

**AGENDA  
CITY OF MONONA  
SUSTAINABILITY COMMITTEE  
Library Municipal Room  
Thursday, September 15, 2016  
7:30 PM**

1. Call to Order – **7:30 PM**
2. Roll Call
3. Approval of Minutes from the **August 18, 2016** Sustainability Committee Meetings
4. Public Appearances
5. Unfinished Business
  - A. Annual Report Update: Fuel Tracking
  - B. Website Updates: View Webpage
  - C. Codifying Sustainability Update: Memo
  - D. Strategic Plan Updates 2016: See Final Review
6. New Business
  - A. Green Tier Legacy Communities: Energy Benchmarking
  - B. Life Costs Assessment for Vehicle Purchases: Department of Public Works Example
7. Adjournment

**Next Meeting: October 20, 2016 at 7:00 PM**

**Please notify Brad Bruun at 222-2525 or [bbruun@ci.monona.wi.us](mailto:bbruun@ci.monona.wi.us) if you cannot make it.**

**NOTE:**

Upon reasonable notice, the City of Monona will accommodate the needs of disabled individuals through auxiliary aids or services. For additional information or to request this service, contact Joan Andrusz at (608) 222-2525 (not a TDD telephone number), FAX: (608) 222-9225, or through the City Police Department TDD telephone number 441-0399. The public is notified that any final action taken at a previous meeting may be reconsidered pursuant to the City of Monona ordinances. A suspension of the rules may allow for final action to be taken on an item of New Business. It is possible that members of and a possible quorum of members of other governmental bodies of the municipality may be in attendance at the above stated meeting to gather information or speak about a subject, over which they have decision-making responsibility. No action will be taken by any governmental body at the above stated meeting other than the governmental body specifically referred to above in this notice.

**CITY OF MONONA**  
**Sustainability Committee**  
**Thursday, August 18, 2016**  
***MINUTES-Draft***

1. **8:30 PM - Meeting called to order by committee Chair, Chad Speight**
2. **Roll Call:**  
**Members Present:** Chair Chad Speight, Co-Chair Andrew Kitslaar, Leslie Busse, Pat Howell, Nina Catterall, Sue Vogt, Mari Westin  
**Members Excused Absent:** Maureen Muldoon, Katherine Sommers, Teresa Radermacher  
**Members Absent:** None  
**Staff Present:** Brad Bruun  
**Guests:** None
3. **Approval of 7.21.16 Meeting Minutes:**  
Motion to approve; First – Pat, Second – Sue
4. **Appearances:**  
NONE
5. **Unfinished Business**  
\*\* No quorum until 8:30 PM, no action taken on items on items for unfinished business
6. **New Business**
  - A. **Committee Share Drive**

Brad shared a memo discussing points made by City Attorney Bill Cole in regards to providing a shared drive for the committee to use to reference documents. Mari asked if the committee's webpage can be updated to provide the necessary documents for committee reference. Mari asked that if documents are shared that are still working documents if these could be locked or view only. Brad will upload documents to related documents section of committee's webpage.
  - B. **New Committee Member Packet**

Brad presented points made by Teresa from July's meeting regarding providing new committee members with information necessary to catch them up and help them feel comfortable in sharing their ideas in discussion. Andrew stated that Erick Plumb's packet could be a great example. There was a concern raised over who reviews applications and if they are sent to the correct individual at the staff level. Many who applied for the committee did not hear back right away after submitting their application. Leslie asked who is responsible for communicating with applicants. Brad stated that applications go through the HR Dept. and are forwarded on to the staff of the committees. Chad asked if there was a way to change or add an automatic response for those who send in their application. Mari added that possibly adding a question and answer section would help people get answers to some basic questions they might have.

**8:50 PM - Meeting Adjourned, first Leslie, second Pat**

**Next Meeting: Thursday October 20th at 7:30 PM.**

*Any questions or additions please notify Brad Bruun, [bbruun@ci.monona.wi.us](mailto:bbruun@ci.monona.wi.us) – Thank you.*

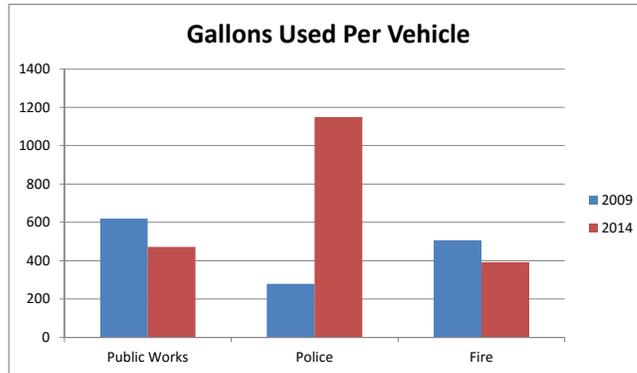
2014

Department	No. of Vehicles	Gasoline		Diesel		Total Gallons	Average Gallons Used per Vehicle
		Vehicles	Gallons	Vehicles	Gallons		
Public Works	37	14	5973.01	23	11486	17459.01	471.87
Police	12	12	13799.06	0	0	13799.06	1149.92
Fire	10	4	2890.10	6	1027.68	3917.78	391.78
Administrator	1	1	553.54	0	0	553.54	553.54
Facilities Maintenance	1	1	286.45	0	0	286.45	286.45
Parks Director/Parks Maintenance	2	1	377.95	1	69.16	447.11	223.56
Inspections	1	1	44.14	0	0	44.14	44.14
Unspecified			636.825		115.99	752.815	
<b>TOTAL</b>	<b>64</b>	<b>34</b>	<b>24561.08</b>	<b>30</b>	<b>12698.83</b>	<b>37259.905</b>	

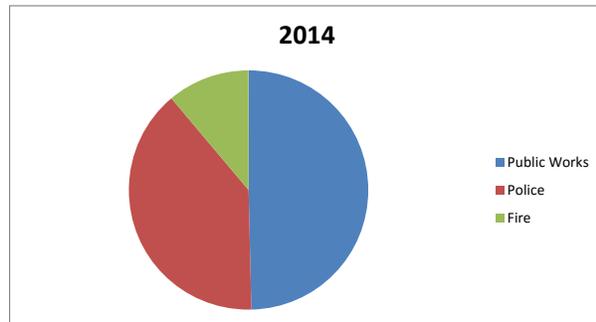
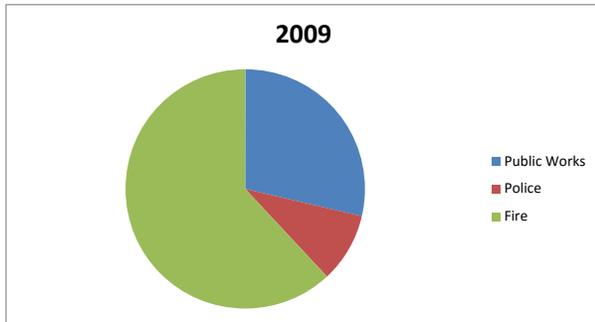
2009

Department	No. of Vehicles	Gasoline		Diesel		Total Gallons	Average Gallons Used per Vehicle
		Vehicles	Gallons	Vehicles	Gallons		
Public Works	11	11	6807	0	0	6807	618.82
Police	8	2	1506	6	720	2226	278.25
Fire	29	17	8687.00	12	6020	14707	507.14
<b>TOTAL</b>	<b>48</b>	<b>30</b>	<b>17000</b>	<b>18</b>	<b>6740</b>	<b>23740</b>	<b>494.58</b>

	2009	2014
Public Works	618.82	471.87
Police	278.25	1149.92
Fire	507.14	391.78



	2009	2014
Public Works	0.2867	0.4963
Police	0.0938	0.3923
Fire	0.6195	0.1114





5211 SCHLUTER ROAD

MONONA, WI 53716-2598  
CITY HALL (608) 222-2525  
FAX (608) 222-9225  
<http://www.mymonona.com>

## MEMO

TO: Sustainability Committee  
FROM: Brad Bruun, Public Works Project Manager  
RE: Agenda Item 5C) Codifying Sustainability Update  
DATE: 9/9/2016

I spoke with Anna Haines and Sonja Reichertz and we have begun to formulate a plan to get Anna a copy of our zoning codes of which she will review. The City's zoning codes are a quasi-performance oriented code. In this regard permits go through a case by case review and are conditional based on planner's and plan commission's recommendations. The zoning codes for the City are also conceptually written to reflect Monona's more common development types which are redevelopments due to the lack of open space and unutilized land. Anna will go through our code and give suggestions for revisions.

Please see attached powerpoint presentation that describes Codifying for Sustainability.

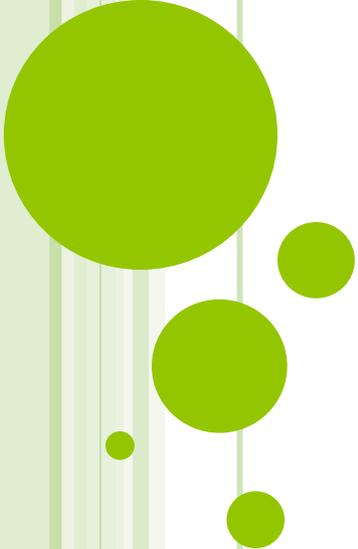
Brad Bruun  
Public Works Project Coordinator and GIS Specialist

**POLICE DEPARTMENT**  
5211 Schluter Road  
222-0463

**COMMUNITY CENTER**  
1011 Nichols Road  
222-4167

**MONONA SENIOR CENTER**  
1011 Nichols Road  
222-3415

**FIRE DEPARTMENT**  
5211 Schluter Road  
222-2528



# **SUSTAINABLE ZONING IN WISCONSIN:**

**Does it exist? Or  
Chickens anyone?**

# WHAT IS SUSTAINABILITY?

- 3 E's
- A framework to base decisions
  - The Natural Step
    - 4 principles
      - Reduce dependence on stuff we dig out of the earth (fossil fuels, metals, minerals);
      - Reduce dependence on chemicals and other manufactured substances that can accumulate in nature;
      - Reduce dependence on activities that harm life-sustaining ecosystems (air, water, soils, etc.)
      - Meet the hierarchy of present and future human needs fairly and efficiently (water, food, shelter, work, etc.)



# HOW DOES TNS WORK?

## ○ Personal

- Should I drive, bike, or walk?
  - Reduce fossil fuel use?
- Should I keep my thermostat at 68 degrees in the winter?
  - Reduce fossil fuel use?
  - Reduce need for another power plant?
- Should I buy local food and other local purchases?
  - Reduce fossil fuel use?
  - Keep money in the local economy?



# HOW DOES TNS WORK IN A LOCAL REGULATORY CONTEXT?

- First, let's set the stage
  - What does zoning and subdivision regs do?
    - Sets the development pattern
      - Roads
      - Density
      - Land Uses
      - Building envelope dimensions (setbacks, height, etc.)
    - Impacts how our communities look and how they function



# HOW DOES TNS WORK IN A LOCAL REGULATORY CONTEXT?

## ○ More stage setting

- How zoning ordinances typically work
  - Permitted uses
  - Conditional uses
- Example: R-2 Single Family Residence District
  - 2) Permitted Uses.
    - a) Permitted uses in "R-1" District
    - b) Private non-commercial recreational areas and facilities
    - c) Cemeteries
    - d) Accessory uses
    - e) Filling of property
  - 3) Conditional Uses.
    - a) Conditional uses in "R-1" District
    - b) Gardening and community garden plots
    - c) Public or institutional community center, senior center, youth center or library
    - d) Junior & Senior High Schools and Publicly-Owned & Operated Technical Schools

Euclidean zoning

## ○ Go back to R-1, sends us to R-LD

- Permitted Uses
  - a) Permitted uses in "C" District except truck gardening
  - b) Single Family dwellings
  - c) Home occupations/Professional home offices
  - d) Tennis courts
  - e) Churches, convents, chapels, temples, synagogues, parish or rectory houses.
  - f) Fire and police stations
  - g) Accessory uses
  - h) Filling of property
  - i) Family day care centers



# WHAT IS SUSTAINABLE ZONING?

- Simply put,
  - An ordinance that results in a community development pattern that is working towards the 4 TNS principles:
    - Reducing or eliminating:
      - Use of stuff dug from the earth
      - Use of chemicals and other manufactured substances
      - Dependence on activities that harm ecosystems
    - Meeting human needs fairly and efficiently
- But,...



# BUT, HOW?

## ○ Big questions

- Given how most zoning ordinances are structured, how sustainable are they?
  - Do we already have zoning ordinances in place that can be considered sustainable?
  - If not, how can they be made more sustainable?



# ZONING ORDINANCE STUDY

- Conducted two studies
  - 40 city nation-wide study
    - All cities saying they are integrating sustainability into planning and zoning
  - 40 city Wisconsin study
    - 20 cities adopted a “green” program (eco-municipality, green tier or energy)
    - 20 cities with no adoption
- Developed an evaluation tool



# OUR EVALUATION TOOL

- Only considered permitted uses not conditional
- Assumed that if landowner needed to request a conditional use
  - Potential barrier
  - Could be turned down
- Looked for other aspects such as overlay districts, special codes, regulations that encouraged particular behavior/types of development
- Process
  - Total number of districts, e.g., residential
  - Review permitted use within each district



# TOPICS TO ADDRESS

- Experience as planner, plan commission, extensive study
- Used Rocky Mountain Land Use Institute and Sturm School of Law Beta Code framework
  - <http://www.law.du.edu/index.php/rmlui/rmlui-practice/code-framework>
  - Outline of topics to consider
    - 2. Environmental Health and Natural Resources
      - 2.1. Climate Change
      - 2.2. Low Impact Development and Green Infrastructure
      - 2.3. Natural Resource Conservation/Sensitive Lands Protection
      - 2.4. Water Conservation
      - 2.5. Solid waste and recycling
    - 3. Natural Hazards
      - 3.1. Floodplain Management
      - 3.2. Wildfires in the Wildland-Urban Interface
      - 3.3. Coastal Hazards
      - 3.4. Steep Slopes
    - 4. Land Use and Community Character
      - 4.1. Character and Aesthetics
      - 4.2. Urban Form and Density
      - 4.3. Historic Preservation
    - 5. Mobility & Transportation
      - 5.1. Transit Oriented Development
      - 5.2. Mobility Systems
        - 5.2.1. Complete Streets
        - 5.2.2. Bicycle Mobility Systems
        - 5.2.3. Pedestrian Mobility Systems
      - 5.3. Public Transit
      - 5.4. Parking
    - 6. Community
      - 6.1. Community Development
      - 6.2. Public Participation and Community Benefits
    - 7. Healthy Neighborhoods, Housing, Food Security
      - 7.1. Community Health and Safety
      - 7.2. Affordable Housing
      - 7.3. Housing Diversity and Accessibility
      - 7.4. Food Production and Security
    - 8. Energy
      - 8.1. Renewable Energy: Wind (small- and large-scale)
      - 8.2. Renewable Energy: Solar (including solar access)
      - 8.3. Energy Efficiency and Conservation
    - 9. Livability
      - 9.1. Noise
      - 9.2. Lighting
      - 9.3. Visual Elements



# OUR LIST OF USES WITH TNS: EXAMPLE

Permitted Residential Uses	TNS Principles
Accessory units (secondary dwelling only)	P4 – Increases density, affordable housing
Cooperative housing (social commons)	P4 – affordable housing, choice
Commercial gardens (market gardens, farming)	P1 & 3 – local food
Community gardens	P1 & 3 – local food, exercise
Community housing/group homes/boarding & rooming houses	P4 – affordable housing, choice
Grocery/food stores	P1 & 3 – less driving, less low density
Live/work units (home occupations)	P1 & 3 & 4 – less driving, employment
Manufactured/modular housing & mobile homes	P4 – affordable housing, choice
Mixed use buildings/dwellings above businesses	P1 & P3 & P4 – less driving, affordable housing, choice
Multi-family housing (3-4 units+)	P4 – affordable housing, choice
Urban agriculture/animal husbandry (incl greenhouses & beekeeping)	P1 & 3 – local food
Energy systems/wind or solar	P1 – less fossil fuel use



# % ORDINANCES

Permitted uses in residential districts	All cities	Program Cities	No Program Cities
Accessory units (secondary dwelling only)	0.00	0.00	0.00
Cooperative housing (social commons)	0.03	0.05	0.00
Commercial gardens (market gardens, farming)	0.30	0.30	0.30
Community gardens	0.03	0.05	0.00
Community housing/group homes/boarding & rooming houses	0.68	0.55	0.80
Grocery/food stores	0.03	0.00	0.05
Live/work units (home occupations)	0.53	0.45	0.60
Manufactured/modular housing & mobile homes	0.43	0.45	0.40
Mixed use buildings/dwellings above businesses	0.05	0.05	0.00
Multi-family housing (3-4 units+)	0.95	0.95	0.90
Urban agriculture/animal husbandry (incl greenhouses & beekeeping)	0.18	0.10	0.25
Energy systems/wind or solar	0.08	0.10	0.05

COMMUNITY GROUP	all	program	no program
	% ordinances		
Design review (4/6)	0	0	0
Historic preservation (5/4)	0.55	0.55	0.45
Infill development (4/10)	0.15	0.25	0.05
Live/work units (1/7)	0.53	0.45	0.6
Mixed use buildings (1/9)	0.05	0.05	0
Residential of any kind (2/4)	0.75	0.7	0.75
Mixed use, smart growth (5/6)	0.4	0.4	0.15
Public and civic spaces (3/7)	0.13	0.15	0.1
Public markets (3/6)	0.03	0.05	0
Urban design (5/9)	0.05	0.05	0
AVERAGE	0.26	0.27	0.21

ENERGY GROUP	all	program	no program
	% ordinances		
Energy facilities & systems res (1/12)	0.08	0.1	0.05
energy facilities comm (2/7)	0.05	0.1	0
energy special codes (3/11)	0.38	0.4	0.35
Solar energy (4/16)	0.28	0.4	0.15
Wind areas overlay (5/13)	0	0	0
Green buildings (4/7)	0.05	0.1	0
Green landscaping (4/8)	0.05	0.05	0.05
Green roofs (4/9)	0	0	0
<b>AVERAGE</b>	<b>0.11</b>	<b>0.14</b>	<b>0.08</b>



HOUSING GROUP	all	program	no program
	% ordinances		
Accessory dwelling units (1/1)	0	0	0
Affordable housing (4/1)	0.1	0.15	0.05
Inclusionary district (5/5)	0	0	0
Community housing (1/5)	0.68	0.55	0.8
Cooperative housing (1/2)	0.03	0.05	0
Manufactured housing (1/8)	0.43	0.45	0.4
Multi-family housing (1/10)	0.95	0.95	0.9
Small lot SF homes (average)	6829	7180	6778
<b>AVERAGE</b>	<b>0.31</b>	<b>0.31</b>	<b>0.31</b>



LOCAL FOOD GROUP	all	program	no program
	% ordinances		
Agricultural preservation (3/2)	0.28	0.25	0.3
Ag preservation regulations (4/2)	0.23	0.2	0.25
Agriculture, urban district (5/1)	0.6	0.6	0.6
Commercial gardens res (1/3)	0.3	0.3	0.3
Commercial gardens comm (2/1)	0.15	0.25	0.05
Community gardens res (1/4)	0.03	0.05	0
Community gardens comm (2/2)	0.05	0.1	0
Farmers markets (2/3)	0.08	0.15	0
Neighborhood grocery standards (3/1)	0.03	0.05	0
Grocery res(1/6)	0.03	0	0.05
Urban agriculture res (1/11)	0.18	0.1	0.25
Urban ag comm (2/6)	0.3	0.3	0.3
<b>AVERAGE</b>	<b>0.19</b>	<b>0.20</b>	<b>0.18</b>

NATURAL RESOURCES GROUP	all	program	no program
	% ordinances		
Conservation subdivisions (4/5)	0.2	0.2	0.2
TDR/PDR (5/7)	0	0	0
Eco-industrial (5/3)	0	0	0
On-site water management (4/14)	0.23	0.25	0.2
Open space protection regs (4/11)	0.63	0.7	0.55
Conservancy/open space district (5/2)	0.85	0.85	0.65
Pervious surfaces (4/13)	0.08	0.1	0.05
Riparian buffers (3/8)	0.4	0.35	0.45
Steep slopes (3/9)	0.18	0.15	0.2
Water resources protection (5/10)	0.45	0.45	0.3
Wetland protection (5/11)	0.3	0.3	0.55
Wildlife habitat special code (3/10)	0.03	0.05	0
Wildlife habitat district (5/12)	0	0	0
<b>AVERAGE</b>	<b>0.26</b>	<b>0.26</b>	<b>0.24</b>

TRANSPORTATION GROUP	all	program	no program
Bicycle transportation (4/3)	0.2	0.25	0.15
Complete streets (4/4)	0	0	0
Parking lot landscaping (3/5)	0.45	0.35	0.55
Parking maximums (3/4)	0.1	0.15	0.05
Pedestrian access (4/12)	0.53	0.75	0.3
Shared parking (3/3)	0.38	0.35	0.4
Transit stops (2/5)	0.3	0.35	0.25
Transportation connect (4/17)	0	0	0
TOD (5/8)	0.05	0.05	0
<b>AVERAGE</b>	<b>0.22</b>	<b>0.25</b>	<b>0.19</b>



# MAKING ORDINANCES MORE SUSTAINABLE

- High Score – 66% of possible points
  - Madison
    - Residential districts
      - Permitted uses or permitted if meet conditions: cohousing, housing cooperative, accessory dwelling unit, community garden, home occupation, keeping of chickens, solar energy
    - 5 mixed use and commercial districts
      - Farmer's market, residential, community garden, transit stop, keeping of chickens
    - Allow for small single-family lot size = 3,000 (from literature)



# MADISON

- Interior Parking Lot Landscaping.
  - The purpose of interior parking lot landscaping is to improve the appearance of parking lots, provide shade, and improve stormwater infiltration. All parking lots with twenty (20) or more parking spaces shall be landscaped in accordance with the following interior parking lot standards.
- Bicycle parking
  - (11) Bicycle Parking Design and Location
    - Section a-j
- (7) Shared Parking Requirements
  - Section a-f



# EXAMPLE

## ○ Eugene, Oregon

- 5 residential districts
  - Community garden in all
  - Farm animals with standards in 4 districts
  - Types of transit in 5 districts
- 5 commercial districts
  - Permit horticultural use, such as field crops, orchards, berries, and nursery or flower stock in 4 districts
  - Permit a range of residential uses in 4 districts



# EUGENE

- **Commercial Districts**
- **(6) Pedestrian Amenities and Community Spaces.**
  - (a) Each development site subject to these standards shall contribute to the establishment or enhancement of community and public spaces by providing a space where at least two of the following: patio-seating area, pedestrian plaza with benches, covered playground area, kiosk area, water feature, clock tower or other similar focal feature or amenity. Any such area shall have direct access to the public sidewalk network and be placed in a visible location that is convenient for use as a public gathering area.



# EUGENE

## ○ Solar Standards

- 9.2780 Purpose of Solar Standards. Solar standards are utilized to create lot divisions, layouts and building configurations to help preserve the availability of solar energy to one and two family dwellings. 9.2790 Solar Lot Standards.
  - (1) Applicability. Solar lot standards apply to the creation of lots within subdivisions in R-1 and R-2 zones.
  - (2) Solar Lot Requirements. In R-1 and R-2, at least 70% percent of the lots in a subdivision shall be designed as “solar lots” and shall have a minimum north-south dimension of 75 feet and a front lot line orientation that is within 30 degrees of the true east-west axis. For purposes of this subsection, a lot proposed for more than one dwelling unit shall count as more than one lot, according to the number of units proposed (e.g. a lot proposed for a fourplex shall be considered 4 lots).
  - Etc.



# CONCLUSIONS

- Little difference between two types of communities
  - Most striking differences (25% or more)
    - Program communities
      - Pedestrian access
      - Solar energy
      - Mixed use, smart growth
    - No program
      - Wetland protection
      - Community housing (group homes, boarding houses)
- City ordinances have a long way to go to become more sustainable



## RECOMMENDATIONS

- If a community “joins” a program, make it real.
  - Follow-up with actions
- Use a decision-making framework
  - To make it easier to evaluate current ordinance and
  - To update ordinance
- Like any ordinance, revise based on what is appropriate for your community
  - E.g., not every community in every district needs chickens!



Permitted uses in commercial/business districts	All cities	Program Cities	No Program Cities
Commercial gardens (market gardens, farming)	0.15	0.25	0.05
Community gardens	0.05	0.10	0.00
Farmers markets (open air)	0.08	0.15	0.00
Residential (of any kind)	0.75	0.70	0.75
Transit stop/station (incl park-and-ride)	0.30	0.35	0.25
Urban agriculture/animal husbandry (including greenhouses & beekeeping)	0.30	0.30	0.30
Energy facilities/wind or solar	0.05	0.10	0.00



Special codes or standards for:	All cities	Program Cities	No Program Cities
Grocery/food stores	0.03	0.05	0.00
No non-agricultural uses permitted in agricultural districts	0.28	0.25	0.30
Parking, shared/collective/joint	0.38	0.35	0.40
Parking, maximums	0.10	0.15	0.05
Parking, landscaping	0.45	0.35	0.55
Public markets	0.03	0.05	0.00
Public/civic spaces, public malls/plazas/squares	0.13	0.15	0.10
Riparian buffers/shoreland protection	0.40	0.35	0.45
Steep slopes & hillsides protection	0.18	0.15	0.20
Wildlife habitat & corridor protection	0.03	0.05	0.00
Energy facilities & systems/wind or solar	0.38	0.40	0.35



Regulations that pertain to or encourage (including density bonuses):	All cities	Program Cities	No Program Cities
Affordable housing	0.10	0.15	0.05
Agricultural preservation	0.23	0.20	0.25
Bicycles	0.20	0.25	0.15
Complete Streets (combined motor vehicle, pedestrian & bicycle use)	0.00	0.00	0.00
Conservation subdivisions (cluster development)	0.20	0.20	0.20
Design review	0.00	0.00	0.00
Green buildings (e.g., LEED)	0.05	0.10	0.00
Green landscaping (e.g., LEED)	0.05	0.05	0.05
Green roofs	0.00	0.00	0.00
Infill development/adaptive reuse	0.15	0.25	0.05
Open space	0.63	0.70	0.55
Pedestrians	0.53	0.75	0.30
Pervious/permeable/porous surfaces	0.08	0.10	0.05
On-site water management (e.g. rain gardens, drainage/bio-swales, water storage tanks)	0.23	0.25	0.20
Solar energy	0.15	0.20	0.10
Transportation connections/circulation systems (pedestrian & bicycle)	0.28	0.40	0.15



Special and overlay districts/zones:	All cities	Program Cities	No Program Cities
Agriculture, including urban	0.60	0.60	0.60
Conservancy/open space	0.85	0.85	0.65
Eco-industrial development	0.00	0.00	0.00
Historic preservation	0.55	0.55	0.45
Inclusionary/affordable housing	0.00	0.00	0.00
Mixed use/smart growth	0.40	0.40	0.15
TDR/PDR (agricultural and open space)	0.00	0.00	0.00
TOD	0.05	0.05	0.00
Urban design (exact term)	0.05	0.05	0.00
Water resources/wellhead protection	0.45	0.45	0.30
Wetlands	0.30	0.30	0.55
Wildlife habitat	0.00	0.00	0.00
Wind areas	0.00	0.00	0.00

## ○ Overlay zones

- Residential Density Range Overlay Zone
- Broadway Overlay Zone
- Commercial Airport Safety Overlay Zone
- Hillside Development Overlay Zone
- Nodal Development Overlay Zone
- Planned Unit Development Overlay Zone
- Site Review Overlay Zone
- Transit Oriented Development Overlay Zone
- Urbanizable Land Overlay Zone
- Waterside Protection Overlay Zone
- Water Quality Overlay Zone
- Water Resources Conservation Overlay Zone
- Wetland Buffer Overlay Zone
- Willamette River Greenway Overlay Zone



**MONONA STRATEGIC PLAN UPDATE – 2016**

<b>DEPARTMENT: Sustainability</b>		<b>STAFF: Brad Bruun</b>	
<b>SECTION</b>	<b>STRATEGY / TACTIC ACCOMPLISHED:</b>		
4A	1. Develop and finalize comprehensive sustainability plan		
4C	2. City Hall LED lighting for building interior and exterior		
<b>SECTION</b>	<b>IN PROGRESS:</b>	<b>DEADLINE / STATUS</b>	<b>Notes</b>
4A	1. Train staff on sustainability and efficiency	Ongoing.	The sustainable purchasing policy will help with this. Staff Assigned: Brad
4A	2. Implement objectives and strategies from the sustainability plan	Ongoing.	Staff Assigned: Brad
4B	3. Staff training on technology that will reduce paper and energy	Ongoing.	Staff Assigned: Brad
4B	4. Eliminate duplication of efforts (e.g. preparing both electronic and hard copy documents)	Ongoing.	Possible 2017 budget item. Explore digitization of older files. Staff Assigned: April
4B	5. Research electronic billing system for bills	Ongoing.	Employee checks are now set up for direct deposit. Staff Assigned: Michelle, Marc, Leah
4C	6. Find ways to reduce energy usage	Ongoing.	Staff Assigned: Brad
4C	7. Find ways to reduce fuel usage	Ongoing.	We are currently benchmarking fuel usage to analyze and work toward reduction. Staff Assigned: Brad
4D	8. Research sustainability related grants	Ongoing.	Staff Assigned: Brad
4D	9. Research state funding for sustainability related initiatives.	Ongoing.	Staff Assigned: Brad
4E	10. Storm water treatment (e.g. improving sediment and phosphorous capture before entering lakes via structure improvements)	Ongoing.	Staff Assigned: Dan
4E	11. Educate residents regarding good storm water practices	Ongoing.	Staff Assigned: Dan
4E	12. Improve water quality by promoting resident/business involvement with good practices to keep water on site whenever possible	Ongoing.	Staff Assigned: Dan

**MONONA STRATEGIC PLAN UPDATE – 2016**

<b>SECTION</b>	<b>NOT STARTED:</b>	<b>REASON / ITEM NEEDED TO PROGRESS</b>	<b>Notes</b>
4B	1. Research printers that make more efficient use of toner (e.g. a good “draft” print function)		Review for removal. Staff Assigned: Leah
4D	2. Create plan to fund/incentivize energy and water efficiency		Review for removal.
<b>SECTION</b>	<b>NEW PRIORITIES 2017 - 2019</b>	<b>DEADLINE</b>	<b>Notes</b>
4D	1. Continuing financing Sustainability Committee educational efforts	Ongoing, changing language.	Support sustainability educational efforts for both residential and municipal. Staff Assigned: Marc
4A	2. Include sustainability in annual staff performance reviews		
4C	3. Expand LED retrofits in interiors of existing buildings		
4C	4. Reduce drive time to and from job sites due to lack of preparation; limit staff trips	Ongoing, changing language.	Utilize web/teleconferencing to reduce miles driven on city vehicles and maximize staff time. Staff Assigned: Dept Heads / Brad
4E	5. Continue storm water infrastructure maintenance	Ongoing, new strategy.	Routinely reduces run-off of phosphorous and suspended solids. Staff Assigned: Dan, Brad, Jeff
4F	6. Improve equity, interconnectivity, and accessibility of all modes of transportation	Ongoing	Begins with the UniverCity project, and promoted by a sustainable transportation plan. Staff Assigned: Brad
4F	7. Improve bikeability and walkability	Ongoing	Begins with the UniverCity project, and promoted by a sustainable transportation plan. Staff Assigned: Brad
4F	8. Improve safe routes to school	Ongoing	Begins with the UniverCity project, and promoted by a sustainable transportation plan. Staff Assigned: Brad

## MONONA STRATEGIC PLAN UPDATE – 2016

4F	9. Improve transit	Ongoing	Begins with the UniverCity project, and promoted by a sustainable transportation plan. Staff Assigned: Brad
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**From:** [Friedlander, Michael - DNR](#)  
**To:** [Gazza, Dean](#); [Hoopman, Billie](#); [Kluetmeier, Erika](#); [Abby Attoun-Tucker](#); [Parker, Valerie](#); [Noel, Ned](#); [Pederson, Andy](#); [Kuhlman, Lewis](#); [Spieler-Sandberg, Rose](#); [Pelishek, Chad](#); [Mlada, Tom](#); [Brad Bruun](#); [Theisen, Matt](#); [ABELES-ALLISON, MARK](#)  
**Cc:** [Sukup, Laurel C - DNR](#); [Levy, Megan - PSC](#); [Curtis, Monica](#); [Erikson, William L - DNR](#)  
**Subject:** Scope of work for Office of Energy Innovation MEETAP contract  
**Date:** Thursday, September 08, 2016 9:02:55 AM

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Greetings All –

As discussed earlier, we are excited to move forward with the Energy benchmarking effort. Office of Energy Innovation will continue assisting those GTLC that have yet to establish their benchmarking efforts. In addition, below is the scope of work for the MEETAP contract that the Green Tier Legacy Communities can “piggyback” on to. This approach will provide for greater administrative streamlining relative to deeper analysis. Please review this scope of work and provide me with suggested edits that best suit your communities needs

Also, please let me know if your community will be taking advantage of this contract, so that the contractor can anticipate workload and set the expectations of the communities.

We would like to move expeditiously on this contract, so please respond back not later than COB, Monday September 12.

#### SCOPE OF WORK

Preliminary Facility Energy Use and Benchmark Report – gather and compile owner provided electronic (excel) monthly utility energy, demand and billing data, detail electric/gas interval data, building equipment schedules and operating data. Develop benchmark comparisons with end-use and cost allocation estimates based on similar building types.

- 1) Review Past Audits, Benchmarking Analysis and Current Energy Management Program – owner to provide past project information with forecasted savings, associated M&V, energy portfolio data, etc. Analyze and compare utility data from 1) above and check corresponding real savings. For 66.01 Energy savings performance contracting:
  - a. Review - the report from the qualified provider containing recommendations concerning the amount the local governmental unit should spend on energy conservation and facility improvement measures. The report contains estimates of all costs of installation, modifications, or remodeling, including costs of design, engineering, maintenance, repairs and financing. In addition, the report contains a guarantee specifying a minimum amount by which energy or operating costs of the local governmental unit will be reduced or energy or water metering accuracy will be improved, if the installation, modification or remodeling is performed by that qualified provider.
  - b. Check - amount spent on the energy conservation and facility improvement measures not to exceed the amount to be saved in energy and operation costs over the remaining useful life of the facility to which the measures apply.

Check - monitoring; reports. During the entire term of each performance contract, the qualified

provider entering into the contract monitors the reductions in energy consumption and cost savings attributable to the energy conservation and facility improvement measures installed under the contract, and periodically prepare and provide a report to the local governmental unit entering into the contract documenting the reductions in energy consumption and cost savings to the local governmental unit.

Budget Estimates – for planning purposes

- 1) Preliminary Facility Energy Use and Benchmark Report – Average of 4 hours (or \$500 per facility) after being provided with complete electronic (excel) monthly utility energy, demand and billing data, electric/gas interval, building plans, equipment schedules and operating data.
- 2) Review Past Audits, Benchmarking Analysis and Current Energy Management Program – Average of 12 hours total \$1500 per facility, including the 4 hours \$500 for 1) above plus 8 hours for 2) Review Past Audits, Benchmarking Analysis and Current Energy Management Program.

Thanks much and have a great day!

**We are committed to service excellence.**

Visit our survey at <http://dnr.wi.gov/customersurvey> to evaluate how I did.

**Mike Friedlander**

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# Solar Monona 3rd-Party Financing Model

\$ (629,522) Retail Cost of Developing Solar Project (approx)  
 156.62 kW of Solar (DC rating)  
 9.24% % Renewable in City's Mix  
 1000 kWh = 1 Renewable Energy Credit (REC)

**Solar Services Agreement**  
 (6 years then buyout or renewal)  
**CASH FLOWS SHEET**

	Size (kW)	Sites
Roof Mount	47.15	Library
	25.01	City Hall
	55.76	PW Garage
	28.7	Well #3
<b>sub-total</b>	<b>156.62</b>	<b>kW</b>

Cost \$ 130.00 =Price of each REC generated from this project  
 Savings \$ 114.31 ="Avoided Cost" (the rate per 1,000 kWh MGE is currently billing Monona)  
 \$0.00 = amount of costs front-loaded over 6 years (refundable upon purchase)  
 Rent \$ 5,261.68 =Lease Income (portion received by City each year)  
 0.0% Escalation rate for REC price  
 3.0% REC escalation rate (yrs 7-25) if no sale and City renews contract.  
 4.5% Utility Escalation rate assumption (recent hx is above 5%)  
 0.0% Rent Escalation rate  
 \$ 314,761 Purchase Option Price (vs. FMV, which will be a lower number)  
 0.4% Insurance Premium (% equipment replacement cost)

Energy Cost per kWh  
**\$0.0809**  
**City's 25 yr cost**

Sale, yr 6?
<b>Y</b>
Purchase Option \$ (314,761.00)

Year	Cumulative	1	2	3	4	5	6	7	8	9	10
Annual Non-Solar Service Costs (yrs 1-6)											
Annual REC Re-Sales		\$8,960.00	\$8,960.00	\$8,920.00	\$8,880.00	\$8,880.00	\$8,840.00				
\$ 53,440.00 \$40/REC											
<b>Sub-Total</b>	<b>\$ 53,440.00</b>	<b>\$ 8,960.00</b>	<b>\$ 8,960.00</b>	<b>\$ 8,920.00</b>	<b>\$ 8,880.00</b>	<b>\$ 8,880.00</b>	<b>\$ 8,840.00</b>				

Annual Solar Service Agreement Cash Flows													
REC Price		\$	130.00	130.00	130.00	130.00	130.00	130.00	133.90	137.92	142.05	146.32	
kWh of electricity generated	6 yr total		224,821	224,147	223,472	222,798	222,123	221,449	220,100	219,425	218,751	218,076	
Number of RECs Generated	6 yr total		224	224	223	222	222	221	220	219	219	218	
Cost for Solar RECs		\$	(29,120.00)	(29,120.00)	(28,990.00)	(28,860.00)	(28,860.00)	(28,730.00)	-	-	-	-	
Rent paid to City		\$	5,261.68	5,261.68	5,261.68	5,261.68	5,261.68	5,261.68	-	-	-	-	
electrical rate		\$	0.1143	0.1195	0.1248	0.1304	0.1363	0.1425	0.1489	0.1556	0.1626	0.1699	
Savings from MGE bill	6 yr total	\$	171,259.05	25,699.40	26,775.31	27,896.00	29,063.34	30,279.25	31,545.74	32,764.49	34,133.98	35,560.36	37,046.00
.4% loss-rider for replacement									(1,080.99)	(1,080.99)	(1,080.99)	(1,080.99)	
<b>Sub-Total</b>	6 yr total	\$	29,149.13	1,841.08	2,916.99	4,167.68	5,465.02	6,680.93	8,077.42	32,764.49	34,133.98	35,560.36	37,046.00
Inverter Replacement (avg)									(2,455.12)	(2,455.12)	(2,455.12)	(2,455.12)	
Loan Service for Buyout	2.5% 10								305,921.00	(34,954.16)	(34,954.16)	(34,954.16)	(34,954.16)

<b>Overall Cash Flows</b>	6 yr total	\$ 73,749.13	\$ 10,801.08	\$ 11,876.99	\$ 13,087.68	\$ 14,345.02	\$ 15,560.93	\$ 8,077.42	\$ (5,725.77)	\$ (4,356.29)	\$ (2,929.90)	\$ (1,444.26)
	25 yrs	\$ 581,658.28										
Net Present Value, yr 25		\$ 367,860.68										

Year	Cumulative	1	2	3	4	5	6	7	8	9	10
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Equipment	Vehicle ID#	Use Area	Year	Miles/ Hours (previous)	Miles/ Hours (current)	Age Years	Standard Replacement Interval	Estimated Replacement Year
<b>CITY HALL STAFF</b>								
Jeep Patriot	75	DPW office	2013			2	8-10 yrs	2023
Ford Escape	74	Administrator	2005			10	8-10 yrs	2015
Chevrolet 1500 pickup	49	Facility maintenance	2003			12	8-10 yrs	2013
Crown Victoria	72	Code Enforcement (formerly PD use)	2005			10	8-10 yrs	2015
<b>UTILITY OPERATIONS</b>								
Chevrolet step van	45	Utility	1997			18	10-12yrs	2016
Ford Step Van	0	Utility	2015				10-12yrs	2027
Chevrolet 2500 pickup	23	Utility	2005			10	8-10 yrs	2015
<b>STREET OPERATIONS</b>								
Chevrolet Colorado	76	Street operations	2012			3	8-10 yrs	2022
Chevrolet 2500 pickup	44	Street operations, parking lot plow	2005			10	8-10 yrs	2015
Chevrolet 2500 pickup	40	Street operations	2005			10	8-10 yrs	2015
Ford F350 4yd dump	43	Patching, brush, construction, snow	2014			1	8-10 yrs	2024
Chevrolet 3500 boom truck	41	Trimming, banners	2008			7	10-12yrs	2020
<b>LEAF COLLECTION</b>								
Freightliner leaf machine		Leaf collection	2014			1	12-15yrs	2029
Freightliner leaf machine		Leaf collection	2015				12-15yrs	2030
Ford leaf machine	52	Leaf collection (backup 4th truck)	1992			23	12-15yrs	2014
Freightliner leaf machine	31	Leaf collection	2008			7	12-15yrs	2023
<b>SEDIMENT REMOVAL</b>								
International Vac All - Leach	34	Inlets, storm sediment box cleaning	1989			26	12-15yrs	2004
Elgin street sweeper	50	Street sweeping	2007			8	8-10yrs	2017
<b>SNOW &amp; ICE CONTROL</b>								
International 4900 dump	21	Snow removal	2007			8	15-18yrs	2025
International 4900 dump	24	Snow removal	1995			20	15-18yrs	2015
Peterbilt dump tandem axle	26	Snow removal	2009			6	15-18yrs	2027
International 7400 dump	25	Snow removal	2005			10	15-18yrs	2023
International 7400 flatbed	22	Snow removal, main break	2011			4	15-18yrs	2029
International 7400 dump	20	Snow removal	2012			3	15-18yrs	2030
Chevrolet 3500 flat dump	42	Prewet, landscaping,	2003			12	8-10 yrs	2013
John Deere 1435, sidewalks		snow blower, broom,	2007			8	5-10yrs	2017
<b>MECHANIC</b>								
Ford 350 truck	48	Mechanic	2010			5	8-10 yrs	2020
<b>MISC. EQUIPMENT</b>								
John Deere tractor w/bucket	56	Mixed use	2007			8	8-10yrs	2017
Ford water truck	46	Utility, watering, parks	1996			19	10-12yrs	
Chevrolet Tahoe (old PD)	10	Utility, mixed use, classes, etc.. (replaces crown vic)	2006					
John Deere loader	51	Mixed use	2007			8	8-10yrs	2017
Bobcat mini excavator	61	Construction	2007			8	8-10yrs	2017
Bobcat S185	60	Construction (annual upgrade)	2015			1	8-10yrs	annual
Vermeer 1400 chipper	55	Brush	2004			11	8-10yrs	2014
Grapple	73	Brush						
Stepp hot box	58	Patching	1989			26		
ATV	36	Mixed use	2004			11		
Sulliar compressor	59	Mixe use	1984			31		
Onan generator	57	Sewer	1999			16	12-15yrs	2014
Forklift	33		2000			15		

## Points Allocation System

Equipment is evaluated by six criteria: age, mileage, type of service, general overall condition, maintenance cost and reliability. Each vehicle is scored as follows to determine which units are eligible for replacement consideration.

- 1) **Year of Vehicle:**  
One (1) point is assigned for each year of chronological age, based on "in-service date" of the vehicle.
- 2) **Mileage/Hours:**  
One (1) point is assigned for each 10,000 miles of operation, or for each 750 hours of use.
- 3) **Type of Service:**  
One, three, or five (1, 3, 5) points are assigned based on type of service that vehicle receives. For example, a police squad car would be assigned a five (5) because it is a severe duty service vehicle. An administrative sedan would be assigned a one (1) because of light duty service.
- 4) **General Overall Condition:**  
This category takes into consideration the condition of the body, rust, interior condition, vehicular accidents status, anticipated repairs, etc... A scale from one (1) to five (5) is used, with five (5) being extremely poor condition.
- 5) **Maintenance Cost:**  
Points are assigned on a scale of one (1) to five (5) based on the total cost factor. The maintenance cost figure includes all repair and maintenance costs minus any costs associated with accident repairs. A five (5) would be equal to or greater than the original purchase price, while a one (1) would be equal to 20% or less of the original purchase price.
- 6) **Reliability:**  
Points are assigned as one (1), three (3), or five (5) depending on frequency that a vehicle is in the shop for non-routine repair. A five (5) would be assigned to a vehicle that is in the shop two or more times per month on average, while a one (1) would be assigned to a vehicle in the shop an average of once every three months or less.

### POINT RANGES FOR REPLACEMENT CONSIDERATION

<u>SCORE:</u>	<u>CONDITION:</u>
0-17 points	Excellent
18 - 22 points	Good
23 - 27 points	Qualifies for Replacement
Above 28 points	Needs Immediate Replacement

### **Process of Selecting Units to be Replaced:** (Discussion from APWA - Vehicle Replacement Guide)

The fact that a vehicle has reached an age and usage threshold beyond which it is a candidate for replacement does not mean that it automatically should be replaced. Some vehicles do not wear out as quickly as others, however, some vehicles should be replaced sooner than others because they experience above average wear and tear.

In addition to having replacement cycle guidelines the organization should have a decision making process in place to determine which specific vehicles should be replaced. Such processes help to set replacement priorities and to ensure that the most deserving vehicles are replaced with the level of funding available.

Replacement cycles are planning parameters, and as such are predictive criteria used to establish funding requirements. While they are also often used to identify potential candidates for replacement, additional factors need to be considered when developing the list of units that are most deserving of being replaced. These additional factors should include items such as maintenance and repair costs, reliability, type of use, vehicle condition, etc...





## **CITY OF MONONA PUBLIC WORKS DEPARTMENT**

### **FLEET & EQUIPMENT MANAGEMENT**

A sound vehicle and equipment replacement schedule is important to the operation of the City of Monona public works department. Reliable vehicles and equipment in good working order are essential to our day to day operations and are critical when responding to snow and ice emergencies, clearing fallen trees and branches, sanitary and storm water overflow and flooding, leaf collection, street sweeping, and many other functions that ensure our public services are available to our citizens and businesses in a timely manner.

Vehicles and equipment that frequently breakdown due to age and excessive use interfere with our daily scheduling and can lead to disrupted or undelivered service. Good, dependable equipment enables trained public works crews to respond quickly and professionally to emergency situations.

The vehicles and equipment used by the public works department can be considered as a tool for the provision of services to our residents and businesses by our employees. This tool requires upkeep or our ability to provide necessary services will suffer. A key component of effective fleet management is the commitment to replace vehicles and equipment prior to any decline in service levels. A fleet replacement schedule will lead to less vehicle downtime, lower operating and maintenance costs, however, at higher capital costs. The cost of new equipment should be balanced against increased operation and maintenance costs, reliability to perform intended functions, demonstrable total cost savings to the City, and the safety of our operation.

The Monona Department of Public Works is responsible for managing its fleet of vehicles and construction/maintenance equipment. The department is responsible for developing vehicle and equipment specifications; vehicle and equipment replacement schedules; acquiring vehicles and equipment; and reassigning and disposing of vehicles and equipment.

The purpose of this document is to propose a suggested vehicle replacement plan which details the vehicle and equipment needs of the department. This document will be modified and updated annually to reflect changes in the condition of department fleet and equipment, the organizational climate, and the changing needs of our customers.

### **Equipment Purchase**

The goal of the vehicle and equipment purchase plan is to obtain the best economics for the required equipment. All vehicle and equipment purchases will follow the established internal policies and guidelines. Subject to the annual approval process, and prior to the completion of the annual Operating and Capital Budget, the vehicle and equipment schedule will be reviewed and a purchase and replacement plan will be developed.

### **Maintenance**

The maintenance of our vehicles and equipment takes place at the public works garage located at 851 Femrite Drive. The maintenance of all vehicles and equipment is performed by one mechanic assigned to the public works department.

The goal of our maintenance practices is to keep the department's vehicles and equipment in sound operating condition. Preventive maintenance routines and intervals are followed by our mechanic, and are based on local driving conditions and manufacturers recommendations, for each type of vehicle or equipment, and each type of maintenance service.

Maintenance costs represent a significant portion of the total cost to own and operate a vehicle or a piece of heavy equipment and tend to increase as a vehicle or equipment ages. Escalating maintenance costs are a key factor in determining when to replace a fleet vehicle. In addition to the added cost of maintenance as a vehicle ages, there is an additional cost to the department when a vehicle is in the garage receiving maintenance and not available for use.

Preventive maintenance is the key to avoiding the repair or replacement of costly major vehicle components such as engines, transmissions, and drive trains.

Accurate and complete vehicle and equipment maintenance records are a key tool for making fleet management decisions. Vehicle maintenance costs are variable and distinct to each vehicle. Pertinent records for each vehicle are maintenance logs; fuel usage logs; and a cumulative cost of parts, labor, and overhead by a vehicle over its life.

We do currently collect this information and input the data on a maintenance software program called Fleet Maintenance Pro. The program has the ability to track our vehicle and equipment maintenance program, and provide maintenance information at a level that will increase our department efficiency.

## **Replacement**

As with other aspects of fleet management, replacing a vehicle too soon or too late wastes money. We are developing our replacement standards based on APWA, federal and municipal guidelines, and years of experience in operating and maintaining vehicles and equipment. The goal is to analyze the costs associated with a vehicle and identifying the point when, on average, a vehicle is reasonably depreciated but not yet incurring significant maintenance costs. The criteria that are considered when establishing a vehicle or equipment replacement schedule include:

- Age
- Miles/Hours
- Type of service or use
- Overall condition
- Maintenance costs
- Reliability

Because each municipality's fleet and usage is unique, a universal management guide does not exist that can be applied to all types of fleets for every location. An example would be that a police cruiser has a different maintenance demand and useful life than a public works pickup truck. A police cruiser here in Monona has requirements that are different from a rural sheriff's cruiser. Likewise, a dump truck that is not used to haul salt and plow streets during winter cannot be compared to the same piece of equipment in a southern location that does not get snow.

## **Reassignment or Disposal**

Our vehicle and equipment fleet is sized to meet the needs of the department, and to meet the service demands of our residents and businesses. Fleet vehicles and heavy equipment will not be reassigned unless it is used to replace a unit currently assigned in another department. In those instances, the older units will be disposed. A review of the vehicle and equipment replacement schedule will take place annually, and a plan for the reassignment or disposal of vehicles and equipment that have reached their age, and mileage thresholds will be replaced in the next budget cycle. Vehicles selected for replacement will be reassigned, traded in or sold as-is to the public via auction or public bid.

## **Development and Guideline Procedures**

Department staff has inventoried existing vehicles and equipment and have prepared a replacement schedule for all public works vehicles and equipment. The schedule will be updated annually and will be used as the basis for planning for replacement of vehicles and equipment through operating and capital budgets. The vehicle and equipment replacement schedule will include the following information for each vehicle or piece of equipment.

1. Age
2. Miles/Hours
3. Type of service or use
4. Overall condition
5. Maintenance costs
6. Reliability

The guidelines for vehicles considered for replacement are based on vehicles meeting predetermined age and hour/mileage criteria. Additional consideration is given to functionality and overall condition of the vehicle or equipment.

As vehicles reach the threshold miles or age of replacement criteria, a vehicle maintenance evaluation is performed by the public works mechanic. The evaluation form will be provided to the Deputy Director and Director for review and consideration. If the evaluation proves the vehicle would be economical to retain for an additional year, the vehicle will be targeted for retention, or possibly reassigned to a lower use function. Vehicles and equipment will be replaced when they are at the end of their useful life, no longer safe to operate, not reliable enough to perform their intended function, or there is a demonstrated cost savings to the City.

## **Process of Selecting Units to be Replaced**

The fact that a vehicle has reached an age or usage threshold beyond which it is a candidate for replacement does not mean that it automatically should be replaced. Some vehicles do not wear out as quickly as others, however, some vehicles should be replaced sooner than others because they experience above average wear and tear.

In addition to having replacement cycle guidelines the organization should have a decision making process in place to determine which specific vehicles should be replaced. Such processes help to set replacement priorities and to ensure that the most deserving vehicles are replaced with the level of funding available.

Replacement cycles are planning parameters, and as such are predictive criteria used to establish funding requirements. While they are also often used to identify potential candidates for replacement, additional factors need to be considered when developing the list of units that are most deserving of being replaced. These additional factors should include items such as maintenance and repair costs, reliability, type of use, vehicle condition, etc.

For the City of Monona Public Works Department, in addition to using industry replacement standards based on age and use, we will be using the APWA standard point system for evaluation and replacement. Vehicles and equipment will be evaluated by six criteria; age, mileage, type of service, overall condition, maintenance costs, and reliability.

1. **Year of Vehicle:** One (1) point is assigned for each year of chronological age, based on “in-service date” of the vehicle.
2. **Mileage/Hours:** One (1) point is assigned for each 10,000 miles of operation. Hour meter based small equipment is assigned one (1) point for each 325 hours; large equipment is assigned one (1) point for each 750 hours.
3. **Types of Service/Use:** One, three, five (1, 3, 5) points are assigned based on type of service a vehicle provides. For example, a police squad car would be assigned a five (5) because it is a severe duty service vehicle. An administrative sedan would be assigned a one (1) because of light duty service.
4. **General Overall Condition:** This category takes into consideration the condition of the body, rust, interior condition, vehicular accident status, anticipated repairs, etc... A scale from one (1) to five (5) is used, with five (5) being extremely poor condition.
5. **Maintenance Cost:** Points are assigned on a scale of one (1) to five (5) based on the total cost factor. The maintenance cost figure includes all repair and maintenance costs minus any costs associated with accident repairs. A five (5) would be equal to or greater than the original purchase price, while a one (1) would be equal to 20% or less of the original purchase price.
6. **Reliability:** Points are assigned as one, three, five (1, 3, 5) depending on the frequency that a vehicle is in the shop for non-routine repair. A five (5) would be assigned to a vehicle that is in the shop two or more times per month on average, while a one (1) would be assigned to a vehicle in the shop an average of once every three months or less.

It is anticipated that items with the highest point total will be replaced in order, as approved and allocated in the capital budget.

### **Multi Year Vehicle and Equipment Schedule**

The chart that follows represents the vehicle and equipment replacement schedules for the upcoming five (5) year capital budget cycle. These schedules are based on the current replacement values of the individual vehicles and equipment units that are currently included in our fleet. Replacements are based on the year the unit was placed in service plus the unit's useful life. For example, a dump truck with plow assembly that was placed into service in 2000 has a useful life of twelve (12) years and would be evaluated for replacement in 2012.