2025 Target
1) Total waste for all municipal buildings and & department (pounds/year)	n/a	n/a	Decrease by 15%

\*Waste data for Monona currently combines residential and municipal waste. Future plans exist for implementing a Waste Management System, allowing Monona to conduct waste audits. Waste audits will assist Monona in separating the amount of waste collected by residential homes and municipal buildings and departments.

### OBJECTIVE SM2: SOLID WASTE, MUNICIPALITY INCREASE PERCENTAGE OF SOLID WASTE BEING RECYCLED OR OTHERWISE DIVERTED FROM LANDFILLS

#### Potential strategies to help achieve this objective:

- Develop a waste management plan for city facilities.
  - Report 2015:** This strategy was not targeted in 2015.
- Conduct a waste audit at city facilities.
  - Report 2015:** This strategy was not targeted in 2015.

Evaluation Indicators and Metrics	2012 Baseline	2015	2025 Target
1) Annual recycling rate (percentage) for municipal facilities	n/a	n/a	60%

**Eventual addition when infrastructure exists:**

2) Annual compost/digester rate (percentage)	n/a	n/a	-
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\* See SM1 for explanation about lack of municipal waste data.

**OBJECTIVE SM3: SOLID WASTE, MUNICIPALITY**

**INCREASE PERCENTAGE OF CONSTRUCTION AND DECONSTRUCTION MATERIALS DIVERTED FROM LANDFILLS**

**Potential strategies to help achieve this objective:**

1. Make a construction/deconstruction waste management plans and calculate reuse and recycling.
  - **Report 2015:** This strategy was not targeted in 2015.

<b>Evaluation Indicators and Metrics</b>	<b>2012 Baseline</b>	<b>2015</b>	<b>2025 Target</b>
1) Municipal construction waste reuse and/or recycle rate (percentage, pounds diverted/pounds total waste*year)	n/a	n/a	80%

\*\* Monona Municipal Waste Collection by Advanced Disposal cannot break down collection total at City Owned facilities unless the City agreed to raise the amount due to Advanced Disposal so the Municipal Govt. can calculate their disposal totals and efficiency.

# APPENDICES

## APPENDIX A: GLOSSARY AND DEFINITIONS

### Focus Area:

A major element (category) of the Monona Sustainability Plan. There are six total focus areas, taken together they are meant to encompass the many characteristics of a sustainable community. Each focus area includes a specific vision and a list of objectives and strategies.

*Example: land use, energy, solid waste, etc.*

### Indicator:

A proxy measurement or assessment that indicates progress toward a given objective. One or more indicators are used if a direct quantifiable measurement (metric) cannot be easily/practically established for the objective.

*Example: Number of green education sessions hosted, and number of visits to sustainability website, as indicators for raised sustainability awareness.*

### Metric:

A quantifiable measurement that can be used to assess a baseline value related to an objective, and then to evaluate progress toward meeting relevant targets.

*Example: kWh electricity used/household/year.*

### Objective:

Each focus area includes a list of community objectives and municipal objectives. Objectives define gaps between a current practice and a sustainable practice and indicate a direction in which the practice should change.

*Example: Decrease total electrical consumption (kWh).*

Municipality objectives pertain to the city's public lands, buildings, and operations. Community objectives more directly affect and involve private residents and businesses.

### Strategies:

Each objective includes a list of strategies. Strategies are ideas, methods and actions that, when implemented, will move the community in the direction specified by the given objective.

*Example: Encourage new homes to meet ENERGY STAR home standards.*

### Targets:

Quantitative or qualitative measurements that are set for each objective based on relevant baseline data.

*Example: Achieve a 20% reduction in total annual municipal electricity use (kWh/year).*

### Vision:

Each focus area has a vision, and each vision consists of an aspirational description of what the community intends to accomplish in the long-term future. A vision is intended to serve as a clear guide for choosing current and future courses of action.

## APPENDIX B: REFERENCE METRICS

The tables below contain reference metrics used for the calculation of certain baselines and targets included in the MSP.

Reference metrics which will need to be updated each year:

Reference Indicator and Metrics	2011	2012	2013	2014	2015
Number of residents*	7,533	7,523	7,532	7,532	7,859
Number of households**	3,868	3,899	3,898	n/a	n/a
Number of residential water customers***	n/a	2,460	2,450	2,417	
Number of commercial water customers***	n/a	317	318	320	
Commercial Building Area (sq ft)****				17,605,242	*2,698,492

\*Wisconsin Department of Administration \*\*American Fact Finder, an entity governed by the US Census \*\*\*Public Service Commission of Wisconsin \*\*\*\*City of Monona

\*For the 2015 metric of Commercial Building square footage, a new layer in the ArcGis map has been created to calculate actual square footage of commercial buildings.

Reference metrics that generally remain constant:

Reference Indicator and Metrics	Value
Total Land area, City of Monona (acres)*	2,100
Municipality Building Area (sq ft)**	101,625
City Hall/Fire Dept/Police	29,450
Community Center	12,000
Library	26,882
Public Works Garage	28,468
Pool	3,000
Park Shelters	1,825

\*Capital Area Regional Planning Commission \*\*City of Monona's 25 x 25 Plan for Energy Independence.

## Appendix C: Energy Metrics

\*\* Notes coming soon