

It is expected that a Quorum of the Personnel Committee, Board of Public Works, Plan Commission and Administration Committee will be attending this meeting: (although it is not expected that any official action of any of those bodies will be taken)

CITY OF MENASHA

SUSTAINABILITY BOARD

Elisha D. Smith Menasha Public Library

440 First Street

Menasha, WI 54952

Company E Room - Lower Level

February 24, 2022 4:00 PM

AGENDA

A. CALL TO ORDER

B. ROLL CALL/EXCUSED ABSENCES

C. PUBLIC COMMENTS ON ANY MATTER OF CONCERN TO THE SUSTAINABILITY BOARD
(five (5) minute time limit for each person)

D. MINUTES TO APPROVE

1. Minutes of the January 27, 2022 Sustainability Board Meeting

E. ACTION ITEMS

F. DISCUSSION

1. Sustainability Plan, Benchmarking, and Comparison with other communities
 - a. Energy Innovation Grant and Comprehensive Energy Planning
 - b. GTLG
2. Transportation
 - a. Bike Friendly Community Designation
3. Land Use
4. Natural Resources
 - a. 2022 Arbor Day Celebration
 - b. Natural Landscaping & Maintenance
5. Energy
 - a. Streetlight upgrades to LED
 - b. Third Party Financing Solar
6. Water
 - a. Stormwater educational signage
7. Waste
 - a. 2022 Electronics Recycling Event May 7 and Sept 21, 2022
8. Health

G. Future Meeting Dates

H. ADJOURNMENT

"Menasha is committed to its diverse population. Our Non-English speaking population and those with disabilities are invited to contact the Menasha City Clerk at 967-3603 24-hours in advance of the meeting for the City to arrange special accommodations."

**CITY OF MENASHA
SUSTAINABILITY BOARD
January 27, 2022**

Minutes

A. CALL TO ORDER

Meeting Called to order by Linda Stoll at 4:04PM

B. ROLL CALL/EXCUSED ABSENCES

Attending: Kyler Arndt, Kyle Coenen, Austin Hammond, Roger Kanitz, Roni Kaspernek, Kelsey Perry, Linda Stoll, Kathy Thunes

Also Attending: Mayor Donald Merkes, Sandra Dabill-Taylor, Ald. James Taylor

C. PUBLIC COMMENTS ON ANY MATTER OF CONCERN TO THE SUSTAINABILITY BOARD

Sandra Dabill-Taylor spoke regarding the long agenda noting that most items were just for discussion. Specific items addressed included the Energy Innovation Grant application should have included UW-Fox Cities, Village of Fox Crossing, and Neenah-Menasha Sewerage Commission because they have a presence within the City of MJSD, hydro power should be considered for the community, current street lighting isn't sufficient for safety in her neighborhood, and spreadsheet for transportation had too many bike-related items.

Ald. James Taylor spoke regarding hydro power potential at Whiting and Lawson Canal that the City should explore. City should lead by example with electric vehicles and electric vehicle charging stations.

Sandra Dabill-Taylor left the meeting.

D. MINUTES TO APPROVE

None

E. COMMUNICATIONS

1. City of Menasha Sustainability Accomplishments

The City of Menasha Sustainability Board has been active since 2007 and played a role in significant energy reduction in City building and facilities since that time. Projects listed showed over 1 million kwh saved annually. The board has also spearheaded an electronics recycling program diverting waste from landfills, supported additional home recycling pickup, improved raingardens, and advocated for environmentally friendly policies and services in Menasha.

2. WPPI Energy Annual Report

Menasha Utilities purchases its electricity from WPPI Energy, a group of 51 municipal utilities. Power purchased is 40.9% carbon free (renewable or nuclear). WPPI goal is to be 100% carbon free by 2050 with advances in technology. Menasha Utilities customers can purchase additional blocks of renewable energy to offset their carbon footprint.

F. REPORTS

G. ACTION ITEMS

H. DISCUSSION

1. Welcome to new Members

Attendees introduced themselves, backgrounds, and interests in sustainability.

2. Sustainability Plan, Benchmarking, and Comparison with other communities
The recently submitted Energy Innovation Grant will provide benchmarking data for City, Utility, and MJSD facilities including current usage and energy star (or similar) average use for similar buildings. Energy plan will then focus on improvements to current facilities and equipment including vehicles and opportunities to self-generate power. If successful, \$100,000 would be grant funded and the remaining \$40,000 would be split between City, Utility, MJSD, and WPPI.
 - a. [GTLC](#)
Benchmarking categories for GTLC were included in the packet, benchmarking provides opportunities to compare Menasha to our peers in other communities and show comparisons in community desirability. There is a desire to learn from other communities data and share ours.
 - b. [Appleton Climate Action Plan Proposal](#)
Appleton produced a draft plan; there may be opportunities to benchmark or promote.
3. Transportation
 - a. Bike Friendly Community Designation
Menasha was named a bronze level Bike Friendly Community in 2021 by the League of American Bicyclists. Sustainability Board would like to participate in meeting benchmarks provided by the League to reach silver level in 2026. Menasha is a member of the Wisconsin Bike Federation, which helped file the City's application. The City does not have a paid membership in the League of American Bicyclists. The Sustainability Board members collectively requested a listing of requirements to take the city's current Bronze level status to Silver status.
4. Land Use
Menasha recently updated its Comprehensive Plan including the Land Use and Transportation chapters which included sustainability components. The Housing Chapter is scheduled to be updated in 2022. There may be opportunities for collaboration with the Sustainability Board during that process.

Questions if there were opportunities to better integrate natural and protected areas into the fabric of the community and everyday life of residents and visitors.
5. Natural Resources
 - a. 2021 Urban Forestry Grant – EAB Plan
It was noted Urban Forestry is a low cost way to help climate change and reduce the negative effects of heat islands and stormwater while increasing property values and community image. There are existing programs through Menasha Utilities (tree power) that assist in planting trees on private property to reduce energy usage.

EAB plan completed with financial assistance from DNR grant in 2020-21 ash trees either removed or treated. City plans to apply for a grant to produce an Urban Forest Management Plan in the next grant cycle.
6. Energy
 - a. [PWF Solar installation](#)
There was an overview of solar project completed at the Public Works Facility in Fall of 2021 and public web page of production/consumption at the facility. Reduction in solar costs have made ROI on facilities much more attractive with this installation estimated at 10.6 years. There is still sufficient space for a public solar garden on this facility if PSC rates would make it attractive for residents. Current rates have not generated public interest in other communities that they have been installed.

Third Party Financing Solar options

There was an overview of financing options to install solar at City facilities; third party financing allows non-profit entities to benefit from tax incentives on solar that they would otherwise be ineligible for and improve ROI on non-profit or municipal solar installations.

b. Potential Streetlight upgrades

There was an overview on potential streetlight LED conversion for remaining HPS lights. These lights are mostly located on the eastern portion of the City. Payback of 5.68 years was considered positive for the community by those in attendance. Even the overall 9.85 years was considered worthy of additional exploration if funding is available through the WPPI member loan program at 0% interest.

Discussion ensued on potential of solar trail lighting on future projects if the technology has improved to the point of being affordable and providing suitable lighting output.

7. Water

a. Downtown Underground Stormwater treatment facility

The downtown Brin mixed use project has started construction and will feature underground stormwater detention/treatment. This facility will allow for stormwater to be treated effectively while providing parking on the same site maintaining walkability of the downtown. Completion is set for spring of 2023. Being that this was a new process for stormwater, educational signage would be appropriate to better inform the public.

b. Stormwater educational signage

Education is a portion of the City's permitting process for stormwater regulation. Signage at visible locations along the Province Terrace Trail and boardwalk will allow for pedestrians to gain knowledge of three processes (natural wetlands, rain gardens, and wet ponds). Heckrodt already has similar signage to the sample draft signs included. Sample draft signage will be reviewed to provide consistent information at both locations. Final draft signage will be reviewed at a future Sustainability Board meeting before installation.

There was a desire to include a stormwater education panel on the 2022 City calendar.

8. Waste

a. 2021 Refuse and Recycling tonnage

Recycling and Refuse totals and percentages diverted remain fairly constant. Future discussion on strategies to increase diversion percentage to State average of 29%.

b. 2021 Electronics Recycling Event

Participation and quantities remain similar to fall 2019 event. Location at the Public Works Facility worked well and Board recommended to continue at that location. Sustainability Board should review notification list to encourage more involvement as contacts have changed.

c. 2022 Electronics Recycling Event May 7 and Sept 17, 2022

Motion by Kyle Coenen, second Linda Stoll to schedule the 2022 Electronics recycling event on Saturday May 7, and Saturday September 17, 8AM – Noon at the Menasha Public Works Facility.
Motion carried.

d. 2022 Spring Cleanup FWWA May 7, 2022

Fox Wolf Watershed Alliance has an annual clean-up day in early May. There could be opportunities for expansion in areas around the City that are not waterfront or to partner with neighborhood groups.

e. America Recycles Day November 15, 2022

This day provides the city with an opportunity to promote recycling and education.

9. Health

Health, Housing, Neighborhoods, and Economic development are part of the three-legged stool of sustainability. Programs such as the Strong Neighborhoods program would be part of this category.

Upon review of current efforts of the City and interests of the Board, recommended topics for further discussion and action at future meetings included:

Energy reduction/benchmarking, bike friendly designation, natural landscaping, maintenance of greenspaces and natural areas, stormwater education, urban forestry.

I. Future Meeting Dates

Meetings will be on the fourth Thursday of the month at 4PM at Menasha City Center. A calendar will be provided to members.

J. ADJOURNMENT

Motion by Kathy Thunes, second Austin Hammond to adjourn at 6PM

Motion carried



Energy Innovation Grant Application

January 14, 2022

EXECUTIVE SUMMARY

Menasha is looking to engage in a Comprehensive Energy Study that would be created in partnership with the City of Menasha, Menasha Utilities, the Menasha Joint School District, and the community that we serve. Providing this grant would allow common goals to be set, identify innovative solutions to further reduce energy usage and greenhouse gas emissions, and educate residents/businesses how to best use current and new programs to reduce their own energy use.

- **Project Description:** Creating a Comprehensive Energy Plan is our community's next step in the process of meeting our energy goals for today and into the future. While the city, school district and utility have made progress through their own efforts, it is important to collaborate on a plan that will meet the needs of the community at large. The Plan would include an evaluation of current energy use and sources for facilities and fleets, explore renewable energy generation options, and expand our energy efficiency initiatives internally as well as programs available to our customers, and creation of long-term community-wide energy goals. This plan would include a comprehensive energy audit that seeks to identify all cost-effective investment opportunities through a combination of engineering analysis of energy-using systems and economic analysis of potential energy saving measures.
- **Key Partners and Stakeholders:** The City of Menasha, Menasha Joint School District, Menasha Utilities, WPPI Energy and Menasha Sustainability Board are collaborating on this project to ensure stakeholders are involved in the development of the Comprehensive Energy Plan.
- **Objectives and Metrics:** Given the City, Utility and School District all have a role in local government we feel we need to do our part in reducing the community-wide emissions. Energy-efficiency has been the most cost-effective option in the past and we would like to look at additional options moving forward that can further advance those goals at the municipal and community level. Menasha is a diverse community, we see that as an advantage mixing different cultures, ideas, and income levels. The economic impacts need to be taken into consideration to ensure they are mutually beneficial in accomplishing the goals and not largely impacting one group, the taxpayer or ratepayer. Community engagement throughout this process is important to best meet their needs as well as the goals locally and at the state level.
- **Reference Material List:**
 - Resolution R-21-08 Resolution Supporting the Creation of Office of Energy Independence
 - Resolution R-23-09 Implementing Community-Wide Energy Program
 - Resolution R-24-19 Continued Commitment of Municipal-Wide Energy Management Policy
 - City of Menasha 2021-2041 Comprehensive Plan
 - Menasha Joint School District Policy on Conservation of Natural and Material Resources
 - 2021 Smart Energy Provider Application
 - WPPI Energy At A Glance
 - Data from Customer Studies conducted for Residential, Small, Mid and Large Business Customers

INTRODUCTION

The City of Menasha, Menasha Utilities, and the Menasha Joint School District have a unique relationship of shared and contracted services among the three parties. The District and City share a joint administration building owned by the District. The three parties share fleet management and maintenance at the City's Public Works Facility. The City and District share health services managed by the City, the District contracts with the City Police Department to provide School Resource Officers, and the District partners with the City for winter salt purchases and storage. The Utility and City have partnered to replace all lead water laterals in the community and convert city streetlights to LED. All the entities partner with WPPI Energy for technical assistance with energy management.



Heckrodt Wetland Preserve Solar PV System & EV Charger

All three entities have worked on sustainability measures; however, they are at different points in data collections and implementation of these initiatives. Menasha is looking to engage in a Comprehensive Energy Study that would be created in partnership with the City of Menasha, Menasha Utilities, the Menasha Joint School District, and the community that we serve. Providing this grant would allow common goals to be set, identify innovative solutions to further reduce energy usage and greenhouse gas emissions, and educate residents/businesses how to best use current and new programs to reduce their own energy use.

Since 2009, the City of Menasha and Menasha Utilities committed to being an environmentally responsible Utility, dedicated to improving global and local quality of life through active stewardship. Our commitment includes promoting energy conservation and recycling, development and implementation of mutually beneficial renewable energy and energy conservation programs and projects, and educational activities within the community of Menasha to lead by example toward this initiative.

In 2019, Governor Evers issued an executive order relating to clean energy in Wisconsin and ensuring electricity consumed in the state will be carbon-free by 2050. WPPI Energy, our power provider, has committed to being carbon free by 2050. Additionally at the local level we feel we need to do our part in reducing the community-wide emissions. While energy-efficiency continues to be the most cost-effective option, innovative programs and new technological advancements need to be explored to reach these goals at the municipal and community level.

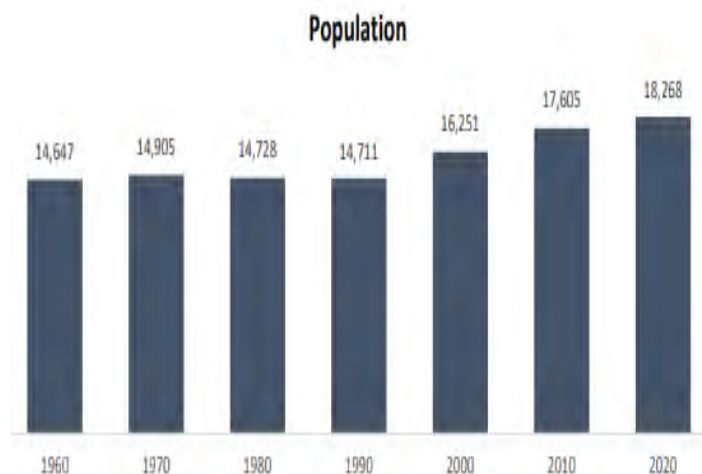
The economic impacts of new projects and programs need to be evaluated to ensure they are mutually beneficial in accomplishing the goals and not largely impacting the taxpayer, ratepayer or disproportionately, affecting a small group. The low-income population are not typically thinking of the future but rather about today and we need to make sure the programs support them. Community engagement throughout this process is important to best meet their needs as well as the goals locally and at the state level.

CITY OF MENASHA



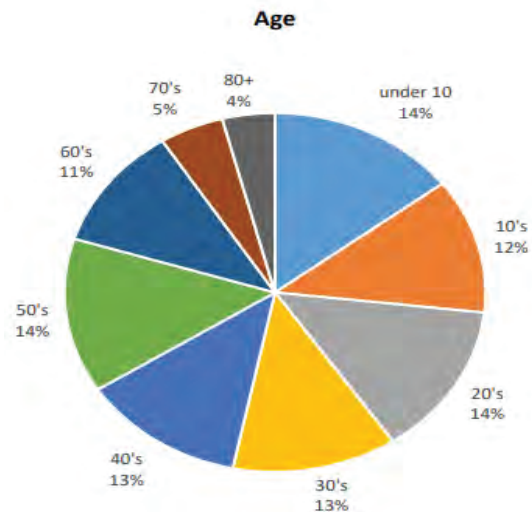
City Public Works Facility Solar PV System

Sustainability has been an important consideration in Menasha for nearly two decades. Menasha passed a resolution in 2007 to create a Sustainability Board to guide implementation of sustainability and energy efficiency measures. In 2008, the City of Menasha supported and adopted the 25x25 goals and became a community partner with the Office of Energy and Independence. We supported the mission to generate 25% of the state's electricity and transportation fuels from renewable energy sources by 2025, capture 10% of the emerging bio industry and renewable market by 2030, and lead the nation in groundbreaking research that will make renewable energy more affordable and create good paying jobs. With this initial resolution there was a commitment to reduce demand for



Nestled in the heart of the Fox Cities, the City of Menasha has created a sense of place that attracts people from around the region with friendly neighborhoods, unique businesses, neighborhood schools, major employers, and exceptional recreational opportunities. Menasha leads in providing quality services, low-cost electric rates, progressive public safety, and lifelong learning opportunities. Incorporated in 1874, the City is comprised of 7.76 square miles with a population of 18,268. Menasha has the most publicly accessible waterfront in the Fox Cities promoting itself as “Your Place on the Water”.

Demographics



electricity, water, and natural gas by 10%. This municipal wide energy management policy was reconfirmed in 2019 with a goal to reduce energy by 5% within the next 5 years.

The 2008 Comprehensive Plan included sustainability as a main component, and the 2021 update continues that emphasis. Energy efficiency initiatives, including street lighting, facilities, and solar have reduced the City's electrical use by over 1,000,000 kWh annually. As a community we have achieved sustainable outcomes through a

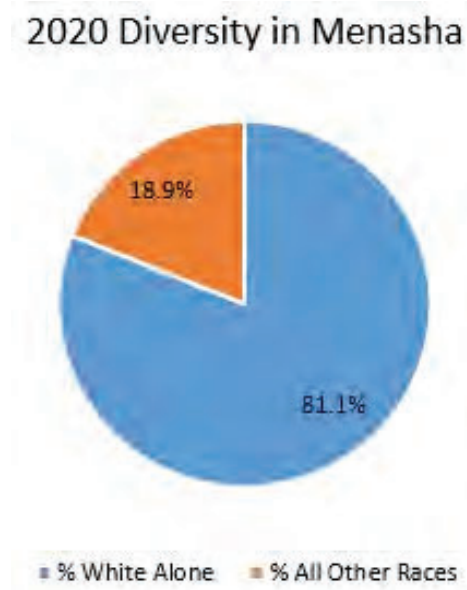
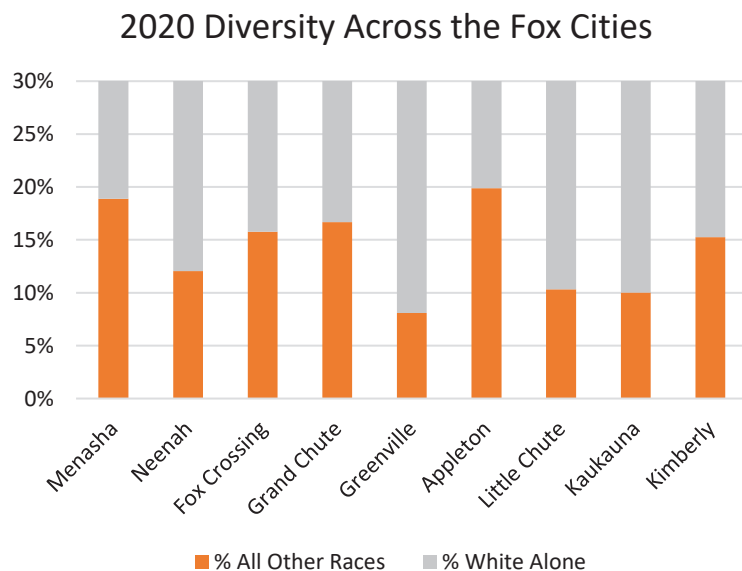
focus on efficiency, including the efficient use of land and infrastructure and the efficient use of energy. Those efforts have improved the capacity to sustain our way of life and intend to improve sustainability and resilience in the future.

Menasha is a diverse community which we see as an advantage, mixing different cultures, ideas, and incomes. While the Fox Cities as a whole is approximately 84% white, Menasha is home to a minority population of approximately 19% (2020 Census). Being that median income is approximately \$10,000 lower than the state average, we strive to ensure that there is equity in the programs and services that we offer. This extends to equity in the economic impacts of the carbon-free goals on the community. The median age of a home in Menasha is over 50 years, giving numerous opportunities for our residents to utilize programs to save energy and money.

Local to national demographic comparisons (2010 US Census Bureau):

| Demographic Indicators | City | County | WI | US |
|--|----------|----------|----------|----------|
| Hispanic population | 8% | 4.10% | 6.80% | 18.00% |
| Non-white population | 17% | 11.40% | 18.70% | 39.30% |
| Persons with Disabilities | 13.90% | 11.90% | 11.70% | 12.60% |
| Female households' w/children | 12.10% | 9.50% | 9.20% | 9.90% |
| Unemployment rate | 4.40% | 3.10% | 3.60% | 5.30% |
| Poverty rate (individuals) | 12.10% | 11.00% | 11.30% | 13.40% |
| Poverty rate for children | 18.30% | 14.10% | 14.90% | 18.50% |
| Poverty rate for female households' w/children | 39.00% | 31.20% | 33.40% | 36.10% |
| Poverty rate (disabled persons) | 25.80% | 20.50% | 20.10% | 19.40% |
| Per capita income | \$33,092 | \$32,571 | \$33,375 | \$34,103 |
| Housing built 1979 or earlier | 61.30% | 60.50% | 60.00% | 53.60% |

Fox Valley demographic comparisons:



MENASHA JOINT SCHOOL DISTRICT

Menasha Joint School District provides pre-kindergarten through grade 12 educational programs that offers opportunities to students to maximize individual potential in the City of Menasha, Village of Fox Crossing and City of Appleton (in Winnebago, Calumet, and Outagamie counties). Students will gain knowledge and skills to equip them with the ability to function as lifelong learners and responsible citizens in their communities.

The Vision of Menasha Joint School District:

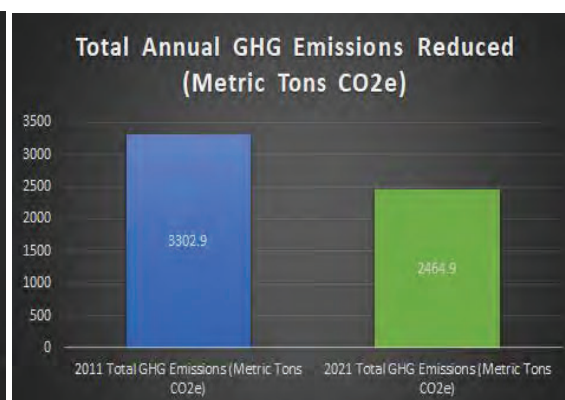
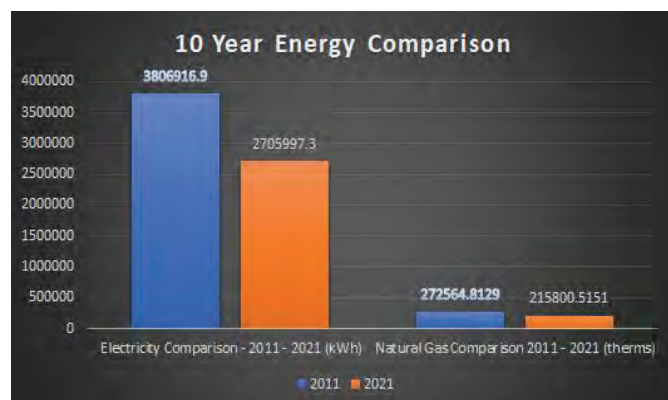


Maplewood Middle School Solar PV System

AN EDUCATIONAL COMMUNITY COMMITTED TO REACHING FOR EXCELLENCE

Our community consists of all district employees, students, parents, businesspeople and the community at large. As an educational community reaching for excellence, we will develop students' communication, mathematical, and technological skills; self-awareness, emotional adjustment, self-discipline, and other intrapersonal skills; self-discipline to function independently; interpersonal relationship skills; leadership skills; citizenship skills; decision making, problem solving, and other critical thinking skills; career planning skills; and fine arts appreciation skills. As an educational community reaching for excellence, we will provide students with essential knowledge from a comprehensive curriculum; teachers who are well trained and who receive ongoing training; learning opportunities from community resource persons; learning that has practical application; opportunities for advanced academic courses; opportunities for advanced technical training; and learning opportunities from the world of work.

Over the past 10 years, Menasha Joint School District has worked closely with energy partners like Menasha Utilities, WPPI and Focus on Energy as we worked to continuously improve our school district's overall energy conservation. We reduced our electrical load by over 1,000,000 kWh and 850 therms of natural gas while still increasing the district over 80,000 square feet during the last 10 years. Our school district's greenhouse gas emissions have reduced over 2200 metric tons which is the equivalent to over 3000 acres of carbon sequestered in a year.



Menasha Joint School District's commitment to energy conservation continues into the future by setting goals to reduce energy consumption annually at a minimum by 10%, working to achieve Energy Star rating at every facility, and pursuing the latest in green energy technology. Always looking at ways to reduce costs and utilize our facilities in the most efficient manner.

We will achieve this by using a program of energy management that looks at all aspects of a building's energy usage. Major building components, facility use, activity scheduling, and other items that impact the district's overall energy costs are analyzed in an effort to reduce our annual energy expenditures and improve our facilities.

Specific District Goals:

- To reduce energy costs district-wide through conservation efforts, renewable energy systems such as solar, cooperative partnerships, and energy savings projects.
- Research future energy savings projects.
- Continue partnerships with local utility providers and municipalities.
- Provide safe, comfortable learning and working environments for all of Menasha Joint School District students, staff, and building users.
- Measure and track energy performance quarterly and annually

The district consists of the following schools:

- Menasha High School (Shelter location in emergencies)
- Maplewood Middle School
- Banta Elementary School
- Butte des Morts Elementary School
- Clovis Grove Elementary School (Shelter location in emergencies)
- Gegan Elementary School
- Jefferson-Nicolet Elementary School
- Fox Valley Virtual School

MENASHA UTILITIES

Menasha Utilities is a municipally owned and operated electric and water utility, serving more than 9,000 customers in Menasha. Menasha is one of the largest municipal electric utilities in the state based on load and currently the 8th largest based on customers served. We strive to provide low-cost, reliable service with a community-focused, personal touch. We are friends and neighbors who share values and understand the local needs.

Menasha Utilities was founded in 1905. While a lot has changed over the past century, the focus of the utility has not. Today, we still offer our customers some of the lowest electric rates in the area - rates significantly lower than those in territories that are served by most investor-owned utilities. And, since we live and work in the community, we provide reliable energy with superior customer service.

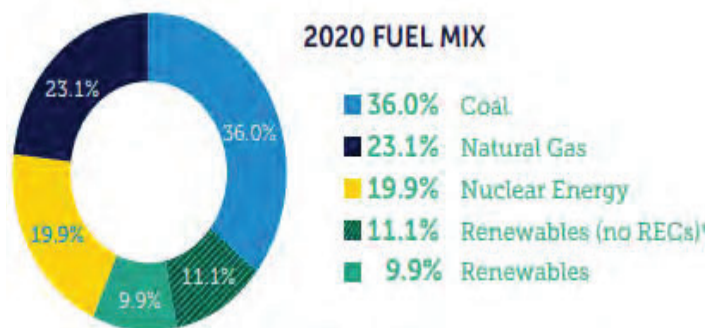
Menasha Utilities also provides our customers with clean, high-quality water that meets or exceeds all state and federal standards. Our water quality and capacity are monitored every day by well-trained system operators.

Menasha Utilities has been recognized by the American Public Power Association as a 2021 Smart Energy Provider. This designation is for utilities that show commitment to proficiency in energy efficiency, distributed generation, renewable energy, and environmental initiatives that support a

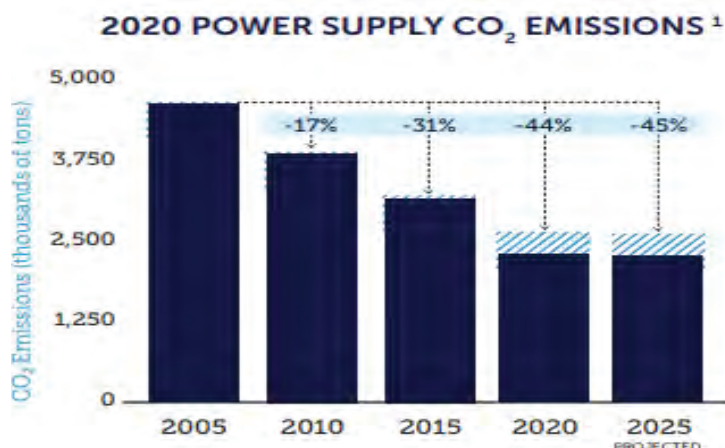
utility's mission to provide low-cost, safe, and reliable electric service. Menasha first received this designation in 2019 and the certification is good for 2 years. Menasha is continuing to lead the way in supporting our community's responsible energy use by offering great programs to our customers to help them save money and reduce the collective footprint on the environment.

WPPI ENERGY

Member-owned, not-for-profit WPPI Energy serves 51 locally owned electric utilities. Together, WPPI members have built a diverse, competitive, and responsible power supply. They share advanced technologies and forward-thinking services, and they speak with a unified voice for effective energy policy advocacy. Menasha is a full requirements member for power supply with WPPI Energy and makes up 10% of the demand of the entire WPPI power supply system.



The 2022-2026 WPPI Energy Strategic Plan includes climate goals and policy. WPPI is targeting net-zero carbon electricity by 2050 which is consistent with Wisconsin's 100% carbon-free goal. In setting this goal WPPI recognizes that costs are important, as is ensuring reliability. Reaching this goal will require continuing improvements in technology. Based on the current initiatives WPPI will achieve approximately 50% carbon reduction by 2030; two of the most recent major generation projects are from renewable sources.



COMMUNITY ENERGY MAKEUP

With our power supply makeup of 19.9% nuclear, 11.1% renewable (Renewable Energy Certificates not claimed) and 9.9% Renewable (with RECs retained), Menasha is currently being served 40.9% carbon-free. With the addition of Point Beach Solar in 2021 this will increase the renewables by 4%. In addition, our customers have voluntarily purchased 778 of renewable energy blocks (233,400 kWh) to offset their usage, showing support for greener energy options. We also have 25 solar PV installations in Menasha, totaling 261.42 kW (AC); the vast majority being owned by residential customers.

| Distributed Generation Inventory | | | | | |
|----------------------------------|------------|-------------|-----------------------|-----------------------------------|----------------------|
| Customer Name | Rate Class | DG Resource | Nameplate Rating (kW) | Tariff | Interconnection Date |
| MENASHA | | | | | |
| Maplewood School | C | Solar PV | 1.05 | Net meter-Pgs-1 | 2004 |
| Commercial | C | Solar PV | 19.2 | Net meter-Pgs-1 | 11/24/2010 |
| Non-Profit | C | Solar PV | 5.06 | Net meter-Pgs-1 | 12/17/2010 |
| N/M Fire Station | C | Solar PV | 5.28 | Net meter-Pgs-1 | 11/28/2011 |
| Non-Profit | C | Solar PV | 10.35 | Net meter-Pgs-1 | 5/17/2018 |
| Heckrodt Preserve | C | Solar PV | 19.6 | Net meter-Pgs-1 | 8/15/2018 |
| Non-Profit | C | Solar PV | 18 | Net meter-Pgs-1 | 10/15/2021 |
| City Public Works | C | Solar PV | 86.4 | Pgs-2 | 10/1/2021 |
| 17 Total Residential | Rg | Solar PV | 96.48 | Solar Buyback and Net meter-Pgs-1 | 2010-2022 |



Menasha Commercial Customer Solar PV System

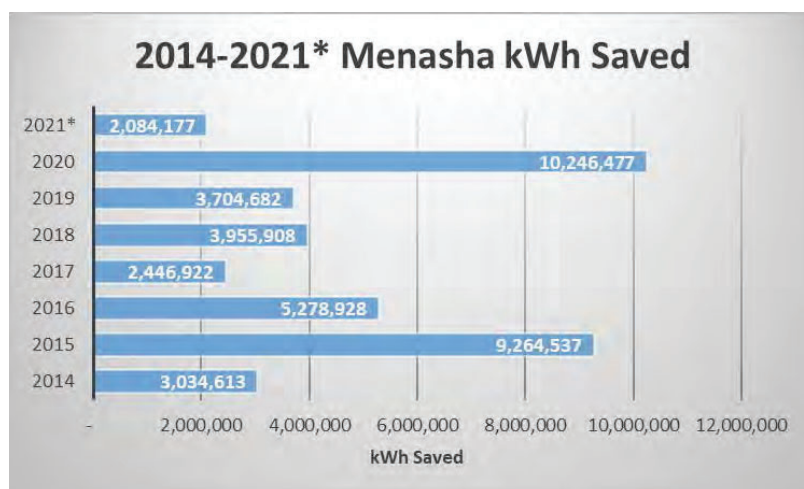
ENERGY TEAM

The Joint Energy Team that was established for this project includes representation from all partners on the leadership and technical side:

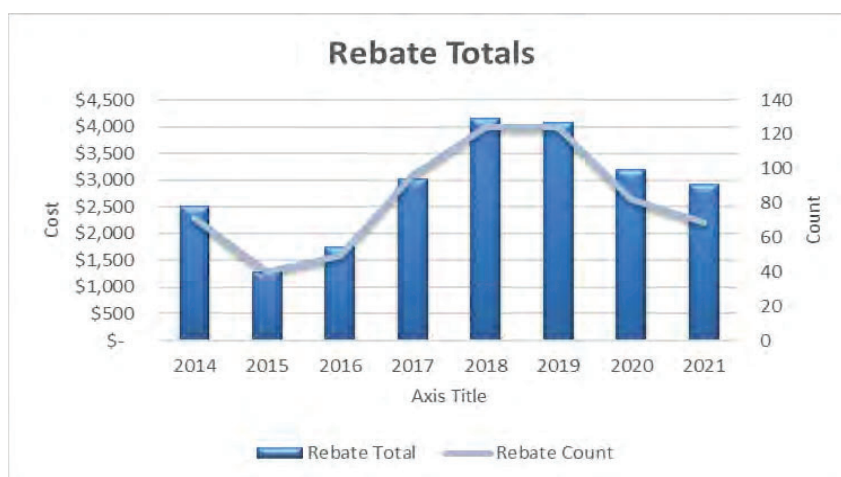
Donald Merkes, City of Menasha, Mayor
Megan Sackett, City of Menasha, Director of Parks, Recreation, Forestry, Cemeteries and Facilities
Brian Haessly, City of Menasha, Electrician and Facilities Technician
Brian Adesso, Menasha School District, Director of Business Services
David Elliott, Menasha School District, Supervisor of Buildings & Grounds
Melanie Krause, Menasha Utilities, General Manager
Steve Grenell, Menasha Utilities, Engineering Manager
Lisa Miotke, WPPI Energy, Energy Services Manager
City of Menasha Sustainability Board

ENERGY GOALS ACCOMPLISHED

For many years the City, School District, Utilities, and the community have been making strides to increase efficiency and reduce energy consumption in their homes, business, and schools. Since 2014 over 40,000,000 kWh has been saved by customers who have installed measures such as LED lighting, Energy Star rated equipment, high performance motors and drives, HVAC equipment and solar PV installations.



Menasha Utilities offers Energy Star Appliance, Central Air Conditioner Tuneup, and TreePower! rebates and our residential customers take advantage of them each year. In 2021 a new Heat Pump Water Heater rebate is being offered to encourage adoption of newer technology that offers higher efficiency alternatives.

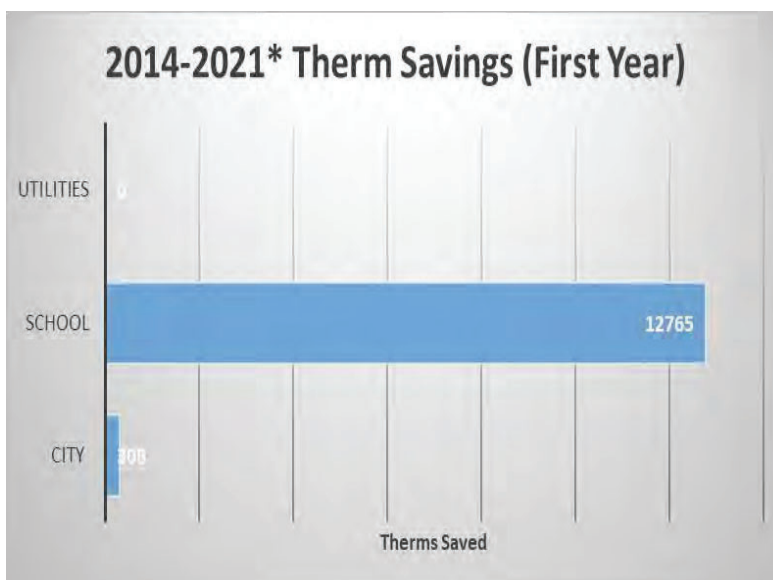
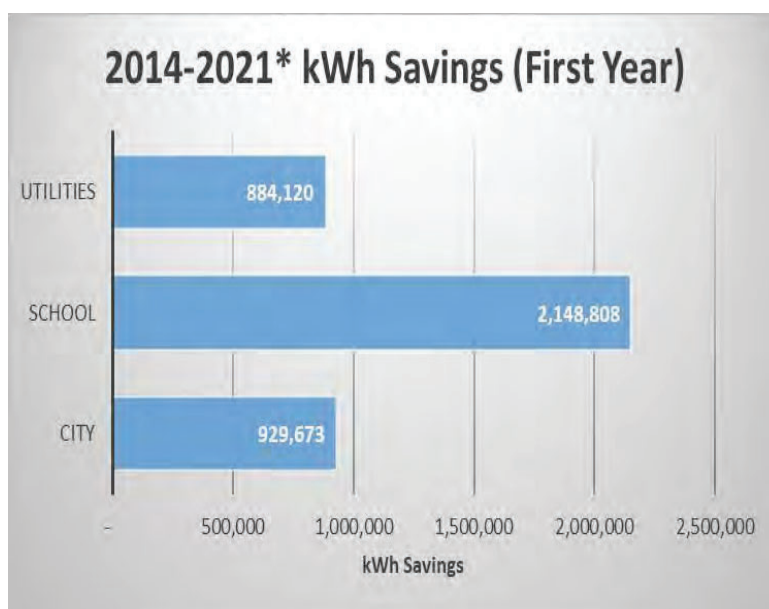


*2021 data not fully reported.

The city, utility and school district have steadily been making progress on their efficiency goals by implementing many projects at their facilities over many years. The main focus has been converting a variety of older and inefficient lighting to LED (Light Emitting Diode), adding more efficient HVAC equipment and building controls. The School District and City have utilized a New Construction Design assistance program on multiple buildings which worked with 3rd party engineers to review plans and adopt recommended equipment that was more efficient than the plans. Adoption of these

recommendations has saved energy from the start. Since 2016, the city and utility have worked together on a concerted effort to transition high pressure sodium streetlights to LED in the city. Most of the energy savings have been electric, but the district has done multiple projects recently with estimated natural gas savings of 12,765 therms.

In addition, the city has been proactive in installing solar photovoltaic systems at the Neenah-Menasha Fire Station #36 and the newly constructed Public Works Facility and is evaluating additional locations. The school district installed a teaching/demonstration solar PV and weather station at the Maplewood Middle School, which is used by educators at the school. Menasha Utilities/WPPI Energy have provided incentives to a number of non-profit organizations for the installation of solar PV. The district would like to evaluate options for a 1 MW solar PV system with battery backup at the High School in the future. Since the High School is designated as a shelter during an emergency, looking at resiliency through renewable energy with battery backup is important for the community. The City's Public Protection Facility is also a prime candidate for battery backup with its emergency response focus.



CUSTOMER BASE

The Electric Utility has 9,319 customers. One large industrial customer makes up 41% of the operating revenue, 83 additional industrial customers make up 34%, and 9,235 residential and commercial customers make up 25%. One of the Utility key strategic initiatives is to maintain energy efficiency programs, conservation and renewable energy programs and look to diversify the programs and rebates each year to benefit all customers.

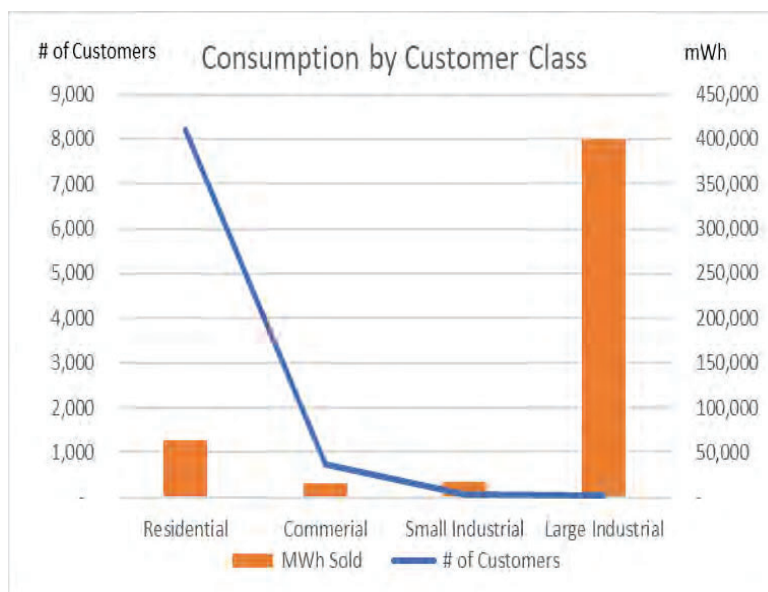
Menasha Utilities strives to assist our customers with their goals, including keeping energy costs manageable by reducing waste through energy efficiency, exploring renewable energy options, and assessing available alternative rate options. We also partner with Focus on Energy to bring many more program options to them if they choose. Some of our programs include:

Residential: Annual Home Energy Report, home energy assessments, rebate programs, Time of Use rate, Electric Vehicle charger incentive (EVCI), educational opportunities.

Commercial: Matching incentives through Main Street Efficiency program, facility assessments, New Construction Assistance (NCDA), Shared Savings program (SS), EVCI, educational opportunities.

Schools and Government: Energy Management for Schools, Utility & Municipal Buildings incentives, RFP for Energy Efficiency grant, RFP for Renewable Energy for Nonprofits grant, NCDA, SS, EVCI, educational opportunities.

Industrial: Matching incentives, RFP for Energy Efficiency, Study Grant, NCDA, SS, EVCI, capacity programs, New Load Market Price tariff, and educational opportunities.



Menasha Non-Profit Commercial Customer Solar PV System

WPPI Energy has conducted surveys each year for the various customer classes to gauge the importance of energy related goals, interest in programs and services, interest in energy efficiency, and participation in these programs. These surveys are conducted on behalf of Menasha and other members and compares the WPPI communities to the other utilities nationally. From these results we can see what the levels of participation have been for energy efficiency and that there is interest from our customers in additional programs and services to help them meet their own energy related goals.



University of Wisconsin Fox Cities Solar PV System

EDUCATION

Engaging and educating our customers and the community has always been one of our key objectives especially when it comes to sustainability and efficiency initiatives. Like many other utilities we have information available to our customers on our website, bill stuffers, and in printed form. Additionally, our customers annually receive a Home Energy Report to explain their energy and water usage and how they compare to the average in Menasha. This report also includes information on various programs and services that we offer. Each year we celebrate Public Power Week by hosting an event to provide energy efficient products and educational opportunities. We have also participated in various community functions like the Farmers Market and Library Educational Series to help get more information out to our customers.

EDUCATIONAL KIOSK

Menasha Utilities has partnered with UW-Fox Cities to create interactive educational kiosks and an online portal for students and the community to use at various locations around the City of Menasha including the library, schools, university, utility building and Heckrodt Wetland Preserve. We envision the kiosks to include renewable energy information for the public systems in the City of Menasha. The software/hardware development has been completed and any new solar systems will be added as they come online. In 2022, the intent is to complete the design and deploy the initial kiosk at the UW Campus Barlow Planetarium and then expand to other locations. In the future other renewable/carbon-free data and information will be added. Our objective of this project was to bring more awareness to our community on the benefits of renewable options and look to expand upon this as we develop our Comprehensive Energy Plan.



PROJECT DESCRIPTION

Creating a Comprehensive Energy Plan is our community's next step in the process of meeting our energy goals for today and into the future. While the city, school district and utility have made progress through their own efforts, it is important to collaborate on a plan that will meet the needs of the community at large. The Plan would include an evaluation of current energy use and sources for facilities and fleets, explore renewable options, expand our energy efficiency initiatives internally as well as programs available to our customers, and creation of long-term community-wide energy goals. This plan would include a comprehensive energy audit that seeks to identify all cost-effective investment opportunities through a combination of engineering analysis of energy-using systems and economic analysis of possible energy saving measures. The details of the plan would include:

Energy Plan

A consultant will facilitate stakeholder engagement between the City of Menasha, Menasha Utilities, and Menasha Joint School District. The primary role will be facilitating meetings with key stakeholders to assess and prioritize different approaches to achieving Menasha's energy goals.

- **Needs Assessment and Prioritization:** The workshop will identify and document stakeholder barriers, priorities, and roles as they relate to the comprehensive energy plan. The consultant will also provide an introductory and educational session on carbon reduction opportunities and best practices across the U.S. to consider as part of the comprehensive energy plan. The outcome of this workshop will be to provide a starting point for a draft comprehensive energy plan.
- **Plan Development:** The consultant will facilitate a workshop to refine and iterate on the comprehensive energy plan. The workshop objective is to align on the prioritized list of projects and future utility programs and identify next steps for implementation (if consensus is achieved). The plan will include recommendations for projects that are feasible in the near term, next steps for implementation, as well as the timeline for achieving long term energy goals.

Facility Audits

Facility wide analyses that culminate in quantification of project costs, prioritization, and critical maintenance needs.

- **Analyze energy use** and building characteristics for preliminary energy use analysis. This involves analysis of historic utility use and cost and development of the energy utilization index (EUI) of the buildings and to compare the buildings' EUI to similar buildings (benchmarking).
- **Identify possible Facility Improvement Measures (FIM)** and critical maintenance needs--Based on energy usage, plan review, maintenance logs, past projects, safety issues, staff input etc., identify possible projects and critical maintenance needs.
- **Detailed audit of facility--walkthrough analysis.** This assesses each building's current utility cost, condition, safety and compliance issues, and operations efficiency by analyzing and carefully surveying each building. This analysis identifies low-cost/no-cost measures, capital improvements, and pressing maintenance tasks that merit further consideration.

- **Confirm FIMs** using survey and analysis, efficiency and infrastructure, and potential costs and savings. This includes a more detailed building survey and analysis, including a breakdown of energy use in each building, a savings and cost analysis of all practical measures that meet the City/District's needs and constraints, and a discussion of any effect on operation and maintenance procedures. It also lists potential capital-intensive improvements that require more thorough data collection and analysis, along with an initial judgment of potential costs and savings.
- **Gather any needed additional information** from vendors and/or facility managers including prioritizing and providing detailed analysis of capital-intensive modifications and maintenance. This step focuses on potential capital-intensive projects identified earlier in the process and involves more detailed field data gathering and engineering analysis. It provides detailed project cost and savings rating with a level of confidence high enough for major capital investment decisions.
- **Create Report and Present Report to City/Utility/District.** The Auditor will bring in subject matter experts (i.e. electrical, technology, environmental health and safety), provide extensive photographic documentation, and perhaps of most value, create a body of detailed, prioritized recommendations in a flexible format tool that can pivot based on District, Board and community decisions regarding how to proceed, whether it be in the future annual capital allocations, other funding opportunities, and/or referendum.



Neenah/Menasha Fire Station Solar PV System

OPPORTUNITIES TO BECOME A CARBON FREE COMMUNITY

Distributed solar and/or wind – Currently we have solar on the City Public Works facility, Neenah/Menasha Fire Station #36, Maplewood Middle School, and at Heckrodt Wetland Preserve. Evaluate other Municipal and School District facilities that have larger loads and the economics of the capital investment make sense.

Energy Efficiency Programs – Currently we have many programs for our different rate classes as well as owner occupied/tenant customers and partner with Focus on Energy and WPPI Energy to maximize the return on investment to our customers. We would look to explore additional programs and services in the future and ensure equitable benefits to our diverse community.

Heat Pump – Explore feasibility of air source and ground source heat pump technologies.

Renewable energy certificates – We will work with WPPI Energy and explore the options of purchasing REC's at the wholesale level or assist larger industrial customers with an interest in acquiring them.

Community solar gardens – There were 2 WPPI member utilities that did a Pilot program previously. Moving forward this option may have additional advantages to customers if the economics improve.

Renewable Energy blocks – In 2021 we made changes to the tariff structure that the Utility has had in place for many years. We could look to better promote this program to our customers and if there are other benefits to be gained in the future.

Renewable/Carbon-free power supply – We are one of the largest members in WPPI Energy and have a say in the makeup of our power supply. If there are changes in the portfolio that is directly passed back to Menasha. Additionally, if we want to explore other options to progress faster than the state-wide goal than we can work directly with our provider.

Fleet Management – Evaluate the municipal and school district fleet to determine best options for replacement to help accomplish the carbon-free goals. Support programs and incentives for our customers that are looking to purchase Electric Vehicles.

Communitywide Transportation Opportunities – Explore ideas identified in the City 2041 Comprehensive plan.

EV Charging Stations – With the increase in electric vehicles an evaluation will need to be done on public access to EV charging and the best way to meet the needs of the community.

Batteries/Storage – Explore opportunities separately or in conjunction with solar PV projects to determine if there are benefits to be gained including Demand Side Management, peak shaving, and increased resiliency.

Other Technologies – Technological advancements are happening every day and we want to be flexible in our plan to take advantage of opportunities that make sense for Menasha. Between 2022 and 2050 there will be other technologies or opportunities that we will continue to explore.

IMPLEMENTATION

Phase 1: Completion of the Comprehensive Energy Plan in 2022. Developing project lists and recommendations and rolling information out to the community.

Phase 2: Start implementation in 2023 of Lead by Example municipal or school initiatives for infrastructure and fleet management that make economic sense. Look to better educate our customers about the energy efficiency and renewable programs that we offer. Continue to explore new programs, incentives, tariffs for customers in our community.

Phase 3: Review and evaluate what initiatives were implemented to determine the progress that has been made. Continue to explore other carbon-free initiatives as technology advances.

FINANCIAL LEVERAGE AND ECONOMIC IMPACT

Receiving this grant will allow the audits, benchmarking, and energy plan development to be done concurrently with facilitation from consultants with expertise within a contracted period. We currently have some basic level assessments that were completed by Focus on Energy however not to the extent that is being proposed in this Comprehensive Energy Plan. Currently, benchmarking through Energy Star has been done only for the school district buildings. Adding utility and city building tracking needs to be established to better evaluate and track the impacts of the projects. The development of the Energy plan would be worked on by the Energy Team and some funds could be budgeted each year by the City, Utility and School to help evaluate various options as well as develop the plan for the future.

BUDGET JUSTIFICATION AND COST SHARE

The budget consists of two components: the comprehensive energy audit and the development of the energy plan. We spoke with several consultants to get quotes and scope of services to determine the pricing however a selection was not made. The energy audit would be based on the square footage of the buildings we wanted to include for the City/Utility/School. Our intent is to go out more formally for a RFQ for these services if we are successful with this grant.

| | |
|-------------------------------------|-----------------|
| Comprehensive Energy Audit | \$75,000 |
| Development of the Energy Plan | <u>\$65,000</u> |
| Total Estimated Contracted Services | \$140,000 |

We are seeking \$100,000 from the grant with the remainder of the contracted costs to be paid by the City of Menasha, Menasha School District, Menasha Utilities and WPPI Energy. Additional contributions not detailed above would be made in the form of personnel time and fringe benefits of the members of the energy team.

Transportation

Require bike parking for all new non-residential and multifamily uses.

Set standards for placement and number (as function of intensity of use) for bike parking spaces.

Commuter bike routes identified and cleared.

League of American Bicyclists certification. (Bronze 5, Silver 7, Platinum 10)

Funded and operating SRTS program (or functional equivalent) covering at least 10 percent of students.

Site schools in the Comprehensive Plan for accessibility with existing or new bicycle and pedestrian infrastructure

Conduct annual survey of students' mode of transport to school.

Require large employers seeking rezoning to set a price signal (cash-out or charge).

Require large employers seeking rezoning to provide subsidized transit.

Require large employers seeking rezoning to provide a TDM plan that would reduce trips by 20 percent over business as

Track VMT or traffic counts and report on efforts at reduction (including those on this list).

Eliminate parking minimums from non-residential districts.

Set parking maximums at X per square feet for office and retail uses.

Scheduled transit service at basic level (hour peak service within half-mile of 50 percent of addresses).

Scheduled transit service at enhanced level (half-hour peak service within 75 percent of addresses).

Develop and fully fund comprehensive maintenance program for existing roads.

Charge impact fees for new roads.

Calculate lane-miles per capita for arterials and collectors, and show reductions

Prepare a plan identifying disconnections in bike and pedestrian networks, prioritizing fixes and identifying potential funding sources for the most important projects.

Any proposal to add lanes to a two-lane roadway shall be evaluated for a center turn lane, the preferred option over an expansion to four lanes.

Identify four-lane roadways with fewer than 20,000 vehicles per day (AADT) and evaluate them for "road diets" with bike lanes or on-street parking

Electric vehicles in gov't fleets - 2% of fleet=5 points. 5% of fleet=10 points.

Allow NEVs on appropriate roadways.

Provide public charging stations

Ban idling (more than 5 minutes) with local government vehicles.

Ban idling (more than 5 minutes) community-wide.

Establish a pedestrian safety task force.

Establish an expanded public transit that serves commuters from all neighborhoods and major parks and recreation facilities, and has racks on vehicles for carrying bicycles.

Require sidewalks in new residential areas and establish a policy for adding sidewalks, as appropriate, in areas built out without sidewalks.

Implement a Complete Streets policy.

Provide an on-street and/or off-street trail network connecting recreational areas in the community (e.g. safe routes to

Encourage pedestrian and bicycle site connections from front door of businesses or apartments to a public sidewalk and/or bike lane ensuring connections to all neighborhoods.

LAND USE

Identify priority areas for infill development, including those eligible for brownfields funding.

Create land bank to acquire and assemble priority infill sites

Develop an inventory of known contaminated properties for reuse planning, with possible GIS application

Measure Walkscore at 10 random residential addresses per Census tract, compute average, and improve upon overall

Adopt traditional neighborhood design ordinance (If population is less than 12,500)

Zoning for office and retail districts permits floor-area ratio > 1, on average.

Zoning for office and retail districts requires floor-area ratio > 1, on average.

| |
|--|
| Zoning code includes mixed use districts |
| Mixed-use language from Smart Code TBA. |
| Support placemaking at varying scale (neighborhood to major city facility) and permanence (temporary to permanent) through programming, financial support and removal of regulatory barriers |
| Adopt form-based codes or similar type design guidelines for healthy active living environments. |
| |
| <u>NATURAL RESOURCE MANAGEMENT</u> |
| |
| Adopt tree preservation ordinance per GTLC standards |
| Set a tree canopy goal and develop a management plan to achieve it (Appleton at 35%) |
| Have a Master Naturalist; ISA Certified Arborist or WDNR Community Tree Management Institute (CTMI) graduate on staff |
| Have community tree canopy mapped - https://pg-cloud.com/Wisconsin/ |
| Require trees to be planted in all new developments |
| Certification as Tree City USA |
| Certification as Bird City Wisconsin Community |
| Certification as a polinator friendly community |
| Certification as a monarch friendly community |
| Public properties and rights of way mown or cleared only for safe sightlines and/or to remove invasive species. |
| Create community policy and BMP guidelines on minimizing chemical use during vegetation management of public and private properties |
| Create program to eliminate use of chemical vegetation management on playgrounds and replace with horticultural vinegar |
| Establish 75-foot natural vegetation zone by surface water. |
| Inventory wetlands and ensure no net annual loss. |
| |
| Energy |
| |
| Adopt PACE ordinance |
| Use PACE financing |
| Watt meters available to the public |
| Offer residents and businesses a mechanism to purchase shares of the electricity generated through a local renewable energy project. (Ex. a community solar program) |
| Facilitate a group-buy program through which residents receive discounted, volume-based pricing on energy efficiency or renewable energy projects based on aggregated demand. |
| Commit to achieving a science-based, community-wide GHG reduction goal. |
| Adopt Residential Energy Conservation Ordinance (time-of-sale certification and upgrades). |
| Work with local utilities to calculate total electricity and natural gas consumption annually, beginning with the fifth year before entering the program. |
| Achieve milestone reductions in GHG emissions, as specified in the community's science-based GHG reduction goals. |
| State of Wisconsin Energy Independent (EI) Community designation. |
| Include transportation energy/emissions as criterion in RFPs for purchases of goods over \$10,000. |
| Develop list of lighting, HVAC and shell improvements to raise Energy Star Portfolio Manager or LEED EBO&M score |
| Reduce motor fuels use for non-transit activities -- |
| Provide transit passes at 50 percent or more off the regular price and/or provide parking cash-out options for local government employees. |
| Streetlights operate at 75 lumens/Watt or higher |
| Stoplights are LED or functional equivalent |
| Establish a policy requiring that all major remodeling projects on municipal buildings result in the building receiving an ENERGY STAR score that is five points higher than the building's pre- |
| Commit to achieving a science-based GHG reduction goal for emissions resulting from all municipal operations. |
| Incorporate energy use intensity (EUI) targets into the contracting process for all significant municipal construction projects |
| Establish policies requiring that all new municipal buildings achieve an ENERGY STAR score of 75 or higher. |

| |
|--|
| Municipal electricity purchases are at least 5 percentage points higher in renewable content than the statewide renewable portfolio standard requires. Calculation may include self-generated |
| Set benchmark for emission free electrical purchases for city use including self generation |
| Work with Energy Task Force OEI to track municipal facilities - Complete EPA Energy Star Portfolio Manager spreadsheet for government energy use. Or score existing buildings with LEED |
| Achieve milestone reductions in GHG emissions, as specified in the municipality's science-based GHG reduction goal. |
| Calculate annual government fleet use of motor fuels, in gallons of petroleum and biofuels, beginning with the fifth year before entering the program. |
| All new and renovated municipal buildings must meet LEED Silver or greater. |
| |
| <u>WATER</u> |
| |
| Track water and sewer use annually, beginning with fifth year before entering program, and develop plan for reductions. |
| Develop a water loss control plan with targets below the 15% required by the state and include a system-wide water |
| Join EPA's WaterSense Program for water utilities or the Groundwater Guardian Green Sites program and promote them to local business. |
| Use block rates and flat rates to encourage water conservation among residential, commercial, and industrial users. |
| Infiltration and inflow reduction by 10% |
| Plan for replacing all toilets using > 1.6 gpf and annual progress sufficient to reach 90 percent replacement in 10 years. |
| Install waterless urinals in men's restrooms at municipal facilities (city hall, parks, etc.) |
| All outdoor watering by local government, excluding parks and golf courses, from rain collection. |
| Develop a water efficiency and conservation plan for municipal buildings |
| Develop and implement asset management plans that set targets for the sustainable maintenance, operation and renewal of water and wastewater infrastructure. |
| Wastewater biogas captured and used in operations. |
| Conduct an energy assessment for municipal water and wastewater facilities and develop a plan to increase energy |
| Financial assistance for sewer lateral replacements. |
| Develop plan to replace all lead laterals in water system |
| Set goals for increasing the recovery of resources from wastewater for energy generation (heat or electricity) and |
| Explore partnership options with high-strength waste. |
| Upgrade water and wastewater utility equipment (e.g., variable frequency drive motors) to achieve energy efficiency |
| Develop a regular street sweeping program to reduce total suspended solids |
| Stormwater utility fees offer credits for best management practices such as rain barrels, rain gardens, and pervious |
| Inventory all paved surfaces (e.g., by GIS mapping), and develop a plan for reduction |
| Work with commercial or light industrial businesses to develop stormwater pollution plans |
| Identify key green infrastructure areas during plan development and/or implement a plan to acquire and protect key green infrastructure areas |
| Replace concrete channels with re-meandered and naturalized creeks, wetlands, or swales |
| Develop a system for identifying culverts that obstruct fish migration and install fish friendly culverts where needed |
| Provide incentives for protection of green infrastructure, sensitive areas, important wildlife habitat, or for the restoration or rehabilitation of wetlands or other degraded habitats such as credit |
| Develop onsite educational signage for green infrastructure projects |
| |
| <u>WASTE</u> |
| Community waste stream monitored at least annually . Waste reduction plan prepared and updated annually |
| Set waste diversion to recycling percentage goal |
| Waste and materials management plan based on "zero-waste" principles, with specific goals, prepared and updated |
| Construction/deconstruction waste recycling ordinance |
| Mandatory residential curbside recycling pickup that covers paper, metal cans, glass and plastic bottles |
| Develop a municipal collection program that encourages the diversion of food discards, yard materials, and other |

| |
|---|
| Develop and promote programs that dispose of household hazardous, medical, and electronic waste |
| Use anaerobic digesters to process organic waste and produce energy |
| Implement municipal ordinances requiring manufacturer takeback for fluorescent bulbs, thermostats and other mercury- containing devices |
| Ordinances in place to reduce the usage of phone books as well as single-use shopping bags, styrofoam food containers |
| Pay-as-you-throw system implemented by municipality or required of private waste haulers |
| Use public education and outreach to promote recycling, backyard composting, product re-use and waste reduction |
| Establish partnerships to reduce waste pharmaceuticals generated in the community and to efficiently collect remaining waste |
| Celebrate America Recycle's Day |
| Create educational program to help identify what can and cannot be recycled to help combat recycling contamination potentially sickens for all cans |
| |
| <u>HEALTH</u> |
| |
| Adopt a resolution that promotes Health in All Policies at the community level (e.g., HEAL Resolution). Include that educational campaigns supporting a program covered by the resolution are |
| Establish a Health Impact Assessments policy, including when an assessment is required and its scope |
| Add health policies in 1 or more of the community's plans, including the comprehensive plan, long-range transportation plan, bicycle/pedestrian plan and open spaces recreation plan (embedded |
| Encourage the formation and/or support of Neighborhood Improvement Districts (NIDs), Neighborhood Development Corporations, or other similar types of neighborhood reinvestment and |
| Implement strategies (urban agriculture, community gardens on public land, diversified farmer's markets, expanded traditional retail food options, ordinances to allow urban chickens and |
| Create a Food Systems Plan that addresses the production, distribution, value-added, marketing, end-market, and |
| Provide education and establish programming to encourage physical activity, especially by youth. |
| Provide recreation programs for youth, adults, senior citizens and disabled persons. |
| Adopt ordinances and programs to maintain a healthy housing stock (code enforcement, landlord licenses, volunteer program, truth-in housing disclosure before sale, etc.). |
| Allow life cycle or adaptable housing options, such as "aging in place", accessory dwelling units, Universal or Inclusive Design, Dementia Friendly Communities, Age-Friendly Communities, etc. |
| Establish a program to make housing more affordable. |
| Establish a program to address chronic homelessness, such as "permanent housing". |
| Use by policy, ordinance or practice, Crime Prevention Through Environmental Design and active threat planning to make public spaces, such as recreational space, crime free. |
| Establish and implement Harm Reduction strategies for alcohol outlet density and sexual oriented establishments (e.g. zoning limitations) |
| Adopt an ordinance or policy that requires tobacco-free and e-cigarette free apartments or places limitations on such |
| Adopt an ordinance or policy that promotes tobacco-free and e-cigarette free parks and/or public events on local government-owned property. |
| Create and implement a climate change action plan that includes a carbon footprint study, and health related components on reducing air pollution from combustion of fossil fuels and |
| Adopt an ordinance, including conditional use permits, on noise abatement for various zoning districts. |
| Implement a wellness program for employees of the local jurisdiction. |
| Encourage or partner with others, such as the Chamber of Commerce, etc., to advance workplace wellness programs within the community. |



MENASHA, WI

TOTAL POPULATION

18,268

POPULATION DENSITY

2357

TOTAL AREA (sq. miles)

7.75

OF LOCAL BICYCLE FRIENDLY BUSINESSES

0

OF LOCAL BICYCLE FRIENDLY UNIVERSITIES

0

10 BUILDING BLOCKS OF A BICYCLE FRIENDLY COMMUNITY

| | Average Silver | Menasha |
|--|------------------------|-----------------|
| High Speed Roads with Bike Facilities | 35% | 0% |
| Total on- and off-road Bicycle Network Mileage to Total Road Network Mileage | 48% | 19% |
| Bicycle Education in Schools | GOOD | AVERAGE |
| Share of Transportation Budget Spent on Bicycling | 11% | 7% |
| Bike Month and Bike to Work Events | GOOD | VERY GOOD |
| Active Bicycle Advocacy Group | YES | YES |
| Active Bicycle Advisory Committee | MEETS EVERY TWO MONTHS | MEETS QUARTERLY |
| Bicycle-Friendly Laws & Ordinances | GOOD | VERY GOOD |
| Bike Plan is Current and is Being Implemented | YES | YES |
| Bike Program Staff to Population | 1 PER 78K | 1 PER 182.7K |

CATEGORY SCORES

ENGINEERING

Bicycle network and connectivity

2.9 /10

EDUCATION

Motorist awareness and bicycling skills

4.3 /10

ENCOURAGEMENT

Mainstreaming bicycling culture

5.0 /10

EVALUATION & PLANNING

Setting targets and having a plan

4.7 /10

KEY OUTCOMES

| | Average Silver | Menasha |
|---|----------------|---------|
| RIDERSHIP Percentage of Commuters who bike | 2.7% | 0.31% |
| SAFETY MEASURES CRASHES Crashes per 10k bicycle commuters | 537 | 1,552 |
| SAFETY MEASURES FATALITIES Fatalities per 10k bicycle commuters | 6.3 | 0 |



KEY STEPS TO SILVER



- » Congratulations on adopting a Complete Streets policy directing transportation planners and engineers to routinely design and operate the entire right-of-way to enable safe access for all users. It is important to ensure that there is a strong implementation and compliance process for this new policy going forward.
- » Continue to improve and expand the low-stress bike network for all ages and abilities, and ensure that your community follows a bicycle facility selection criteria that increases separation and protection of bicyclists based on levels of motor vehicle speed and volume. Consider using FHWA's Bikeway Selection Guide: https://safety.fhwa.dot.gov/ped_bike/tools_solve/docs/fhwasa18077.pdf

- » Develop a design manual that meets current NACTO standards or adopt the NACTO Urban Bikeway Design Guide or the FHWA's Small Town and Rural Multimodal Network Guide. This will make it easier for city staff to propose and implement bicycle facility designs that have been shown to improve conditions for people who bike in other cities throughout the United States.
- » Improve bicycle safety education for students of all ages by incorporating on-bicycle education opportunities and by expanding the program to all K-12 schools. Providing bicycles in schools for on-bike education ensures that all students can learn to safely ride a bicycle regardless of the availability of a bicycle in their household. Work with the school district, local bicycle

KEY STEPS CONTINUED ON PAGE 2...



MENASHA, WI

Fall 2021

KEY STEPS TO **SILVER** CONTINUED

groups, and interested parents to expand and improve the Safe Routes to School program.

» Continue to increase the amount of high quality bicycle parking throughout the community. Adopt a bike parking ordinance for new and existing buildings that specifies the amount and location of secure, convenient bike parking available. Develop community-wide Bicycle Parking Standards that adhere to current APBP guidelines:
www.apbp.org/bicycle-parking-solutions

» Adopt a target level of bicycle use (percent of trips) to be achieved within a specific timeframe, and ensure data collection necessary to monitor progress. Continue to develop a bicycle count program that utilizes several methods of data collection to create an understanding of current bicyclists and the effects of new facilities on bicycling in Menasha. Automated bicycle counters provide long-term data on bicycle use at fixed points in a community and mobile counters can provide periodic or before/after data related to a change in your community's road or bicycle network. Observational counts and surveys can supplement automated data in order to collect demographic information and examine social equity goals.

MORE RESOURCES FOR IMPROVING YOUR COMMUNITY:

- » League of American Bicyclists: <https://www.bikeleague.org>
- » Guide to the BFC Report Card:
https://bikeleague.org/sites/default/files/Guide_to_the_Bicycle_Friendly_Community_Report_Card.pdf
- » Resources for Building a Bicycle Friendly Community: https://bikeleague.org/BFC_Resources
- » Building Blocks of a Bicycle Friendly Community:
<https://bikeleague.org/content/building-blocks-bicycle-friendly-communities>
- » About the BFC Application Process: <https://bikeleague.org/content/about-bfc-application-process>
- » The Five E's: <https://bikeleague.org/5-es>
- » Tips for Current and Aspiring BFCs: <https://bikeleague.org/BFC-tips>
- » Smart Cycling Program: <https://bikeleague.org/ridesmart>
- » Advocacy Reports and Resources: <https://bikeleague.org/reports>
- » Bicycle Friendly Business Program: <https://bikeleague.org/business>
- » National Bike Month: <https://bikeleague.org/bikemonth>



Bike Friendly Menasha Overview



Menasha strives to create a community where biking is fun and safe for people of all ages and abilities year round. Through a process of continuous improvement, the City added on and off street facilities, road diets, safety facilities, wayfinding, and bike parking. Our schools are located in areas that are bike and pedestrian friendly, and trails connect major destinations like parks, healthcare and grocery stores. Bike facilities are located in all neighborhoods, including historic and low income areas, encouraging everyone to get out on their bike for transportation and enjoyment.

Planning has a long history in Menasha with founding and current members of our regional advocacy group [Fox Cities Greenways](#) (est 1994) residing in the City. In addition, [East Central Wisconsin Regional Planning Commission](#), one of the most active agencies in the State regarding bike and pedestrian improvements, is located steps from one of Menasha's trails and downtown. [Trail Summits](#) bring together advocates and decision makers which makes Menasha a leader in connectivity, ensuring facilities line up across municipal boundaries.

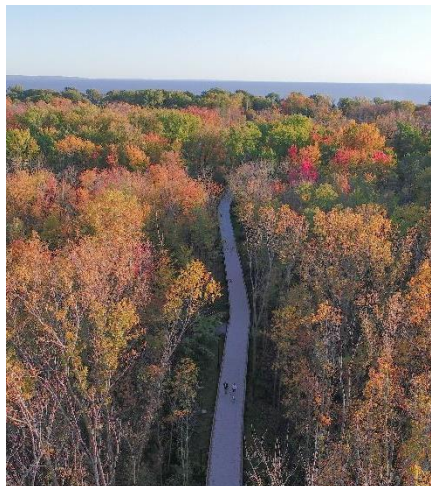
These meetings led to three award-winning projects in Menasha. In 2017, the Trestle Trail was named one of [Wisconsin's Great Places by the American Planning Association – Wisconsin](#), as well as a Destination Builder Award in 2006 from the Fox Cities Visitor and Convention Bureau and an ACEC Best of State award in 2007. Loop the Lake Trail received a Destination Builder Award in 2017 from the Fox Cities Visitor and Convention Bureau and an Engineering Achievement Award from ASCE in 2019. The Gilbert Riverfront Trail received an Award of Excellence from the Wisconsin Park and Recreation Association in 2016. Current planning efforts are bolstered by a recent announcement of a [planning grant by the Community Foundation for the Fox Cities Region to enable a connection to High Cliff State Park](#) from Menasha.



Why do we invest in bike friendly streets and trails? We've found that you see the world differently on a trail, people connect, explore, re-energize, and interact with nature. More importantly, visitors come back; they want to be close to trails in their everyday life. Menasha is positioned at the heart of some of the most used and attractive trails in the Fox Cities: Loop the Lake, Friendship Trail, Paper Trail, and Province Terrace Boardwalk. These trails connect our parks, natural areas, schools, work, shopping and neighborhoods allowing our residents to live an active lifestyle. These facilities not only won awards, they improved our residents' health, increased mobility, offered independence, and provided countless recreational opportunities.

Our goal is that you can get there on a bike in Menasha safely.

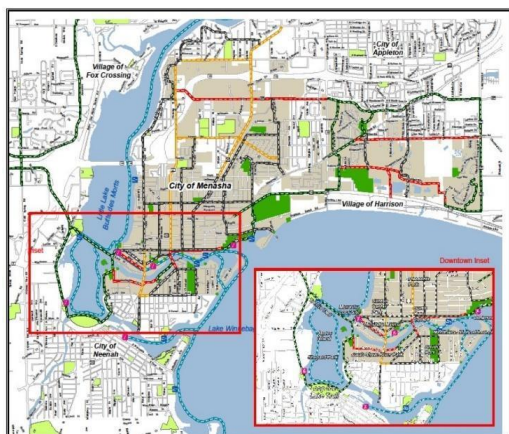
Bike Friendly Menasha Engineering



Menasha is known as [“your place on the water”](#) due to the city’s unique topography and barriers to connectivity. It also creates an opportunity for the community to offer, along with our forestry department, some of the most beautiful connections in the area with unique award-winning engineering solutions & partnerships.

Loop the Lake Trail not only offered a 5K loop for recreation, it also provided a connection for bikers separate from two heavily traveled bridges. The [Province Terrace Boardwalk](#) provides a connection to nearly 3,000 people who previously had to travel on a four-lane highway to reach facilities like the City Pool. The Lake Park Villas trail is part of a stormwater facility. These trails provide transportation connections and natural beauty.

The City’s [Complete Streets policy](#) was recently approved by elected officials, however, these concepts were in place for many years. Menasha was among the first to implement “sharrows” in the Fox Cities. Menasha also worked extensively with WISDOT to provide bike lanes on a portion of Highway 47 and a safely separated trail along Highway 114. The City also had bike/ped wayfinding signage both on and off street before other communities in the area. The City, and our residents, embraced what is safest for people biking, from back-in angle parking to use the full lane on narrow bridges, in-street signage for bike and pedestrian crossings, and HAWK signals at high traffic crossings. We evaluate opportunities to calm traffic not by whether we should do something, but by which method is the best: bump outs, road diets, HAWK signals, crosswalk signs, or a diverging diamond with both bike lanes and paths to navigate by bicycle. Valley Transit implemented its [Rack ‘n Roll](#) program nearly 20 years ago. More recently, [Valley Transit’s Strategic Plan](#) has committed to advocate for multimodal transportation such as bike share.



Menasha recently updated its [CORP](#) and is in the process of updating the Transportation chapter of the [Comprehensive Plan](#). Both plans identified trails and on-street non-motorized transportation as a priority for future health and economic development opportunities. The [CORP](#) identifies six trail opportunities (one that has already been completed). The [Racine Street Bridge](#) which has been a major barrier to family biking is currently under construction which will include bike facilities. This has led to an RFP for Racine Street reconstruction with bike facilities to the North and plans for a connecting riverfront trail to the south. It also led to planning for road diets on

Third Street and Nicolet Boulevard and a discussion regarding the first bike box in the Fox Cities. We have two times more ways for people to cross our water by bicycle (8) than by motor vehicle (4)!

Our goal is that you can get there on a bike in Menasha safely.

Bike Friendly Menasha Encouragement



Our goal is that you can get there on a bike in Menasha, therefore, we have implemented policies, created safe routes, and maintain services to make biking more accessible and self-explanatory.

Most importantly, all trails are maintained for year-round use including plowing during winter months, and most are lit for night use. Menasha has directed off-street facilities to provide service to important services like groceries and supplied bike racks at numerous locations around the City especially Downtown. Menasha's schools are all in bike and pedestrian-friendly neighborhoods.

[Fox Cities Greenways](#) and [Fox Cities Convention and Visitors Bureau](#) have partnered with Menasha to create excellent promotional materials. Maps showing day trips as well as the complete local trail network are available in both printed form and [online](#). Additionally, Menasha installed wayfinding signage with mileage along some of the most popular routes in the community.

People learn by example, and for that reason Menasha included biking, trails, and fitness in many events as well as positioning events in areas that are accessible by bike. The [Backdraft Bike Tour](#) sponsored by Neenah-Menasha Fire Rescue includes rides of every level from expert to family showcasing the accessibility of trails and long distance routes. [Race the Lake](#) and Diablo Criterion showcase professional level cycling and the strategy that is part of racing in a team. The [Fox Cities Marathon](#) includes Loop the Lake as the final leg of its journey. Special events such as the Dive in Movie, [CommunityFest](#), Brews on Bago, and [Fox JazzFest](#) are easily accessed by bike.



Menasha is a very popular place to ride as a recreational group or a part of an event including: Ride with the Mayor, FLOC (Fearless Ladies of Cycling Menasha riders out of a Neenah shop), Different Spokes (Gay mens' ride), and Cycling Without Age tri-shaws.

Climate change is having an effect nationwide as to when the temperature is conducive to outdoor activities. Combining forestry and biking creates pleasant corridors for transportation and recreation. Arbor Day 2021 included not only planting 300 trees, but also showed students at St. Mary's school how a cargo bike could be used to transport trees and supplies.

What better way to encourage people to try biking than to see others in action biking and having fun.

Bike Friendly Menasha Education



We consider every bike ride an opportunity for education. By emphasizing clear routes, signage welcoming bikes on street, educational maps and yard signs, business involvement in Bicycle Benefits, and more, we help build confidence in every person about sharing the roads. Every bike ride is an opportunity to build strong relationships between people biking and driving. We work with the Wisconsin Bike Fed to teach riders to be their own best advocates and communicate with others along the way. With the many amazing trails through our neighborhoods, our strong sense of community grows even more. People biking are happy and meet friendly neighbors everywhere around our city. This equates to thousands of *cyclists* as educators every time they pedal their bikes in our 7.75 mi² community.

Confidence on a bike begins with education while you are young. First, second, and third graders participated in a week long bike skills rodeo during summer-school in the Menasha School District where several learned to ride on borrowed bikes. The program will be able to build on its success with a SafetyTown course planned for the future at Clovis Grove School. We'll be helping parents teach their children safe riding by being the first community in Wisconsin to roll out the ["Teaching Safe Bicycling"](#) video instructional series developed by the [Wisconsin Bike Federation](#) and [Wisconsin DOT](#) along our trail system this Fall. In addition, our Parks & Recreation department hosts events like "Wheely Fun" to keep kids engaged with biking. Not to forget young drivers, driver's education includes a chapter on how to share the road.



League Cycling Instructors in or near Menasha host classes and events regularly. Our goal is to expand offerings by developing six additional instructors to help with classes and rides. Menasha hosted several Smart Cycling classes and two LCI classes prior to COVID; we are building a group of Smart Cycling "graduates" to fill another LCI class in Spring 2022. Menasha based [ECWRPC](#) is home to the [regional Safe Routes to School program](#), and our Wisconsin Bike Fed local office is only a mile and a half away. These organizations share resources, including a bike fleet, cones, safety giveaways, training materials, training space, open class seats and instructors with each other as well as our local schools, library, police and fire departments and advocates as well as many businesses.

Our "Bikes Welcome" attitude draws people from all over the region and our throughout our connected Fox Cities including Menasha, they love our trails and feel confident sharing the roads with our bike savvy drivers.



Leading the movement to create a bicycle-friendly America for everyone

1612 K STREET NW, SUITE 1102, WASHINGTON, DC 20006 | phone 202-822-1333 | fax 202-822-1334 | WWW.BIKELEAGUE.ORG

December 8, 2021

Joe Stephenson
Principal Planner
Community Development
City of Menasha
100 Main Street, Suite 200
Menasha, WI, 54952

Dear Joe,

Congratulations to Menasha on receiving the Bicycle Friendly Community designation at the Bronze level! This award is presented only to communities with impressive commitments to bicycling.

Enclosed you will find your 2021 Bicycle Friendly Community Award Certificate. If you would like to order Bicycle Friendly Community road signs, certificate duplicates, or Smart Cycling educational materials, please visit the League store online at: bikeleague.org/bfcstore.

I have also included information from our partners at Eco-Counter to help your community more effectively collect and track ridership data to improve your Evaluation & Planning efforts.

Your 2021 BFC award status will be promoted by the League for four years, after which time your designation must be renewed. You will be reminded via email prior to the Fall 2025 application deadline. Until then, your community's 2021 award status and report card will be publicly available in our online award database: bikeleague.org/bfa/awards#community.

Once again, congratulations on your efforts to create a great Bicycle Friendly Community! Thank you for your engagement with the Bicycle Friendly Community program and for your commitment to improve bicycling conditions in your community.

Best Regards,

Amelia Neptune
Director, Bicycle Friendly America Program
League of American Bicyclists

**THE LEAGUE
OF AMERICAN BICYCLISTS**

since 1880

is pleased to designate

Menasha, WI

as a

**BICYCLE FRIENDLY
COMMUNITY**

in recognition of your outstanding efforts to encourage bicycling in your community

2021 - 2025 » BRONZE

Bill Meyer

PRESIDENT



Kenneth J. Noddy

CHAIR, BOARD OF DIRECTORS



TO: Sustainability Board
DATE: 18 February 2022
FROM: Donald Merkes, Mayor
RE: Arbor Day 2022

Save the Date. Menasha will be celebrating its 39th Annual Tree City USA award and holding its Arbor Day Celebration on April 29th, 2022. We are finalizing the time and location. We will be exploring Arboriculture and Urban Forestry as careers, planting trees, and demonstrating common activities of arborists.

Potential Native Plant Programming for Menasha rak 02172022

At the Wild Ones Conference this January there were a number of great ideas that we might explore as a community. This combined with the resurgence of the Sustainability Committee, new connections with Heckrodt, and the many rain-water management and community plantings associated with the downtown construction projects point us to new opportunities in 2022.

I outline them here, with the intent of expanding on this information during this year.

1. Find ways to use the community web-site to advertise and promote the idea of native plantings and their benefit to the citizens in our community. Perhaps link with local native plant groups in some way.
2. Don has already set up support the Fox and Wolf River watershed alliance clean-up day on May 7th as a way to connect with citizens. [About Us » Fox-Wolf Watershed Alliance \(fwwa.org\)](http://fwwa.org)
3. It was noted that the Fox Valley Community Network has the bright ideas program to support new environmental projects in the region. They helped fund the Wild Ones Conference this year, so might they help us with a project that we as a community develop?
4. Wild Ones membership advantages: members get free site reviews as to how to utilize native plants on their property. They also have a native plant ID program as well as many other benefits.
5. Wild Ones also is working on a plant education program that the city and our library might wish to become involved with.

Wild Ones Fox Valley Area is developing a Native Plant Certification Program starting as soon as this summer. The program will consist of a series of classes and field trips with an option to work towards a certificate. We are looking for instructors (paid), partners, and prospective students. Partnering organizations will receive discounts for members and a volunteer base in exchange for advertising and otherwise supporting the program. [Click here](#) to learn more about the program's goals, proposed courses, and to let us know your interest. Email Shannon at wildonesfoxvalley@gmail.com for more information.

6. Now see that there is the Wisconsin lakes Partnership that cities can use to support shoreline property planting of native plants. With all of the construction going on along the river, seems like a program to explore (in conjunction with City Parks Committee perhaps?). The city could be a partner by sponsoring grants from them. Patrick Goggin told me we could contact him with questions. I got some brochures from them. [Healthy Lakes Program of WI. Let's Make Healthy Lakes Together! \(healthylakeswi.com\)](http://healthylakeswi.com)
7. There is a native plant finder that Doug Tallamy and Wild-Ones are developing to illustrate which plants might be best for our citizens to plant on their properties. It is www.nativeplantfinder.org as related to supporting the web of life!
8. Since we discussed the Jeffert Menasha had to plant trees on private land, this seems it might be something for us to explore in more detail. At the conference, Doug Tallamy also discussed states that have implemented a tree/shrub exchange program where non-natives can be replaced with native types with cost support by the state! Could our community develop trial programs like this? Here is what I found on his website Hub: [TALLAMY'S HUB — HOMEGROWN NATIONAL PARK](#)
 - California gives citizens \$1 per ft² of grass that is removed to reduce water consumption.
 - Minnesota has a cost sharing plan to replace lawn with native plants.
 - Missouri has a free replacement of Callery Pear and such with native trees.

- Florida pays its citizens if they offer space for endangered birds in their yards, like the burrowing owl.
9. The City's rain water management signs plus its new connection with Heckrodt suggest other possible collaborations for community education programming. It was noted that Wild Ones wants to support a native plant speaking and education program which might be good fit for us.
 10. Discussion of how rain garden maintenance at EC might be handled going forward as both EC programming direction has changed and the ownership of the building might change. A discussion on that is needed as plants there need to be thinned out as one type. As this was a joint effort of a grant from Wild Ones and the property owner, it seems we have some interest in bringing this to a good resolution.



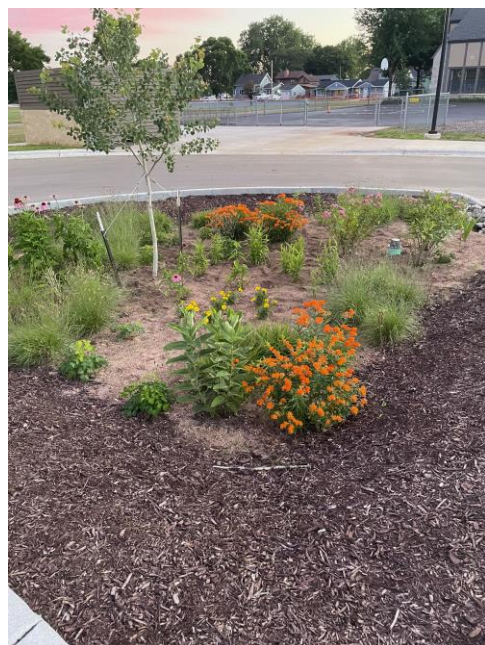
TO: Sustainability Board
DATE: 18 February 2022
FROM: Donald Merkes, Mayor
RE: Raingardens

Background

Part of the City's MS4 permitting requires that we reduce suspended solids and phosphorous from stormwater before it is released back into rivers and lakes. The City utilizes several methods to do this including raingardens. The raingardens at Jefferson Park and Fire Station 36 have been recently planted to give a more formal appearance while continuing to serve their function cleaning stormwater. Plants within the raingardens include: columbine, iris, milkweed, grasses, aster & purple coneflower.



Fire Station 36



Jefferson Park

Recommendation

Additional native plants are available through Wild One's plant sale. The current gardens have good variety and color early in the spring and early summer, they lack color in the fall. They also could use height. Possible additions could include: Spike Blazingstar, Black Eyed Susan, Cup Plant, Compass Plant, Big Bluestem, & Indiangrass. These plants would provide variety and additional attraction for wildlife and insects.



FOX VALLEY AREA

2022 Native Plant, Tree & Shrub Sale

Orders Due: **Thursday, March 31** (Get your orders in early, some quantities are limited)

Pick Up: **Saturday, May 21 • 9 am–2 pm WILD Center**

Directions to WILD Center (2285 Butte des Morts Beach Rd., Neenah, WI 54956):
From Hwy 41, take Exit 136, drive east on BB (Prospect Ave) to right onto Northern Rd, then left onto Stroebe Rd. Off Stroebe Rd, turn right onto Butte des Morts Beach Rd.

Nursery-propagated native perennial plants are typically in 4-inch pots, 1- to 2-year growth. Plants are \$6.50 each or tray of 12 same species (example: 12 butterflyweed) at \$5.50 each. Trees, shrubs and vines are in 1, 2, 3 or 5 gal pots as noted. Species priced individually. Pre-Order recommended. Over-the-counter native plants sale for \$7.00 each, pending COVID status. Watch for details. Visit us online at foxvalleyarea.wildones.org.

1. **Complete** and mail the original form.
2. **Copy** your order for your records.
3. **Make check payable to:** Wild Ones Fox Valley (credit card orders add 3.5%).
4. **Mail to:** Wild Ones Native Plant Sale, PO Box 385, Appleton, WI 54912.
5. **Discounts** are available for not-for-profit organizations (pre-ordered plants only).
6. **Credit Cards** orders, call Dick Filzen. *Note: a 3.50% service fee will be added for credit card processing.*

Contact Pat Filzen or Dick Filzen at 920-901-9544 or via e-mail at rlfilzen@twc.com or psf4fiber@gmail.com, with questions or to **help with the plant sale**. Copy this order form for friends and relatives. Download extra copies at foxvalleyarea.wildones.org.

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: Mobile (_____) _____ Home (_____) _____

E-mail: _____

Are you a Wild Ones Member? Yes ☐ No ☐ Chapter: _____

| TYPE | QTY | Price |
|--|-----|-------|
| Forbs – Column 1 | | |
| Forbs – Column 2 | | |
| Ferns etc. – Column 3 | | |
| Shrub – Column 1 | | |
| Vine & Tree – Column 2 | | |
| Return entire form with your check payable to: Wild Ones Fox Valley. TOTAL | | |

Plant resource classification comes from:

- botany.wisc.edu/wisflora
- plants.usda.gov

For more information, go online to:

- northernsunset.com
- Click on "Learn About Perennials" for info on deer resistant plants, attracting butterflies, how to, etc.

2022 Native Perennial Plant Sale

Orders Due: **Thursday, March 31** (Get your orders in early, some quantities are limited)

Pick Up: **Saturday, May 21 • 9 am–2 pm WILD Center** (2285 Butte des Morts Beach Rd., Neenah, WI 54956)

| | NATIVE FORBS | QTY | \$6.50 |
|---|---|-----|---------------------|
| ✦ | Anemone, Meadow (<i>Anemone canadensis</i>) | 200 | |
| ✦ | Anemone, False Rue (<i>Enemion biternatum</i>) | 202 | |
| ✦ | Aster, Bigleaf (<i>Aster macrophyllus</i>) | 300 | |
| ✦ | Aster, Heath (<i>Aster ericoides</i>) | 61 | |
| ✦ | Aster, New England (<i>Aster novae-angliae</i>) | 64 | |
| ✦ | Aster, Sky-Blue (<i>Aster azureus</i>) | 60 | |
| ✦ | Aster, Smooth Blue (<i>Aster laevis</i>) | 62 | |
| ✦ | Aster, White Wood (<i>Aster divaricatus</i>) | 205 | Unavailable in 2021 |
| ✦ | Baneberry, Red (<i>Actaea rubra</i>) | 194 | * * |
| ✦ | Baneberry, White (<i>Actaea pachypoda</i>) | 193 | |
| ✦ | Black-Eyed Susan (<i>Rudbeckia hirta</i>) | 117 | |
| ✦ | Black-Eyed Susan, Sweet (<i>Rudbeckia subtomentosa</i>) | 118 | |
| ✦ | Blazing Star, Marsh Or Spike (<i>Liatris spicata</i>) | 100 | |
| ✦ | Blazing Star, Meadow (<i>Liatris ligulistylis</i>) | 98 | |
| ✦ | Blazing Star, Prairie (<i>Liatris pycnostachya</i>) | 99 | |
| ✦ | Blazing Star, Rough (<i>Liatris aspera</i>) | 97 | |
| ✦ | Blue Wood Aster (<i>Aster cordifolium</i>) | 301 | |
| ✦ | Bluebells Of Scotland (<i>Campanula rotundifolia</i>) | 208 | |
| ✦ | Boneset (<i>Eupatorium perfoliatum</i>) | 87 | |
| ✦ | Bottle Gentian (<i>Gentiana andrewsii</i>) | 89 | Unavailable in 2021 |
| ✦ | Bowman's Root (<i>Gillenia trifoliata</i>) | 224 | |
| ✦ | Brown-Eyed Susan, Sweet (<i>Rudbeckia triloba</i>) | 119 | |
| ✦ | Butterfly Weed (<i>Asclepias tuberosa</i>) | 59 | |
| ✦ | Canadian Ginger (<i>Asarum canadense</i>) | 204 | |
| ✦ | Cardinal Flower, Red (<i>Lobelia cardinalis</i>) | 101 | |
| ✦ | Cardinal Lobelia Great Blue (<i>Lobelia siphilitica</i>) | 102 | |
| ✦ | Cohosh, Blue (<i>Caulophyllum thalictroides</i>) | 209 | |
| ✦ | Columbine (<i>Aquilegia canadensis</i>) | 57 | |
| ✦ | Compass Plant (<i>Silphium laciniatum</i>) | 124 | |
| ✦ | Coneflower, Great (<i>Rudbeckia maxima</i>) | 241 | |
| ✦ | Coneflower, Pale Purple (<i>Echinacea pallida</i>) | 83 | |
| ✦ | Coneflower, Purple (<i>Echinacea purpurea</i>) | 84 | |
| ✦ | Coneflower, Yellow Or Greyhead (<i>Ratibida pinnata</i>) | 116 | |
| ✦ | Coreopsis, Lance-Leaf (<i>Coreopsis lanceolata</i>) | 78 | |
| ✦ | Coreopsis, Prairie Or Stiff (<i>Coreopsis palmata</i>) | 79 | |
| ✦ | Culver's Root (<i>Veronicastrum virginicum</i>) | 141 | |
| ✦ | Cup Plant (<i>Silphium perfoliatum</i>) | 125 | |
| ✦ | Dutchmen's Breeches (<i>Dicentra cucullaria</i>) | 216 | |
| ✦ | Flowering Spurge (<i>Euphorbia corollata</i>) | 221 | |
| ✦ | Foamflower (<i>Tiarella cordifolia</i>) | 246 | |
| ✦ | Golden Alexander (<i>Zizia aurea</i>) | 144 | |
| ✦ | Golden Alexander, Heart Lvd (<i>Zizia aptera</i>) | 143 | Unavailable in 2021 |
| ✦ | Golden Groundsel (<i>Packera aurea</i>) | 235 | |
| ✦ | Goldenrod, Ohio (<i>Solidago ohioensis</i>) | 129 | |
| ✦ | Goldenrod, Riddell's (<i>Solidago riddellii</i>) | 130 | |
| ✦ | Goldenrod, Showy (<i>Solidago speciosa</i>) | 133 | |
| ✦ | Goldenrod, Stiff (<i>Solidago rigida</i>) | 131 | |
| ✦ | Goldenrod, ZigZag (<i>Solidago flexicaulis</i>) | 302 | |
| ✦ | Hepatica, Sharp Lobed (<i>Hepatica acutiloba</i>) | 226 | |
| ✦ | Hyssop, Giant Blue Or Anise (<i>Agastache foeniculum</i>) | 53 | |
| ✦ | Indigo, Blue False (<i>Baptisia australis</i>) | 68 | |

Native Forbs – Column 1 TOTAL

*Gallon pots, \$13 each

(Carry Totals Forward to Page 1)

KEY

✦ Woodland

✦ Woodland Edge

✦ Butterfly

✦ Midwest Native - but not from our area

✦ Wetland, Shoreline

✦ Meadow/Prairie

| | NATIVE FORBS | QTY | \$6.50 |
|---|--|-----|---------------------|
| ✦ | Indigo, Cream Wild (<i>Baptisia leucophaea</i>) | 70 | |
| ✦ | Iris, Blue Flag (<i>Iris virginica</i>) | 189 | |
| ✦ | Iris, Larger Blue Flag (<i>Iris versicolor</i>) | 229 | |
| ✦ | Ironweed (<i>Vernonia fasciculata</i>) | 140 | |
| ✦ | Jack In The Pulpit (<i>Arisaema triphyllum</i>) | 203 | |
| ✦ | Jacob's Ladder, Creeping (<i>Polemonium reptans</i>) | 239 | |
| ✦ | Joe-Pye Weed, Spotted (<i>Eupatorium maculatum</i>) | 86 | |
| ✦ | Leadplant (<i>Amorpha canescens</i>) | 56 | |
| ✦ | Marsh Marigold (<i>Caltha palustris</i>) | 260 | |
| ✦ | Mayapple (<i>Podophyllum peltatum</i>) | 238 | |
| ✦ | Merrybells (<i>Uvularia grandiflora</i>) | 248 | |
| ✦ | Missouri Primrose (<i>Oenothera macrocarpa</i>) | 233 | |
| ✦ | Monkey Flower (<i>Mimulus ringens</i>) | 104 | |
| ✦ | New Jersey Tea (<i>Ceanothus americanus</i>) | 77 | |
| ✦ | Nodding Pink Onion (<i>Allium cernuum</i>) | 55 | |
| ✦ | Oxeye Sunflower (<i>Heliopsis helianthoides</i>) | 188 | |
| ✦ | Phlox, Prairie (<i>Phlox pilosa</i>) | 237 | |
| ✦ | Phlox, Smooth (<i>Phlox glaberrima interior</i>) | 289 | |
| ✦ | Phlox, Wild (<i>Phlox divaricata laphamii</i>) | 236 | |
| ✦ | Prairie Dock (<i>Silphium terebinthinaceum</i>) | 126 | |
| ✦ | Prairie Smoke (<i>Geum triflorum</i>) | 90 | |
| ✦ | Purple Prairie Clover (<i>Dalea purpurea</i>) | 215 | |
| ✦ | Queen Of The Prairie (<i>Filipendula rubra</i>) | 222 | Unavailable in 2021 |
| ✦ | Rattlesnake Master (<i>Eryngium yuccifolium</i>) | 85 | |
| ✦ | Rock Harlequin (<i>Corydalis sempervirens</i>) | 214 | |
| ✦ | Royal Catchfly (<i>Silene regia</i>) | 121 | |
| ✦ | Shooting Star (<i>Dodecatheon meadia</i>) | 217 | |
| ✦ | Smooth Penstemon (<i>Penstemon digitalis</i>) | 109 | |
| ✦ | Sneezeweed (<i>Helenium autumnale</i>) | 91 | |
| ✦ | Solomon's Seal (<i>Polygonatum biflorum</i>) | 240 | |
| ✦ | Solomon's Seal, False (<i>Smilacina racemosa</i>) | 244 | |
| ✦ | Spiderwort (<i>Tradescantia ohimensis</i>) | 137 | |
| ✦ | Spring Beauty (<i>Claytonia virginica</i>) | 212 | |
| ✦ | Swamp (Red) Milkweed (<i>Asclepias incarnata</i>) | 58 | |
| ✦ | Thimbleweed (<i>Anemone virginiana</i>) | 201 | |
| ✦ | Trillium, Large White (<i>Trillium grandiflorum</i>) | 247 | |
| ✦ | Turks-Cap Lily (<i>Lilium superbum</i>) | 230 | Unavailable in 2021 |
| ✦ | Turtlehead, White (<i>Chelone glabra</i>) | 210 | |
| ✦ | Vervain, Blue (<i>Verbena hastata</i>) | 138 | |
| ✦ | Vervain, Hoary (<i>Verbena stricta</i>) | 298 | |
| ✦ | Violet, Marsh Blue (<i>Viola cucullata</i>) | 249 | Unavailable in 2021 |
| ✦ | Violet, Common Blue Or Woolly (<i>Viola sororia</i>) | 250 | |
| ✦ | Virginia Bluebells (<i>Mertensia virginica</i>) | 232 | |
| ✦ | Virginia Mountain Mint (<i>Pycnanthemum virginianum</i>) | 115 | |
| ✦ | Whorled Milkweed (<i>Asclepias verticillata</i>) | | |
| ✦ | Wild Bergamot (<i>Monarda fistulosa</i>) | 105 | |
| ✦ | Wild Geranium (<i>Geranium maculatum</i>) | 187 | |
| ✦ | Wild Lupine (<i>Lupinus perennis</i>) | 103 | |
| ✦ | Wild Quinine (<i>Parthenium integrifolium</i>) | 108 | |
| ✦ | Wild Senna (<i>Senna hebecarpa</i>) | 76 | |
| ✦ | Wine Cups/Mallow Poppy (<i>Callirhoe involucrata</i>) | 207 | |
| ✦ | Wood Poppy (<i>Stylophorum diphyllum</i>) | 245 | |

Native Forbs – Column 2 TOTAL

(Carry Totals Forward to Page 1)

2022 Native Perennial Plant Sale

Orders Due: **Thursday, March 31** (Get your orders in early, some quantities are limited)

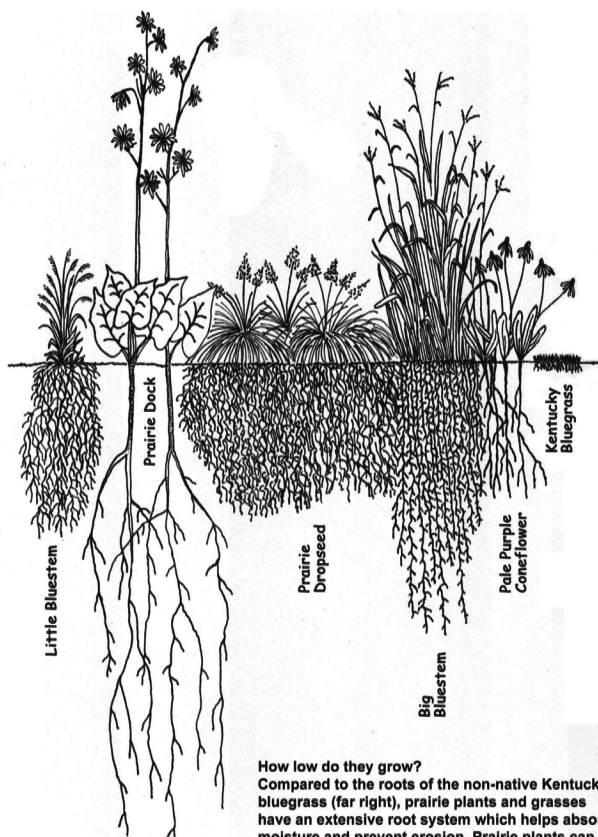
Pick Up: **Saturday, May 21 • 9 am–2 pm WILD Center** (2285 Butte des Morts Beach Rd., Neenah, WI 54956)

| | FERNS/GRASSES/SEDGES/RUSHES | QTY | \$6.50 |
|---|--|-----|---------------------|
| ⌘ | Cinnamon Fern (<i>Osmunda cinnamomea</i>) | 257 | |
| ⌘ | Hay Scented Fern (<i>Dennstaedtia punctilobula</i>) | 253 | |
| ⌘ | Interrupted Fern (<i>Osmunda claytonia</i>) | 258 | |
| ⌘ | Lady Fern (<i>Athyrium filix-femina</i>) | 252 | |
| ⌘ | Leather Wood Fern (<i>Dryopteris marginalis</i>) | 254 | |
| ⌘ | Maidenhair Fern (<i>Adiantum pedatum</i>) | 251 | |
| ⌘ | Ostrich Fern (<i>Matteuccia struthiopteris</i>) | 255 | |
| ⌘ | Royal Fern (<i>Osmunda regalis</i>) | 259 | |
| ⌘ | Sensative Fern (<i>Onoclea sensibilis</i>) | 256 | |
| ⌘ | Bluestem, Big (<i>Andropogon gerardi</i>) | 20 | |
| ⌘ | Bluestem, Little (<i>Schizachyrium scoparium</i>) | 21 | |
| ⌘ | Prairie Dropseed (<i>Sporobolus heterolepis</i>) | 52 | |
| ⌘ | Side Oats Grama (<i>Bouteloua curtipendula</i>) | 22 | |
| ⌘ | Blue Eye Stout Grass (<i>Sisyrinchium angustifolium</i>) | 243 | |
| ⌘ | Wild Canadian Rye Grass (<i>Elymus canadensis</i>) | 36 | Unavailable in 2022 |
| ⌘ | Bottlebrush Grass (<i>Hystrix patula</i>) | 44 | |
| ⌘ | Indian Grass (<i>Sorghastrum nutans</i>) | 50 | |
| ⌘ | Prairie Cord Grass (<i>Spartina pectinata</i>) | 51 | |
| ⌘ | Sweet Grass (<i>Hierochloa odorata</i>) | 43 | |
| ⌘ | Switch Grass (<i>Panicum virgatum</i>) | 46 | |
| ⌘ | Fox Sedge (<i>Carex vulpinoidea</i>) | 33 | |
| ⌘ | Palm Sedge (<i>Carex muskingumensis</i>) | 197 | |
| ⌘ | Pennsylvania Sedge (<i>Carex pensylvanica</i>) | 198 | |

Ferns/Grasses/Sedges/Rushes – Column 3 TOTAL

(Carry Totals Forward to Page 1)

rev 01/21/22



How low do they grow?
Compared to the roots of the non-native Kentucky bluegrass (far right), prairie plants and grasses have an extensive root system which helps absorb moisture and prevent erosion. Prairie plants can withstand prolonged periods of dry weather and so require little or no watering.

KEY

⌘ Woodland ♦ Woodland Edge ⌘ Butterfly ⌘ Midwest Native - but not from our area ⌘ Wetland, Shoreline ⌘ Meadow/Prairie

Donna's Recommendations

Use these suggestions from Donna VanBuecken, *Plant Sale Coordinator*, to create successful plant communities that fit your garden.

| Short Stature (Monarch Friendly) Sunny - sandy lighter soil | Shade | Tall Butterfly (Monarch Friendly) Sunny - moist | Butterfly/Bird (Monarch Friendly) Sunny - drier heavy soil | Sunny Rain Garden Sunny - moist | Early Nectar Shade to Part Shade |
|---|---|--|--|---|---|
| Little Bluestem Side-oats Grama Sky-blue Aster Black-eyed Susan Whorled Milkweed Nodding Pink Onion Showy Goldenrod Pale Purple Coneflower Rough Blazing Star | Pennsylvania Sedge Lady Fern Columbine Smooth Blue Aster Jack-in-the-Pulpit Merrybells Trillium Wild Geranium Zig Zag Goldenrod | Big Bluestem Indiangrass Culver's Root Ironweed Joe-Pye Weed Mountain Mint Sneezeweed Spike Blazingstar Swamp Milkweed | Prairie Dropseed Little Bluestem Sky-blue Aster Black-eyed Susan Butterflyweed Meadow Blazingstar Pale Purple Coneflower Riddell's Goldenrod Wild Bergamot | Fox Sedge Sweet Grass Blue Flag Iris Great Blue Lobelia Golden Alexander Ohio Goldenrod Spike Blazingstar Swamp Milkweed White Turtlehead | Blue Eye Stout Grass Columbine Wild Phlox Spring Beauty Merrybells Common Blue Violet Virginia Bluebells Wild Geranium Jacob's Ladder |

✓ Return original form with your check.

✓ Please make a copy for your records.

✓ Orders Due: Thursday, March 31
(Get your orders in early, quantities may be limited)

✓ Pick-Up: Saturday, May 21, 9 am–2 pm at WILD Center



2022 Native Tree & Shrub

Orders Due: **Thursday, March 31** (Get your orders in early, some quantities are limited)
 Pick Up: **Saturday, May 21 • 9 am–2 pm**
 at **WILD Center**, 2285 Butte des Morts Beach Rd., Neenah, WI 54956
Directions: From Hwy 41, take Exit 136, drive east on BB (Prospect Ave) to right onto Northern Rd, then left onto Stroebe Rd. Off Stroebe Rd, turn right onto Butte des Morts Beach Rd.

| Soil Type | Sun Light | Notes | SHRUBS (S) | Pot Size | Price | Qty | |
|--------------------------------|-----------|---------|---|----------|-------|---------|--|
| M-D | FS,P | B,W | Running Serviceberry (Amelanchier stolonifera) | S | #2 | \$24.50 | |
| M-W | FS,P | B,P | Glossy Black Chokeberry (Aronia melanocarpa var. elata) | S | #2 | \$40.50 | |
| W-M | FS,P | P | Buttonbush (Cephalanthus occidentalis) | S | #2 | \$18.00 | |
| W-M | FS,P | B,W | Silky Dogwood (Cornus amomum) | S | #2 | \$18.00 | |
| M-D | FS,P | B | Gray Dogwood (Cornus racemosa) | S | #2 | \$23.00 | |
| W-M | FS,P | | Redosier Dogwood (Cornus sericea) | S | #3 | \$36.00 | |
| M-D | FS,P | B,W | American Filbert (Corylus americana) | S | #3 | \$21.00 | |
| M-D | FS,P,S | | Dwarf Bushhoneysuckle (Diervilla lonicera) | S | #2 | \$18.75 | |
| M-D | FS,P,S | | Common Witchhazel (Hamamelis virginiana) | S | #2 | \$27.00 | |
| R/W-M | FS,P | B | Female Winterberry (Ilex verticillata) | S | #2 | \$37.50 | |
| M-D | FS | B,D | Creeping Juniper (Juniperus horizontalis) | S | #2 | \$18.75 | |
| M-D | FS,P | B,W | Common Ninebark (Physocarpus opulifolius) | S | #2 | \$20.25 | |
| W-M | P | | Alderleaf Buckthorn (Rhamnus alnifolia) | S | #2 | \$12.75 | |
| M-D/WD | FS | B,P,D,W | Fragrant Sumac (Rhus aromatica) | S | #2 | \$21.00 | |
| M-D/WD | FS,P | B,P | Smooth Sumac (Rhus glabra) | S | #2 | \$20.25 | |
| M-D/WD | FS | B,P,W | Staghorn Sumac (Rhus typhina) | S | #2 | \$20.25 | |
| M-D | FS,P,S | B | American Black Currant (Ribes americanum) | S | #2 | \$21.75 | |
| M-D/WD | FS,P,S | B,D | Missouri Gooseberry (Ribes missouriense) | S | #2 | \$12.75 | |
| M-D | FS | B,P | Virginia Rose (Rosa virginiana) | S | #2 | \$12.75 | |
| M-D | FS,P,S | P,W | Thimbleberry (Rubus parviflorus) | S | #5 | \$23.00 | |
| W-M | FS,P,S | P | Shining Willow (Salix lucida) | S | #2 | \$15.00 | |
| W-M | FS,P,S | B,P,W | American Elderberry (Sambucus canadensis) | S | #2 | \$27.00 | |
| M/WD | FS,P,S | B,P,W | Scarlet Elderberry (Sambucus pubens) | S | #5 | \$27.00 | |
| W-M | FS,P | P | Meadowsweet (Spiraea alba) | S | #2 | \$18.00 | |
| M/WD | FS,P,S | | Bladdernut (Staphylea trifolia) | S | #2 | \$24.00 | |
| W-M/WD | FS,P,S | B,D | Common Snowberry (Symphoricarpos albus) | S | #2 | \$21.00 | |
| M/D | FS,P | B | Witherod Viburnum (Viburnum cassinoides) | S | #2 | \$27.00 | |
| M/WD | FS,P | B,P | Nannyberry Viburnum (Viburnum lentago) | S | #2 | \$25.50 | |
| M-D | FS,P,S | B | Rafinesque Viburnum (Viburnum rafinesquianum) | S | #3 | \$25.50 | |
| Shrubs - Column 1 TOTAL | | | | | | | |

(Carry Totals Forward to Page 1)

| Soil Type | Sun Light | Notes | VINES (V) & TREES (T) | Pot Size | Price | Qty | |
|---|-----------|-------|--|----------|-------|---------|--|
| W-M | FS,P | B,W | Red Maple (Acer rubrum) | T | #5 | \$75.00 | |
| R/M/WD | FS,P,S | B,W | Sugar Maple (Acer saccharum) | T | #5 | \$75.00 | |
| M/WD | FS,P,S | B | Mountain Maple (Acer spicatum) | T | #5 | \$82.50 | |
| M-D | FS,P | B | Allegheny Serviceberry (Amelanchier laevis) | T | #5 | \$82.50 | |
| M-D | FS,P,S | | Yellow Birch (Betula alleghaniensis) | T | #5 | \$75.00 | |
| M-D | FS,P | | Paper Birch (Betula papyrifera) | T | #5 | \$90.00 | |
| R/M/WD | FS,P,S | B,P,W | Musclewood (Carpinus caroliniana) | T | #5 | \$75.00 | |
| R/M/WD | FS | D,W | American Chestnut (Castanea dentata) | T | #5 | \$90.00 | |
| R/M/WD | FS,P | B,P,W | Pagoda Dogwood (Cornus alternifolia) | T | #2 | \$26.25 | |
| W-M | FS,P | B,P | American Beech (Fagus grandifolia) | T | #5 | \$90.00 | |
| M-D | FS,P | | Black Walnut (Juglans nigra) | T | #5 | \$75.00 | |
| M-D | FS | B,D | Oldfield Common Juniper (Juniperus communis var. depressa) | T | #2 | \$36.75 | |
| M-D | FS | B,D | Eastern Redcedar (Juniperus virginiana) | T | #2 | \$27.00 | |
| W-M | FS | | Tamarack (Larix laricina) | T | #5 | \$67.50 | |
| M-D | FS | B,P,W | Prairie Crabapple (Malus ioensis) | T | #5 | \$82.50 | |
| M-D/WD | FS,P,S | B | Ironwood (Ostrya virginiana) | T | #5 | \$82.50 | |
| M-D | FS | | Red Pine (Pinus resinosa) | T | #5 | \$67.50 | |
| M-D | FS | | Eastern White Pine (Pinus strobus) | T | #5 | \$52.50 | |
| M/WD | FS,P,S | | Eastern Cottonwood (Populus deltoides) | T | #5 | \$67.50 | |
| M-D | F | B,P,W | Black Cherry (Prunus serotina) | T | #5 | \$75.00 | |
| M-D | FS,P | B,P,W | Chokecherry (Prunus virginiana) | T | #1 | \$16.50 | |
| M-D/WD | FS,P | B,P | White Oak (Quercus alba) | T | #5 | \$90.00 | |
| W-M | P | | Swamp White Oak (Quercus bicolor) | T | #5 | \$90.00 | |
| D | FS | B,P | Hills Oak (Quercus ellipsoidalis) | T | #5 | \$90.00 | |
| M/WD | FS,P,S | B,P | Bur Oak (Quercus macrocarpa) | T | #5 | \$90.00 | |
| R/M/WD | FS,P | B,P,W | Red Oak (Quercus rubra) | T | #5 | \$90.00 | |
| W-M | FS,P | | Northern White Cedar (Thuja occidentalis) | T | #5 | \$75.00 | |
| R/M/WD | FS,P,S | P,W | Basswood (Tilia americana) | T | #5 | \$75.00 | |
| M-D | FS,P | B | American Bittersweet (Celastrus scandens) | V | #1 | \$15.00 | |
| M-W | FS,P | D,W | Virgins bower (Clematis virginiana) | V | #1 | \$18.00 | |
| M-D | P, S | B,P | Limber Honeysuckle (Lonicera dioica) | V | #2 | \$22.50 | |
| Vines and Trees - Column 2 TOTAL | | | | | | | |

(Carry Totals Forward to Page 1)

KEY

SOIL: **R** = Rich, **WD** = Well Drained, **D** = Dry, **M** = Mesic, **W** = Wet

NOTES: **B** = For Birds, **BF** = For Butterflies, **D** = Deer Resistant, **W** = Black Walnut Tolerant

SUNLIGHT: **FS** = Full Sun, **P** = Partial Sun, **S** = Shade

POT SIZE: **#1** = 1 Gallon, **#2** = 2 Gallon, **#3** = 3 Gallon, **#5** = 5 Gallon

PRE-ORDERS ONLY. NO trees or shrubs available for purchase the day of pickup. Trees and shrubs are NOT guaranteed.¹ For tree information go to: jnplants.com. If you are looking for trees and shrubs not listed on this order form, it may be possible to get a larger size (10 gal) of the species from the Nursery. Prices will be substantially higher as well. Call Everett Grosskopf at 920-470-6325 for more info.

¹The Wild Ones Fox Valley Area Chapter makes no warranty on merchantability or other warranties express or implied. All material is sold as being true to form and species, and it is in good condition. All orders are subject to crop conditions. The order is void should injury befall the nursery stock from natural events, inventory error, or other cause beyond our control prior to pick-up. In this case, purchaser may choose other species of equal value or request a refund.



Memorandum

To: Board of Public Works

From: Mayor Merkes, Mayor
Laura Jungwirth, Director of Public Works

Date: February 3, 2022

Re: Street Lighting Upgrades

BACKGROUND

The City of Menasha, in conjunction with the City's Sustainability Board and WPPI Energy, lead a series of upgrades to its infrastructure reducing electrical use by over 1,000,000 kWh annually. The majority of these savings resulted from a 2011 upgrade of street lighting in the downtown and on Doty Island from HPS to induction and a 2016-18 initiative to upgrade street lighting in the western portion of the City from HPS to LED. In addition, solar installation on the new public works facility provides significant savings.

There are approximately 500 HPS streetlights remaining in the Menasha Utilities areas of the City and approximately 62 in the WE Energies portion of the City.

Both Focus on Energy and WPPI Energy provide incentives for the installation of energy-reducing fixtures and equipment. In addition, WPPI Energy provides 0% interest financing up to \$500,000 in each member community, of which Menasha has approximately \$200,000 available. There is also a 10% bonus available to the City for 2022 projects that was realized following a planning meeting with Focus on Energy Staff.

ANALYSIS

The City is proposing to apply for a two year project to update 361 street lights with LED fixtures; 156 in year one. These fixtures are the decorative lights located east of Oneida Street. Overall the project would reduce energy consumption by 199,000 kWh annually and reduce fixed costs by \$11,811 annually.

It should be noted that there is no requirement to complete the second year of the project if the budget doesn't allow for funding in 2023. Applying for the second year locks in incentives at the current rate should Focus on Energy lower them in 2023. We can always reapply if the 2023 rate is more favorable.

RECOMMENDATION

Motion to recommend to the Common Council to upgrade 156 decorative streetlights from HPS to LED in 2022 using funding from the WPPI Member Loan Program with the savings from energy and fixed costs covering loan payments and as shown in the 2022 budget.

| LABOR COSTS @ \$115 each-remove/install | | | | | Monthly Fixed charges-existing Lights | | | | | Annual | | Energy Savings | | | | |
|--|-------|-----------|-----------|------------|---------------------------------------|------------------|----------|-------------|-----------|-----------|-----------|----------------|------------------|--------|----------|----------|
| Labor & Materials Costs | | | | | Count | Cost | | | monthly | wattage | Cost | Rate | Saved/annual kWh | | | |
| Remove/Install | 36 | 100W | \$115 | \$4,140 | Opt A | 36 | \$ 10.25 | \$ 369.00 | 100W | \$ 4,428 | | | 13,400 kWh | 0.0534 | \$ 716 | 100WHPS |
| | 116 | 150W | \$115 | \$13,340 | | 116 | \$ 10.75 | \$ 1,247.00 | 150W | \$ 14,964 | | | 70,900 kWh | 0.0534 | \$ 3,786 | 150WHPS |
| | 4 | 250W | \$115 | \$460 | | 4 | \$ 12.25 | \$ 49.00 | 250W | \$ 588 | | | 3,900 kWh | 0.0534 | \$ 208 | 250WHPS |
| Total Labor | | | | \$17,940 | | | | | | | | | 88,200 total kWh | | \$ 4,710 | Total/yr |
| Material Cost | 36 | Fix | \$ 466 | \$16,776 | | | | | | | | | | | | |
| | 116 | Fix | \$ 466 | \$54,056 | | | | | | | | | | | | |
| | 4 | Fix | \$ 466 | \$1,864 | | | | | | | | | | | | |
| | | | | \$72,696 | | | | | | | | | | | | |
| Total Labor & Materials | 100W | | | \$20,916 | | | | | | | | | | | | |
| | 150W | | | \$67,396 | | | | | | | | | | | | |
| | 250W | | | \$2,324 | | | | | | | | | | | | |
| Total cost of Labor/Materials for all lights | | | | \$90,636 | | | | | | | | | | | | |
| estimated cost of unknowns | | | | | | | | | | | | | | | | |
| | | | | | Total current annual fixed costs | | | | | \$ 19,980 | | | | | | |
| | | | | | Proposed Monthly Fixed charges-LEDs | | | | | Annual | | | | | | |
| | | | | | Opt B | 156 | \$ 5.50 | \$ 858 | 38-75 | \$ 10,296 | | | | | | |
| | | | | | Total LED fixed costs | | | | | \$ 10,296 | | | | | | |
| | | | | | Savings | | | | | Current | \$ 19,980 | | | | | |
| | | | | | | | | | | LED | \$ 10,296 | | | | | |
| | | | | | Total annual Fixed cost savings | | | | | \$ 9,684 | | | | | | |
| FOE Incentives | | | | | UMB Incentives- Options A,B,C | | | | | | | | | | | |
| | Count | Incentive | total FOE | 10% bonus | | Count | UMB | | UMB + FOE | | | | | | | |
| | 0 | \$ - | \$ - | | | | | | | | | | | | | |
| Low output | 156 | \$ 15 | \$ 2,340 | \$ 234.0 | | 100 W | 36 | \$ 536 | \$ 536 | | | | | | | |
| | | | | | | 150W | 116 | \$ 2,836 | \$ 5,176 | | | | | | | |
| | | | | | | 250W | 4 | \$ 156 | \$ 156 | | | | | | | |
| | 0 | \$ - | \$ - | | | Focus Bonus | | | \$ 234 | | | | | | | |
| Total FOE Incentives | | | \$ 2,340 | \$ 2,574.0 | | Total Incentives | \$ 3,528 | | \$ 6,102 | | | | | | | |
| Based on 2021 incentive level/ | | | | | | | | | | | | | | | | |
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|--------------|--|
| Project: | 2023 Plan (Year 2) |
| Description: | LED Ornamental Street Lighting Energy Estimation |
| Date: | 2023 installation period |

| PROJECT | EXISTING FIXTURE | | | | |
|------------------------|------------------|-------------|--------------|--------|-------------|
| Room or Area | Qty. | Description | Annual Hours | | Input Watts |
| | | | On-Pk | Off-Pk | |
| ornamentals | 62 | 100 W HPS | 372 | 3,734 | 130 |
| ornamentals | 143 | 150 W HPS | 372 | 3,734 | 188 |
| Total Fixtures: | 205 | | | | |

| SAVINGS | | | |
|------------------------------|---------------------------------|---------|--------|
| Reduced kW ^[a] | Annual kWh ^[b] Saved | | |
| | On-Pk | Off-Pk | |
| 5.6 | 2,100 | 21,100 | 23,200 |
| 21.3 | 7,900 | 79,600 | 87,500 |
| 27 | 10,000 | 100,700 | |
| | | 110,700 | kWh/yr |

- [1] Annual Dusk to Dawn hours calculated edoc#10968
- [2] Fixture cost from Joint Purchasing Sept 2021
- [3] Labor charges from Melanie based on last project
- [4] No model selected yet for 400W HPS replacement. Estimated
- [5] 400W HPS- may be removed
- [6] Focus incentives based on 2021 catalog
- [7] Unknown wattages estimated based on similar LED models
- [8] Does not include any pole replacement costs

[illegible]

PV Solar third party finance

Discussion with:

Mark Hanson PhD, LEED BD+C
Director of Sustainable Services
Hoffman Planning, Design & Construction, Inc.
608.692.1915 mobile
mhanson@hoffman.net | www.hoffman.net

Potential projects on roofs:

- PWF 70,000 (partially used)
- Police 25,000
- Library 30,000
- Utility 20,000
- Clearwell / Wintz Park

Potential projects on ground:

- Province Terrace pond
- CTH N substation property
- 441 Substation property & DOT pond property

Considerations:

200kwh and up make most sense for investors

Investors take tax credits (minimum 6 years)

Projects are property tax exempt being owned by municipality

Ground mount often gets better results due to less snow accumulation also better for public marketing when it can be seen

Utility has the right to decide if they will allow interconnect

Projects with battery or micro-grid do better on grant applications

This group has two recent municipal utility projects Eagle River & Clintonville

This group hasn't done projects for a municipal utility where the production would be owned by the utility behind the meter (self generation), but thinks that it could be modified to do this.

Average return on investment is 10-12 years

Projects are designed so that there is a guaranteed production that will cover the cost of the lease/loan payments annually

Process if we wish to continue:

Phase I – determine if sites are good candidates for the project, determine size, determine grant opportunities, determine if utility will allow interconnect. Determine if third party investors are interested

Phase II – create RFP & bid project

Phase III – construction and oversee first year of operations of system

Phase I cost about \$10,000

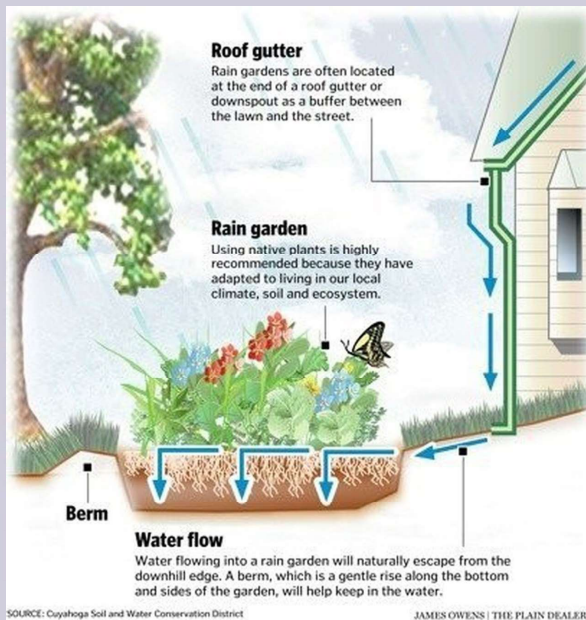
Total cost about \$30,000

Full cost can be rolled into third party finance

Rain Gardens

A **rain garden** is a shallow depression planted with native plants. It temporarily holds and soaks in stormwater runoff from hard surfaces such as a roof, driveway, street or parking lot. This reduces flooding, keeps pollutants out of local water systems, and brings beauty and wildlife to landscapes.

Rain gardens protect our rivers, lakes, and streams by *filtering pollutants found in stormwater* and by recharging groundwater.



When it rains, water runs off hard surfaces like concrete and pavement. This stormwater picks up pollutants like fluids from cars, pet wastes, and lawncare chemicals. The polluted water can then flow into storm drains or directly into our lakes, streams, and rivers. Rain gardens **slow down the rush of stormwater**, allowing the water to be filtered by plants and soak into the soil. This helps remove pollutants and

recharge our groundwater aquifers.

By using native plants when creating rain gardens, their deeper roots help water soak into the soil instead of becoming runoff. Native plants also provide habitat for wildlife.

Rain gardens **do not grow mosquitoes**. Mosquito larvae need a week or more of standing water to mature, and rain gardens are designed to absorb rainwater in 48 hours or less.



We have found that trying to limit paragraphs and words on signage can improve the readers experience. The two parts to this sign have a lot of information and is a lot to read. Here are some thoughts on how we could consolidate these paragraphs. The first paragraph does a nice job of quickly stating what a rain garden does. Then in place of the second paragraph we suggest having a rain garden fact list something like this.

Rain Garden Facts:

- Stormwater can carry pollutants such as vehicle fluids and lawn care chemicals.
- Those pollutants travels directly through our storm drains and into our lakes and rivers.
- Rain gardens slow down stormwater rush and allow water to soak back into soil and aquifers
- Native plants help absorb water and provide wildlife habitat.
- Rain gardens DO NOT grow mosquitos because they absorb water in 48 hours or less.

Raindrop message is fairly redundant to what is said on other parts of the signs. What about a quick take home message on the raindrop something like “Help us protect our waterways” or “Help Clean Your Drinking Water”

We love the idea of adding a “How you can help” section to some of these signs. Quick and easy things for people to change with their own habits or yards to work towards the same goal.

- Pick up pet waste.
- Minimize use of fertilizers, pesticides, herbicides.
- Direct downspouts away from paved surfaces; consider planting a rain garden to collect runoff.
- Clean grass clippings, leaves, and other debris out of curb line and driveway.
- Never pour anything down storm drains.

Interested in starting your own rain garden? Visit your local nature center. Heckrodt Wetland Reserve would be happy to help.

We have a wonderful group of photographers that provide Heckrodt with great pictures. When they donate the pictures to HWR we are able to use them for outreach and interpretation. If we decide to use any of these for city signage, we would just like to see some kind of acknowledgement of the partnership with HWR so that if a photographer saw their photo being used, they would know it came from their photos donated to Heckrodt.



Stormwater Wet Pond

Stormwater is the **runoff from rain and melting snow**. In grassy or wooded areas, plants help slow runoff and absorb water. Rooftops, parking lots, streets and other solid surfaces block stormwater from soaking into the ground. This increases the amount of runoff, resulting in larger, faster floods.

Stormwater management is important to *reduce flooding and to protect our waterways from pollution.*



The Province Terrace Pond is a wet pond serving an area of 162.8 acres. Stormwater ponds are designed to capture runoff from impervious surfaces helping mitigate flooding and improve water quality in urban areas. Stormwater wet ponds capture pollutants that are picked up from impervious surfaces such as sediment, oil, salt, and nutrients associated with fertilizers and plant materials such as grass and leaves. This pond captures approximately 18,000lbs of sediment annually or about one dump truck load every two years



Students helping build awareness



Litter collected in a grate after a storm

First paragraph looks good. Only possible addition would be after the words solid surfaces put in (impervious surfaces).

Rain drop message looks great.

We would suggest changing the second paragraph into more of a bulleted fact/benefit section. Something like this.

Province Terrace stormwater pond benefits/facts:

- . Stormwater ponds collect water that runs off impervious surfaces.
- . Province Terrace pond collects stormwater from 163 surrounding acres.
- . Stormwater ponds help mitigate flooding.
- . Pollutants such as road salt, sediments, lawn chemicals and fertilizers, and vehicle fluids are captured in stormwater ponds.
- . This helps to improve water quality in urban areas.
- . Province Terrance pond captures 18,000 pounds of sediment every year, which is equivalent to half of a dump truck.

We love the idea of adding a “How you can help” section to some of these signs. Quick and easy things for people to change with their own habits or yards to work towards the same goal.

- . Pick up pet waste.
- . Minimize use of fertilizers, pesticides, herbicides.
- . Direct downspouts away from paved surfaces; consider planting a rain garden to collect runoff.
- . Clean grass clippings, leaves, and other debris out of curb line and driveway.
- . Never pour anything down storm drains.

Wetlands

The Menasha Conservancy is part of what was once a much larger area of wetlands in Menasha. Wetlands are areas where water covers the soil for at least part of the year. They can contain both areas of grassy plants and areas with trees and shrubs. These wetlands soak up excess water during wet seasons and slowly release it during dry seasons to Lake Winnebago and the Fox River after trapping pollutants and filtering excess nutrients.

Wetlands are the earth's filter system: they *naturally clean* the water passing through them.



Sedges, grasses and reeds are dominant in wetlands many also have blue flag iris, marsh milkweed, mint and goldenrod and aster.



Turtles, frogs, salamanders, snakes, insects, and other animals also live in or use wetlands.



Wetlands, which include bogs and alder thickets, are characterized by woody shrubs and small trees such as tag alder, bog birch, willow and dogwood.



Wetlands are spawning grounds for fish like pike and muskies; migration and breeding habitat for waterfowl, cranes, and songbirds; and habitat for deer, otter, beaver, and mink.

We really liked the info in the first paragraph. Just made some tweaks to the way the first sentence was worded to make it consistent with our wetland signage. Condensed the paragraph slightly. Then we really like the idea of having quick bulleted sections vs additional paragraphs.

The Menasha Conservancy was once part of a vast wetland eco system on the north shore of Lake Winnebago. Wetlands are areas where water covers the soil for most of the year and are often found connected to ponds, lakes, and riverbeds. These wetlands soak up excess water during wet seasons and slowly release it during dry seasons to Lake Winnebago and the Fox River after trapping pollutants and filtering excess nutrients.

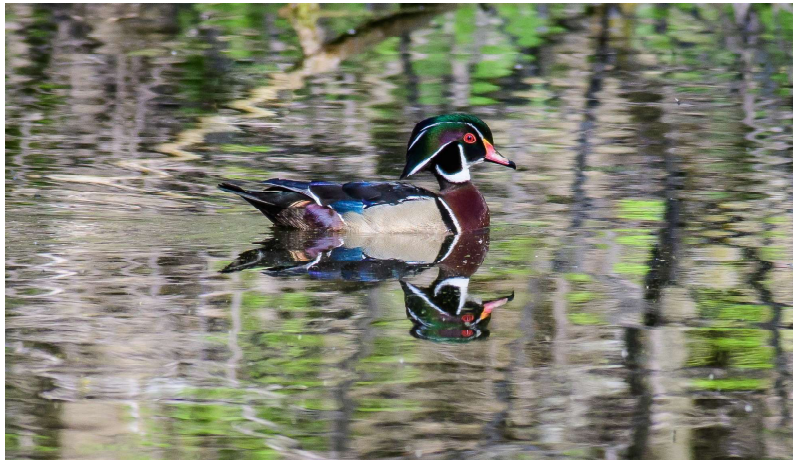
We like the idea of having a “Wetland Facts” section. With bullets.

- In Wisconsin, 75% of wildlife species use wetlands during some stage of their life cycle.
- Wetlands are critical to many song birds, waterfowl, mammals, fish, reptiles, and insects.
- Wildlife breed, feed, and raise their young within the protection of wetlands.
- Sedges, grasses, rushes, and woody species are dominant in wetlands.
- Wetlands are home to many flowering plant species.
- The tangle of native plants and roots act like a filter, removing sediments from the water.
- When wetlands are destroyed, the many creatures that depend on them often disappear too.

Maybe a “be on the look out for” common things seen in the wetland section:

- White-tailed deer
- Muskrat
- Blue Flag
- Red Twig Dogwood
- Painted turtle
- Leopard frog
- Wood duck
- Great Blue Heron
- Dragonflies

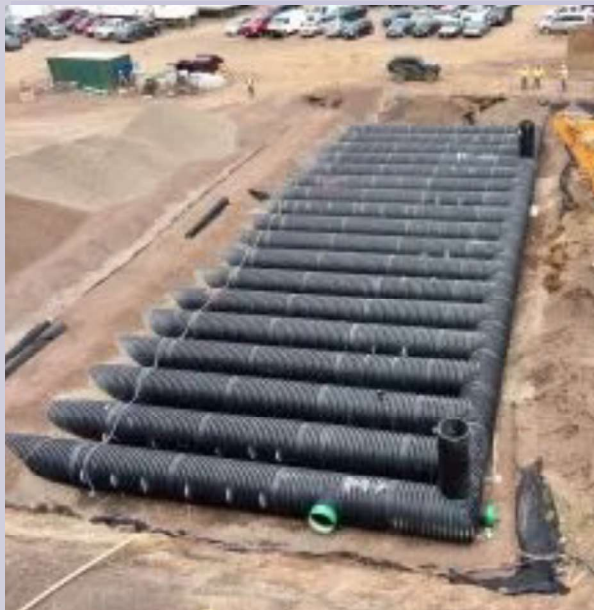
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Underground Storm Water

Underground storm water retention/detention systems capture and store runoff in large pipes or subsurface structures. Storm water enters the system through a riser pipe connected to a catch basin or curb inlet and flows into a series of chambers or compartments for storage. Once a storm event ends, it can be released through an outlet pipe.

Stormwater management is important to *reduce flooding and to protect our waterways from pollution.*



Advantages:

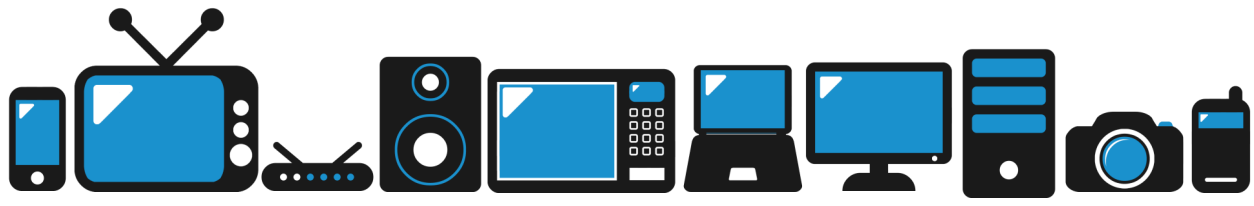
- Captures and stores runoff, helping meet the requirement at newly-developed sites
- Ideal for areas where ponds or wetlands would not work
-



Students helping build awareness



Litter collected in a grate after a storm



ELECTRONICS RECYCLING EVENT

SATURDAY, MAY 7TH, 2021 8:00AM - 12:00PM

NEW LOCATION!!

MENASHA PUBLIC WORKS – 455 BALDWIN ST

- FREE ELECTRONICS -

Please remove all batteries and bulbs from your electronics prior to attending the event

| | | | |
|-----------------|-------------------|------------|----------------|
| Computer Towers | Audio Equipment | Laptops | Cell Phones |
| Satellite Boxes | Power Supplies | Routers | Record Players |
| Circuit Boards | iPods/MP3 Players | Telephones | Gaming Systems |
| Cords/Wires | Christmas Lights | Tablets | And More... |

We unfortunately do not accept smoke detectors, thermostats, or thermometers

- CHARGEABLE ELECTRONICS -

We accept cash, debit card, credit card, or check. Checks can be made out to 'Recycle That Stuff'

| | | | |
|-----------------------------------|-----------|--------------------------|-----------|
| Flat and Tube Computer Monitors | \$20 each | Microwaves | \$15 each |
| Flat and Tube TVs (29" and under) | \$20 each | Dehumidifiers | \$20 each |
| Flat and Tube TVs (30" - 49") | \$40 each | Dorm-Size Refrigerators* | \$20 each |
| Flat and Tube TVs (50" and over) | \$60 each | Window Air Conditioners* | \$20 each |
| Wood Console or Projection TVs | \$60 each | Large Printers/Copiers | \$15 each |

*We unfortunately do not accept full-size refrigerators, full-size freezers, or central air conditioning units

For your safety and ours, please:

- ✓ Wipe down all materials prior to the event
- ✓ Put all materials in a trunk, truck bed, or trailer
- ✓ Stay in your vehicle at the event, we will unload
- ✓ No batteries or light bulbs

Event Questions? 920.955.3760



RecycleThatStuff.com
Resource Solutions



Event is held rain or shine!



2022 Meeting Schedule

| THURSDAYS 4:00 PM Sustainability Board |
|--|
| January 27 |
| February 24 |
| March 24 |
| April 28 |
| May 26 |
| June 23 |
| July 28 |
| August 25 |
| September 22 |
| October 27 |
| November 24 |
| December 22 |

****Highlighted dates are to-be-determined (current dates are either on or close to City recognized holidays).****

City Employee Contacts

Mayor Don Merkes – dmerkes@ci.menasha.wi.us

Valerie Neuman, Administrative Assistant – vneuman@ci.menasha.wi.us