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 Common Council Chambers 455 Baldwin Street, Menasha Public Works Facility Conference Room April 28, 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 APPROVEa) Minutes of the March 24, 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 https://files.constantcontact.com/ea808663201/d1b8c002-dee5-469b-9e83-4a29c33cd795.pdf
      - b. Sustainability Board Ordinance Revision
  - 2. Transportation
    - a. Bike Friendly Community Designation
    - b. Complete Streets Policy
  - 3. Land Use
  - 4. Natural Resources
    - a. 2022 Arbor Day Celebration
    - b. Natural Landscaping & Maintenance
    - c. R-13-22 No Mow May
  - 5. Energy
    - a. Public Works Facility Solar

https://www.cityofmenasha-wi.gov/departments/public\_works/public\_works\_facility - solar\_power.php

- 6. Water
  - a. Stormwater <u>https://www.cityofmenasha-</u> <u>wi.gov/departments/public\_works/stormwater\_programs\_and\_information/index.php</u>
- 7. Waste
  - a. 2022 Electronics Recycling Event May 7 and Sept 21, 2022
- 8. Health
  - a. Farm Fresh Market
- 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 March 24, 2022 Minutes

- A. CALL TO ORDER Meeting Called to order by Kyler Arndt at 4:00PM
- B. ROLL CALL/EXCUSED ABSENCES Attending: Kyler Arndt, Kyle Coenen, Roger Kanitz, Kelsey Perry Also Attending: Mayor Donald Merkes
- C. PUBLIC COMMENTS ON ANY MATTER OF CONCERN TO THE SUSTAINABILITY BOARD None
- D. MINUTES TO APPROVE Motion by Kyle Coenen second by Roger Kanitz to approve the minutes of 2-47-2022. Motion Caries
- E. ACTION ITEMS None
- F. DISCUSSION
  - 1. Sustainability Plan, Benchmarking and Comparison with other communities
    - a. Energy Innovation Grant and Comprehensive Energy Plan
      - Comprehensive Energy Plan grant awards announcement is expected in April 2022, if successful the implementation period to write the plan is expected to be spring of 2022 2023. LED fixtures ordered for 2022 upgrades on east of Oneida lighting, trestle, and PWF trail to be installed later this year.

Solar Garden system update desired at future Sustainability Board meeting.

- 2. Transportation
  - a. Bike Friendly Communities Designation

School district has interest in helping with student volunteers to do a survey of bike parking within the community. They are verifying how they might be able to structure this. This data would be used determine if zoning ordinance changes could be proposed. Contact was made with FVTC there is preliminary interest in fabrication of bike racks for Menasha as part of their class programming. Bird Scooter pilot has been presented to Common Council, MOU is in development for approval with expected implementation in 2022. Menasha, Neenah, Appleton and Fox Crossing are currently working with Bird for a potential program in their community, there is no cost to the community riders pay all costs.

- 3. Land Use
  - a. Housing type and value data not readily available with current GIS system it could be compiled as the GIS system is expanded.
  - b. Canopy Cover data was reviewed and noted that Menasha has good percentage compared to other peer communities. A goal should be set as part of an urban forestry management plan with implementation plan to achieve. Would be interested in having the City Arborist share planning and maintenance of our forestry assets at a future meeting.
- 4. Natural Resources
  - a. 2022 Arbor Day Celebration

The City's 39<sup>th</sup> annual Arbor Day celebration is planned for April 29<sup>th</sup> 2022 in the area north and west of Menasha High School. This year's theme will be career opportunities in Urban Forestry, introducing students with hands on activities in arboriculture.

b. Natural Landscaping and Maintenance

There are grants and educational opportunities for watershed shoreline planting and naturalization projects. Kelsey will check if there are current grant possibilities that could be used for 2023 planting of Banta Point. Plants for existing rain gardens are ordered from Wild Ones plant sale. Wild Ones continues to be interested in educational opportunities for staff and public. Sustainability Board members interested in helping with extra plant transfers from ECWRPC rain garden to other City rain gardens.

c. No Mow May has been practiced in Appleton for 3 years, program implemented in 20 communities in Wisconsin. Studies have shown that bee populations have increased 5 fold and diversity 3 fold. Marci Fry contacted City to show support for No Mow May. Appleton Ald. Del Toro was contacted and can provide additional information if desired.

Sustainability Board recommends that City consider implementing No Mow May for 2022 with reasonable expectations as provided in packet including registration, signage, and no past citations/notices for tall grass and weeds

- 5. Energy
- 6. Water
  - a. Stormwater Educational Signage

Board reviewed updated signs and provided minimal/grammatical revisions. Recommended separate background colors for each type of sign (wetland, raingarden, pond, underground). Kelsey will match photos that Heckrodt has available to spaces on the signs. Once photos are in place signs will be forwarded to graphic designer for final layout.

- 7. Waste
  - a. 2022 Electronics Recycling Event May 7 and September 21, 2022
    Kyle will be distributing flyers to area businesses. Kyler will volunteer day of. Roger and Kathy will review electronic email distribution list.

#### 8. Health

 Farm Fresh Market
 COVID has been hard on the market for the past few years. There is some interest however there are not final commitments at this time.

#### G. Future Meeting Dates

April meeting will likely be held at the Public Works Facility, 455 Baldwin St, and include DPW Director Jungwirth

#### H. ADJOURNMENT

Motion by Roger Kanitz second by Kyle Coenen to adjourn at 5:50PM Motion Carries

Topic #	Topic Area	Topic Description	Target Audience	Planned Activity	Mechanism	Primary Lead	
	Illicit Discharge Detection and		General Public	Illicit Discharge Reporting Page on City's Stormwater Website	Passive	City	
1		Promoto dataction and	Public Employees	ees Preventing Storm Water Pollution Flyer at City Garage		City	
		elimination of illicit discharges and	Residents	8 Steps to a Clean, Safe, and Beautiful Menasha Waterfront Flyer on City Website	Passive	City	
		with such discharges from	Residents	Resident Action Page on City Website	Passive	City	
	Elimination	municipal separate storm sewer system.	Residents	City Storm Water Permit Page on City Website	Passive	City	
			Residents	One on One Communication	Active	City	
			General Public	Fox Wolf Watershed Cleanup Event	Active	City	
			Residents	A Waterway in Your Front Yard Ditch Flyer on City Website	Passive	City	
			Residents	Carpet Cleaning Flyer on City Website	Passive	City	
			Residents	Fish Don't Swim in Chlorine Flyer on City Website	Passive	City	
			Residents	Power Washing Flyer on City Website	Passive	City	
			Residents	Kids Can Help Too Flyer on City Website	Passive	City	
	Household	Inform and educate the public about the proper management of	Residents	8 Steps to a Clean, Safe, and Beautiful Menasha Waterfront Flyer on City Website	Passive	City	
	Hazardous waste	materials that may cause	Residents	Resident Action Page on City Website	Passive	City	Γ
2	Disposal / Pet	stormwater pollution from sources	Residents	Household Hazardous Waste Flyer on City Website	Passive	City	Γ
	waste	including automobiles, pet waste,	Residents	Good Dog, Good Owner Flyer on City Website	Passive	City	Γ
	Wanagement /	household hazardous waste and	Residents	A Waterway in Your Front Yard Ditch Flyer on City Website		City	
	venicie wasning	household practices.	Residents	City Storm Water Permit Page on City Website	Passive	City	
			Students	Future Fox Cities Career Expo with NEWSC Materials	Active	City	
			Public Employees	Preventing Storm Water Pollution Flyer at City Garage	Passive	City	
			General Public	Storm Drain Stenciling Page on City Website	Passive	City	
			General Public	Storm Drain Stencil Rentals	Active	Heckrodt	
			Businesses	Parking Lot Maintenance Flyer on City Website	Passive	City	
			Residents	Kids Can Help Too Flyer on City Website	Passive	City	
			Public Employees	Preventing Storm Water Pollution Flyer at City Garage	Passive	City	
	Yard Waste Management / Pesticide and Fertilizer Application		Residents	Earth Day Volunteer Storm Drain Cleaning	Active	NEWSC	
			Residents	The Perfect Lawn Flyer on City Website	Passive	City	
			General Public	The Perfect Lawn Flyer at Board of Public Works Meeting	Active	City	
		Promote beneficial onsite reuse of	Residents	Leave Your Leaves on Land Flyer on City Website	Passive	City	
3		leaves and grass clinnings and	Residents	Ice and Snow Control Flyer on City Website	Passive	City	
		proper use use of lawn and garden fertilizers and pesticides.	Residents	8 Steps to a Clean, Safe, and Beautiful Menasha Waterfront Flyer on City Website	Passive	City	
			Residents	Fox Cities Viewpoint - Lawn Fertilizers and Raking Leaves Flyer on City Website	Passive	City	
			Residents	The First Steps in Achieving a Beautiful Lawn and Good Housekeeping Outside? Flyer on City Website	Passive	City	
			Residents	Resident Action Page on City Website	Passive	City	
			Residents	A Waterway in Your Front Yard Ditch Flyer on City Website	Passive	City	
			Residents	Grass Clippings Flyer on City Website	Passive	City	
Λ	Stream and	Promote the management of streambanks and shorelines by	Residents	8 Steps to a Clean, Safe, and Beautiful Menasha Waterfront Flyer on City Website	Passive	City	
4	Management	riparian landowners to minimize erosion and restore and enhance	Residents	Restore Your Shore Flyer on City Website	Passive	City	

Comments	٦
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			Residents	Rain Garden How to Manual on City Website	Passive	City	
5			Residents	8 Steps to a Clean, Safe, and Beautiful Menasha Waterfront Flyer on City Website	Passive	City	
		Promote infiltration of residential	Residents	Rain Garden - The Garden with a Goal Flyer on City Website	Passive	City	Τ
	Residential	stormwater runoff from rooftop	Residents	Resident Action Page on City Website	Passive	City	Γ
	Infiltration	downspouts, driveways, and	Residents	The Perfect Landscape Flyer on City Website	Passive	City	Γ
		sidewalks.	Residents	A Waterway in Your Front Yard Ditch Flyer on City Website	Passive	City	Γ
			Residents	Sample Rain Gardens Planting Flyer on City Website	Passive	City	Γ
			Residents	Link to WDNR Rain Garden Page on City Website	Passive	City	Γ
			Residents	Rain Barrel Flyer on City Website	Passive	City	
			Contractors	Construction Information Page on City's Stormwater Website	Passive	City	Γ
			Public Employees	Fox-Wolf Watershed Conference	Active	City	
		Inform and educate those	Contractors	Silt Fence Flyer on City Website	Passive	City	
	Construction	responsible for the design,	Contractors	Storm Drain Inlet Protection Flyer on City Website	Passive	City	
	Sites and Post-	installation, and maintenance of	Contractors	Ditch Check Flyer on City Website	Passive	City	
6	Construction	construction site practices and	Contractors	Concrete Washout Flyer on City Website	Passive	City	
	Storm Water	stormwater management facilities	Contractors	Erosion Control Handout in Building Inspection Handout Package	Passive	City	
	Management	on how to design, install, and	Developers	Erosion Control Permit Reviews	Active	City	
		maintain the practices.	Developers	Post Construction Storm Water Management Plan Reviews	Active	City	
			Developers	Post Construction Storm Water Management Reference Guide on City Website	Passive	City	
			Businesses	Business Information Page on City's Stormwater Website	Passive	City	Γ
			Businesses	Parking Lot Maintenance Flyer on City Website	Passive	City	
			Businesses	Trash and Dumpster Management Flyer on City Website	Passive	City	
			Contractors	Concrete Washout Flyer on City Website	Passive	City	
	Pollution Prevention		Businesses	Carpet Cleaning Flyer on City Website	Passive	City	
		Identify businesses and activities	Businesses	Resturant Management Poster on City Website	Passive	City	
		that may pose a stormwater	General Public	Pollution Prevention Tips Page on City's Stormwater Website	Passive	City	
7		contamination concern, and	Public Employees	Preventing Storm Water Pollution Flyer at City Garage	Passive	City	
/		educate those specific audiences on methods of stormwater	Residents	8 Steps to a Clean, Safe, and Beautiful Menasha Waterfront Flyer on City Website	Passive	City	
		pollution prevention.	General Public	Preventing Storm Water Pollution Flyer at Board of Public Works Meeting	Active	City	
			General Public	Fox Wolf Watershed Cleanup Event	Active	City	Γ
			Residents	City Storm Water Permit Page on City Website	Passive	City	
		Γ	Residents	Resident Action Page on City Website	Passive	City	
			Residents	A Waterway in Your Front Yard Ditch Flyer on City Website	Passive	City	
8	Green Infrastructure / Low Impact Development	Promote environmentally sensitive land development designs by developers and designers, including green infrastructre and low impact development.	Developers	One on One Communication	Active	City	

Attended by Josh Gerrits, Civil Engineer
Discuss individual projects throughout the year

#### SEC 2-4-16 Sustainability Committee

- (a) Composition. The Sustainability Committee shall consist of seven (7) persons appointed by the Mayor and confirmed by the Common Council who are either residents of the City, own property in the City, work in the City, or go to school in the City.
- (b) Appointment. Six (6) of the members shall be citizen members and one (1) member shall be an Alderman. Citizen members shall hold office for a term of two (2) years with two (2) members appointed each year. The alderperson member shall be appointed annually at the Council's organizational meeting.
- (c) Duties. The Committee shall make recommendations to the Common Council or another Committee, Board, or Authority regarding sustainability practices including: transportation, natural resources, energy use, water, waste management, and healthy communities. Actions by the Board are advisory requiring approval of the governing body or budget for implementation.



#### **City of Menasha Complete Streets Policy**

#### **Background**

East Central Wisconsin Regional Planning Commission (ECWRPC) has long been a proponent of creating a multimodal, safe and efficient transportation system that ensures accessibility to all roadway users. In 2009, ECWRPC started the state's first regional Safe Routes to School Program. This program works with over 150 schools in 33 districts to make it safer and more appealing for students in grades K-8 to walk and bicycle to school. In 2012, ECWRPC received funding from the Wisconsin Department of Transportation to create a bicycle and pedestrian plan for the Appleton (Fox Cities) Transportation (MPO) (Calumet, Outagamie, and Winnebago counties). The purpose of this plan was to identify gaps in the bicycle and pedestrian network and to provide recommendations for creating connectivity throughout the study area. The plan was approved in 2014, and a steering committee oversees the implementation of the plan.

ECWRPC works with transit agencies within the region to provide cost-effective transit services to meet the needs of the users and to comply with the Americans with Disabilities Act (ADA). These planning activities include Transit Development Plans (TDP), transit rider surveys, County Human Services-Public Transportation Coordinated Planning, and overall planning support. In addition to bicycle/pedestrian planning and transit planning, ECWRPC conducts a wide array of transportation planning services, including developing long-range transportation plans, regional highway corridor planning, freight planning, and travel demand modeling. Combined, these planning services aim to enhance and improve the transportation infrastructure, services, and safety for all roadway users throughout the region.

ECWRPC acknowledges the role planning plays in public health and the overall health outcome of those in our communities. Planning impacts "how people make choices of where to live and how to get around, their ability to access healthy foods and opportunities for physical activity...and more. In addition to the role planning plays in health, ECWRPC also recognizes the role planning plays on social equity and social determinants of health, including access to recreational opportunities, employment, health care, support systems, and education/vocational training. The increased emphasis on the role planning plays on health and equity has resulted in strong partnerships and collaborations between planners, health professionals, municipalities, and organizations.

The ECWRPC Complete Streets Policy was adopted in October 2018 and expands on these efforts by ensuring a cohesive and inclusive transportation network that will alleviate inequities, promote physical activity, mitigate traffic congestion, and increase roadway safety.

#### <u>Vision</u>

The City of Menasha will have an equitable, balanced, and effective transportation system where every roadway user can travel safely, efficiently, and comfortably while having many transportation options available for all users regardless of their modes of transportation.

#### Definition of Complete Streets

Complete Streets are roadways designed to safely and comfortably accommodate all users, including, but not limited to, motorists, cyclists, pedestrians, transit and school bus riders, delivery and service personnel, freight haulers, and emergency responders. "All users" includes people of all ages and abilities.

#### Context Sensitivity

While every street should be planned, designed, built, operated, and maintained for all users, there is no single design standard for Complete Streets and few streets will have separate accommodations for every mode. Each project must be considered both separately and as part of a cohesive network to determine the level and type of treatment necessary for all users. Each street and right-of-way design should be created to compliment the neighborhood in which it exists. Identifying best practices is essential when implementing improvements intended to fulfill this Complete Streets Policy.

The City of Menasha will take a flexible, innovative, and balanced approach to creating context-sensitive Complete Streets that meet or exceed national best-practice guidelines.

#### <u>Network</u>

A well-connected network provides more route choices that can disperse traffic across the network, provides alternatives when priority is given to a particular mode along one route, and provides route alternatives when a link in the network is obstructed or where barriers exist. A well-connected network also provides safe and convenient transitions from one mode of transportation to another, from one jurisdiction to another and from one type of infrastructure to another. Every effort should be made to provide a continuous, seamless network that is accessible to all users and modes of transportation.

Recognizing the regional connections throughout ECWRPC's jurisdiction and the uniqueness of each community, the City of Menasha will work with contractors, local units of government, and state agencies to ensure Complete Streets principles are implemented in a context-sensitive manner.

#### Applicability of this Policy

This policy applies to projects that involve new construction, reconstruction, maintenance, repair, resurfacing, rehabilitation, or planning of roads, trails, transit, and other transportation facilities that will use federal and state funds allocated through ECWRPC. Any roadway project that is included in the Transportation Improvement Program (TIP) after adoption of this policy will comply with this policy, and projects must help meet the performance measures set forth by the MPOs as listed in the TIP.

Even small projects can be an opportunity to make meaningful and lasting improvements. For example, adding or moving an edge stripe to create room for cyclists or painting a crosswalk adjacent to a bus stop are both relatively low cost improvements. Furthermore, the design of new or reconstructed facilities should anticipate future demand for bicycling, walking, and transit facilities and should not impede the provision of future enhancements.

Complete Streets projects are generally accomplished through adding the following to the public right-of-way: sidewalks, bicycle facilities (e.g. bike lanes, sharrows, wayfinding signs), ADA-compliant curb ramps and bus stops, trails, and any other reasonably applicable facilities to assist in multimodal uses.

#### **Requirements**

- Each project will use the most appropriate design standards and procedures. For projects using MPO-attributable federal funding, it will be necessary to meet or exceed standards and procedures acceptable to the Wisconsin and U.S. Departments of Transportation.
- Designs will include accommodation of all users and be sensitive to the context of the project setting. It is important to note that Complete Streets may look different for every project and road type.
- A systems approach will be used in developing roadways projects, especially to ensure coordination with adjacent and nearby jurisdictions, projects, and plans.
- If there is another project planned or in development near this project, the two should be coordinated to ensure consistency in the facilities serving the corridor.
- Connections should be made through "pinch points," such as overpassed, railroad crossings, and bridges. Logical termini should be chosen so that the project ends before a "pinch point."
- Public transit facilities will be designed with the goals of Complete Streets in mind by including sidewalks, bicycle connections, secure bicycle parking, crosswalks, and other considerations.
- Every project will ensure that the provision of accommodations for one mode does not prevent safe use by another mode.
- In dense residential and commercial areas, projects accommodating all users on both sides of the roadway will be considered unless a compelling reason exists.

#### **Design and Flexibility**

The latest design guidance, standards, and recommendations available will be used in the implementation of Complete Streets, including the most up-to-date versions of:

- The National Association of City Transportation Officials (NACTO) Urban Bikeway
  Design Guide
- The NACTO Urban Street Design Guide
- American Association of State Highway and Transportation Officials (AASHTO)
  - A Policy on Geometric Design of Highway and Streets
  - Guide for the Development of Bicycle Facilities
- The US Department of Transportation Federal Highway Administration's Manual on Uniform Traffic Design Controls (MUTCD)
- The Wisconsin Manual on Uniform Traffic Control Devices (WMUTCD)
- The US Department of Transportation Federal Highway Administration's Small Town and Rural Multimodal Networks Guide
- Wisconsin Department of Transportation's Bicycle Facility Design Handbook
- Wisconsin Department of Transportation's Facilities Design Manual (FDM)
- East Central Wisconsin Trail Wayfinding Guidebook
- Local and regional bicycle and pedestrian plans
- Transit development plans

The above resources will be consulted when planning and designing new roadways; however, innovative design options that have a comparable level of safety for users when compared to more traditional design options will not be precluded.

#### **Exceptions**

All federally-funded transportation projects will consider Complete Streets principles and possible options at the time of the initial application for funding. However, certain circumstances may exist where it is not possible to consider Complete Streets in roadway design. Such exceptions for federally-funded projects are limited to the following:

- Bicyclists and pedestrians are prohibited by law from using the roadway.
- The cost of establishing bikeways would be excessively disproportionate to the need or probable use. Excessively disproportionate is defined by FHWA and state statutes as bicycle and pedestrian facilities together exceeding 20 percent of the cost of the larger transportation project.
- Where sparsity of population or other factors indicate an absence of need.
- Detrimental environmental or social impacts outweigh the need for these accommodations.

#### **Definitions**

access way One or more connections that provide pedestrian or bicycle passage either between streets or between a street and a building, school, park, transit stop, or other destination. (Beaverton, Oregon) complete street A street that accommodates convenient and safe use by everyone, regardless of age, ability, or mode of travel. (MPO of Johnson County) context sensitive A design which balances safety, mobility and transportation needs, while preserving scenic, aesthetic, historical, environmental, neighborhood, design solution and community values and characteristics. (MPO of Johnson County) A street constructed where one has not previously existed. (MPO of new street Johnson County) reconstructed street An existing street that has rehabilitation done to it, which is estimated at 50% or higher of the cost of a new street (excluding utilities except storm sewer, and sub-drains), will also be considered a reconstructed street for the purpose of this policy. (MPO of Johnson County) right-of-way A right of way is a type of easement that allows a person to pass through another's land. (real-estate-law.com) The street is considered to be the subgrade, base, pavement, grading, street storm sewer, and sub-drains (i.e., all of the elements required to build, operate, and maintain the street). (MPO of Johnson County) street network A system of interconnecting lines and points that represent a system of roads for a given area. A street network provides the foundation for network analysis; for example, finding the best route or creating service areas. street maintenance Rehabilitation of a street, which generally restores the functionality of the existing street components (either primarily as a street project or in conjunction with underground public utility construction), without significantly altering or adding to those components, and which is estimated at less than 50% of the cost of a new street with those components. Utility construction (except storm sewer and sub-drains) is excluded from this cost calculation. transportation A list of upcoming transportation projects—covering a period of at least improvement four years. The TIP must be developed in cooperation with the state and public transit providers. The TIP should include capital and non-capital program (TIP) surface transportation projects, bicycle and pedestrian facilities and other transportation enhancements, Federal Lands Highway projects, and safety projects included in the State's Strategic Highway Safety Plan. (Federal Transit Administration)

## City of Menasha Public Works and Sustainability

Laura Jungwirth, Director of Public Works

## What are Complete Streets?

- Cohesive and Inclusive Transportation Network that alleviates inequities, promotes physical activity, mitigates traffic congestion and increases roadway safety
- Roadways designed to safely and comfortably accommodate users of all ages and abilities
- Accomplished by adding sidewalks, bicycle facilities, ADA accessibility at pedestrian crossings, trails and bus stops



## Complete Streets Policy

- Adopted by Menasha Common Council on September 7, 2021; mirrored ECWRPC's 2018 policy
- Network Connectivity provides multiple route choices and safe transitions between all modes of transportation



## Complete Streets Policy

- Policy applies to all projects utilizing federal and state funds allocated through ECWRPC, specifically the Transportation Improvement Program (TIP)
- Latest design guidance, standards and recommendations while implementing Complete Streets will follow state and federal agency regulations (NACTO, AASHTO, MUTCD, DOT FDM, etc.)
- Local regulations require updates to better incorporate Complete Streets in planning and construction efforts both by the City and with private developments



## Storm Water Regulations and Compliance

- 245 municipalities in Wisconsin are required to have a Municipal Separate Storm Sewer System (MS4) Permit if they have a populous of 10,000 or more
- Permit coverage is 5 years, at which point permits are updated and re-issued
- Annual reports are submitted to the WDNR to document progress and show compliance with permit requirements
- 7 core permit requirements

## WDNR MS4 General Requirements



## 1. Public Education and Outreach

Restaurant Stormwater Pollution A Best Management Practice Guide to

**Protecting Water Quality** 



- Required to address 8 topics per permit term and 6 topics annually
- Both active and passive participation required
  - 1. Illicit Discharge Detection and Elimination
  - 2. Household Hazardous Waste Disposal/Pet Waste Management/Vehicle Washing
  - 3. Yard Waste Management/Pesticide and Fertilizer Application
  - 4. Stream and Shoreline Management
  - 5. Residential Infiltration
  - 6. Construction Sites and Post-Construction Stormwater Management
  - 7. Pollution Prevention
  - 8. Green Infrastructure/Low Impact Development



## 1. Public Education and Outreach

- Information and flyers posted on City Website https://www.cityofmenasha-wi.gov/departments/public\_works/stormwater\_programs\_and\_information/index.php
- Quarterly flyers in Board of Public Works Meeting Agendas
- Quarterly flyers posted at Public Works Facility
- Brochure handouts to contractors and restaurant owners
- Outdoor informational signage at City-Owned Stormwater Facilities
- Partnerships with community groups (i.e. Fox Wolf Watershed Alliance, Northeastern WI Stormwater Consortium, Heckrodt Wetland Reserve, Doty Island Development Council, etc.) for events, workshops, and presentations

## 2. Public Involvement and Participation

#### Requirements

- One annual opportunity for public input on annual report, stormwater management program or ordinance update
- One annual volunteer activity for best management practice installation or maintenance, storm drain stenciling, community rain garden, clean up event, stream monitoring, workshops, etc.





## 2. Public involvement and participation

- 27 Menasha participants in 2021 FWWA Annual Cleanup Event
  - Event collected a total of: 873 bags of trash, 33 electronics, 26 tires, 2,375 plastic bags, 472 face masks, 1,763 straws, 151 bags of recycling
- Storm Drain Stenciling with Doty Island Cleanup Event, Spring 2021
- Girl Scout Troop Badges Storm Drain Stenciling, Fall 2021
  - Assembled stencil kits, wrote instructions, drafted location map
- Career Fair Presentations at Maplewood Middle School, Spring 2022
- Communication with Heckrodt Wetland Reserve Educational Coordinator to update storm drain stenciling program and partner on future events, activities and workshops
- Scheduled for FWWA Exhibiting Plan in 2022
- Promote resident participation for all stormwater activities



## 3. Illicit Discharge Detection and Elimination

#### • Requirements

- Active Illicit Discharge and Detection (IDDE) Ordinance
- Written procedure for identifying, reporting and responding to illicit discharges

https://www.cityofmenashawi.gov/departments/public works/stormwater programs and information/ill icit discharge reporting.php

• Field screening of storm sewer outfalls



## 4. Construction Site Discharge Control

- Active Construction Site Ordinance
- Site plan review process/procedures for tracking sites
- Construction site inspections and enforcement procedures



- Certified staff responsible for inspections and enforcement
- Sufficient inspection frequencies

https://www.cityofmenashawi.gov/departments/public works/stormwater programs and information/construction information.php



## 5. Post-Construction Storm Water Management

- Development sites require Post-Construction Storm Water Review and Permit
  - Stormwater Management Plan submitted by developer for review and approval by City
  - Owners shall sign long-term O&M Agreement for Stormwater Best Management Practices (BMP's)
  - Provides right of entry for city staff to inspect
- 61 Private Stormwater BMP's
- City staff inspects private facilities based on 5-year permit term



## 6. Good Housekeeping and Pollution Prevention – Municipal Facilities

- Inspections of City owned Storm Water BMP's completed annually
- Public Works Facility Staff performs maintenance and repairs as needed

	Wet Pond	Dry Pond	Biofilter	Proprietary Device
City BMP's	11	4	4	1
Private BMP's	24	15	21	1
Total	35	19	25	2



## 6. Good Housekeeping and Pollution Prevention – Municipal Facilities

- Annual Pollution Control Inspections of City Garage and Compost Site
- Salt and Deicing Usage (winter season 2021-2022)
  - Over 1,000 tons of salt and nearly 25,000 gallons of salt brine
- Leaf and Yard Waste Collection
  - Menasha is participant in 3-year USGS Research Project
- Street Sweeping and Catch Basin Cleaning
  - Over 600 hours sweeping
  - Over 2,000 catch basins cleaned



## Public Works Facility Solar Power

- Faith Technologies installed 122 kW PV System, August 2021
- \$175,800 project funded with WPPI Renewable Energy Loan Funding and the following grants:
  - \$15,000 Focus on Energy Rebate
  - \$20,000 WPPI Grant
  - \$38,000 PSC Energy Innovation Grant Applied for but not received
- Annual value of energy produced by system at \$13,300 with a Return on Investment of 10.5 years
- 11.36 MWh of system production thus far in April
- 139,180 kWh projected annually. Using April as a "typical" month, we will see 136,320 kWh annual production
  - 49.24 MWh solar production from October 2021-April 2022



**Environmental Benefits** 

CO2 Emission Saved 75.935.19 lb



#### What is Storm Water?

Storm water is water from precipitation that flows across the ground and pavement when it rains or when snow and ice melt. The water seeps into the around or drains into what we call storm sewers. These are the drains you see at the street corners or at low points on the sides of the street. Collectively, the draining water is called storm water runoff.

#### **Good Rain Gone Wrong**

Storm water becomes a problem when it picks up debris, chemicals, dirt and other pollutants as it flows or when it causes flooding and erosion of stream banks. Storm water travels through a system of pipes and roadside ditches that make up storm sewer systems. It eventually flows directly to a lake, river, stream, pond or wetland. All of the pollutants storm water carries along the way empty into our waters, too, because storm water does not get treated!

- Pet wastes left on the ground get carried away by storm water, contributing to harmful bacteria, parasites and viruses to our water.
- ٠ Vehicles drip fluids (oil, grease, gasoline, etc) onto paved areas where storm water runoff carries them through our storm drains and into our water.



City of Menasha Storm Drain Stenciling Program



#### 

land to a receiving lake, river or stream.

- can also include ditches used to convey storm water from the think that the system is just a series of underground pipes. It 1. Ditch – part of the storm sewer drainage system. Most people
- water should not be allowed to enter a stream. systems open hydrants to flush their water lines the chlorinated sprayed on tires is not regulated as storm water, but it water 2. Fire Hydrant - Not part of the storm sewer system. Water
- storm drain to prevent it trom being used as a trash can. without being treated tirst. It is important to recognize this as a that enters this drain will go directly to streams, rivers or lakes Storm Drain Inlet - Part of the storm sewer system. Anything
- pollutants to the storm sewer system, as well as directly to Improperly maintained septic systems can leak and contribute owners use septic tanks to manage sanitary wastes on-site. Septic System - Not part of the storm sewer system. Home-

lakes, rivers and streams.

3.



water is...water!

Department of Public Works-(920) 967-3610

Where to Go to Continue the Information Flow?

Menasha is preventing storm water pollution through a storm water management program with

the Wisconsin Department of Natural Resources.

This program addresses storm water pollution from

construction, new development, illegal dumping to

the storm sewer system, and pollution prevention

and good housekeeping practices in municipal

operations. It will also continue to educate the community and get everyone involved in making

sure the only thing that storm water contributes to

Contact our office at (920) 967-3610.

our

https://www.cityofmenasha-wi.gov/





Understanding How Storm Water Affects Your Wallet, Safety, Health and Environment In Wisconsin

### **Be Storm Water Smart**





Neenah-Menasha Fire Station 35—Rain Garden

#### What Happens When it Rains?

Rain is an important part of nature's water cycle, but there are times it can do more damage than good. Problems related to storm water runoff can include:

- Flooding caused by too much storm water flowing over hardened surfaces such as roads and parking lots, instead of soaking into the ground.
- Increases in spending on maintaining storm drains and the storm sewers that become clogged with excessive amounts of dirt and debris.
- Decreases in aquatic species because storm water carries sediment and pollutants that degrade important fish habitat.
- More expensive treatment technologies to remove harmful pollutants carried by storm water into our drinking water supplies.

We can help rain restore its good reputation while protecting our health and environment while saving money for ourselves and our community.

#### Test Your Storm Sewer System Knowledge

What does the storm sewer system look like in your community? See if you can identify which pictures are part of the storm sewer system. (Answers are on the back.)









#### Restoring Rain's Reputation: What Everyone Can Do To Help

Rain by nature is important for replenishing drinking water supplies, recreation and healthy wildlife habitats. It only becomes a problem when pollutants from our activities like car maintenance, lawn care and dog walking are left on the ground for rain to wash away. Here are some of the most important ways to prevent storm water pollution.

- Properly dispose of hazardous substances such as used oil, cleaning supplies and paint — never pour them down any part of the storm sewer system and report anyone who does.
- Use pesticides, fertilizers and herbicides properly and efficiently to prevent excess runoff.
- Look for signs of soil and other pollutants, such as debris and chemicals, leaving construction sites in storm water runoff or tracked into roads by construction vehicles. Report poorly managed construction sites that could impact storm water runoff to your community.
- Install innovative storm water practices on residential property, such as rain barrels or rain gardens, that capture storm water and keep it on site instead of letting it drain away into the storm sewer system.



## Pick Up Your Pet's Waste

Studies have found that 20% of the bacteria contaminating some waterways can be traced back to the digestive system of a dog.



Pet waste can negatively affect storm sewer systems. It increases bacteria and adds unwanted plants and algae that diminish clean, clear waters. Disposing properly of pet waste can help reduce undesirable bacteria and parasites in our lakes and rivers.

#### **Take Action:**

- 1. Pick up dog waste in your yard daily
- 2. Always bring plastic bags with when going on walks
- 3. Do not dispose of pet waste in storm drain
- 4. Set a good example to other dog owners

For more information on how you can create a positive impact on our environment, visit the City of Menasha website. Under Department of Public Works, go to Storm Water Programs and Information, then click Resident Action.





### Doty Island Cleanup Event

The Cities of Neenah and Menasha partnered with the Doty Island Development Council this year on their 31<sup>st</sup> Annual Cleanup Event held Saturday May 1, 2021. Many volunteers came to aid in the cleanup effort, and it was overall a great success. Some volunteers broke away from their trash pickup to complete storm drain stenciling and bring additional awareness to the reason for the event: keeping our waterways clean! City staff from each municipality provided materials, safety measures and guidance for the individuals that painted stencils, and the result was beautiful artwork that would be sure to make anyone think twice before putting anything down the storm drain.





#### **RESOLUTION R-13-22**

#### A RESOLUTION RECOGNIZING MAY AS "NO MOW MAY" AND SUSPENDING THE ENFORCEMENT OF SECTION 8-1-6

Introduced by Ald. Austin Hammond

**WHEREAS,** City of Menasha residents require food to sustain their lives, and according to the U.S. Department of Agriculture, one of every three bites of food consumed requires pollinators,

**WHEREAS**, the pollinators whose activities generate our food--bees, butterflies, moths, birds, as well as many other species--are in decline due to urban sprawl, habitat loss, pesticide treatments and mowing, disease, and parasites,

WHEREAS, the formative period for establishment and nourishment of pollinator species occurs in late Spring and early Summer upon their emergence from hibernation; at the same time supporting plants emerge and blossom, offering them crucial habitat and foraging opportunities,

**WHEREAS**, a recent study conducted by Lawrence University in Appleton, Wisconsin, has proven that pollinator foraging, development, and diversity is increased by later leaf removal and mowing of grass,

**WHEREAS**, the City of Menasha desires to create or expand pollinator-friendly habitat on private land to encourage sustainable pollinator-friendly land management practices,

**NOW, THEREFORE, BE IT RESOLVED** that the City of Menasha recognize "No Mow May" for the promotion and education about this critical period for pollinator emergence and survival, allowing for the creation of crucial pollinator-supporting habitat and early Spring foraging opportunities, and;

**BE IT FURTHER RESOLVED** that in support of "No Mow May," for the duration of the month of May, the City of Menasha shall suspend the enforcement of Section 8-1-6 – Destruction of noxious weeds on residential properties which have registered, placed a sign, and have not been in violation of Section 8-1-6 for the preceding 12 months. All properties would be required to be in compliance as of June 1, 2022.

[Signature Page to follow]

Passed and approved this \_\_\_\_\_ day of \_\_\_\_, 2022.

Recommended by:	
Motion/Second:	Donald Merker
Vote:	Haley Krautkr
Pass/Fail: Majority Vote 2/3 Vote	

s, Mayor

ramer, City Clerk



#### Storm Drain Stenciling

- Place safety cones around yourself and the area you are working. Please also wear safety vests. It may be beneficial to have someone in your group stand guard to watch for traffic while painting takes place.
- Use stiff brush to clean off the area on the pavement where you will be placing the stencil. Get rid of any dirt, leaves or anything that will not allow paint to stick to the ground.
- Place stencil in the area you have cleaned off to paint. Have one person hold the stencil in place while another person paints. Do not use too much paint as it easily bleeds under the stencil.
- It is recommended to paint the kelly green on concrete and light blue on asphalt to ensure the colors stand out better.
- Carefully lift the stencil straight up after painting and clean stencil off with paper towel to remove excess paint.
- Clean up any materials and place in your bag. Please do not leave any trash behind!







**Broad Street west of Tayco Street** 

![](_page_37_Picture_0.jpeg)

#### **Broad Street East of Tayco Street**

**Main Street** 

![](_page_38_Picture_0.jpeg)

![](_page_39_Picture_0.jpeg)

#### **City of Menasha Stormwater BMP Inspection Checklist**

Project: Manitowoc Road Pond (BMP W4)

Location: Province Terrace and Manitowoc Road

Date: 10/20/2021

Time: 1:00 pm

Inspector: Adam Baeten

Condition Assessments					
	YES/NO/NA	Comments			
General					
Bare or inadequate vegetation on embankment	NO				
Erosion on embankment	YES	SEE NOTE 1			
Animal burrows	YES	SEE NOTE 6			
Unauthorized plantings	NO				
Seeps/leaks on downstream face	NO				
Riprap failure/erosion	NO				
Obstructions in emergency spillway	NO				
Visible pollution	NO				
Other (specify)					
Spillway or Outfall Structure					
Obstructions in low flow outfall	NO				
Obstructions in weir or high flow outfall	NO				
Outfall channels functioning improperly	NO				
Other (specify)					
Inlets/Pretreatment Areas	•	·			
Obstructions in inlet channels or pipes	YES	SEE NOTE 4			
Erosion or scour at inlet channels or pipes	NO				
Inlet channels or pipes functioning improperly	NO				
Other (specify)					
Permanent Pool (Wet Pond)					
Undesirable vegetative or woody growth	YES	SEE NOTE 3			
Floating debris removal required	NO				
Visible pollution	NO				
Shoreline problems	YES	SEE NOTE 2			
Other (specify)					
	1	1			

Dry Pond						
Bare or inadequate vegetation	N/A					
Undesirable vegetative or woody growth	N/A					
Obstructions blocking outfall	N/A					
Standing water or wet spots	N/A					
Other (specify)						
Biofilter						
Wilting/dying plants/poor vegetation density	N/A					
Undesirable/invasive vegetation	N/A					
Standing water present (3 days after rain event)	N/A					
Voids in mulch area/engineered soil issues N/A						
Other (specify)						
Sedimentation						
Benchmark for pond(assumed elevation ok) Elevation shot with G						
Sedimentation noted (Water height – pound bottom) Shot #8 bottom elev. 753.71 (2018)						
Sedimentation noted (Water height – pound bottom) Shot #9 bottom elev. 754.13 (2018)						
Sedimentation noted (Water height – pound bottom)						
Sedimentation noted (Water height – pound bottom)						

#### All YES answers indicate a problem or something needs to be corrected

#### **Comments:**

- 1. Rip rap failure/bank washout (deep rills and erosion channels) at north and northwestern portions of pond. Just off woods edge on NE corner and for channel coming into pond on far north end around riprap.
- 2. Some of pond bank sloughing off/slight failure near forebay wall and pipe inlet on east side of pond.
- 3. Trees are growing on the edge of the pond and some phragmites and cattail growth on safety shelf.
- 4. Material buildup behind trash guard from behind east side pond inlet (draining Province roadway).
- 5. Landscape material dumped along eastern top of bank from abutting residential properties.
- 6. Eastern and southern portions of the bank deep rilling due to animal burrows.

#### Actions to be taken:

- Cut unwanted trees, phragmites and cattails growing around pond.
- Clear out material from behind trash guards for pipe inlets.
- Send letters to property owners abutting east side of pond to cease dumping activities.
- Spot repair rills in bank and animal trapping.

#### Manitowoc Road Wet Pond (BMP W4)

![](_page_42_Picture_1.jpeg)

Looking to the northeast over the post from the southwest berm. Cattails predominant around most of the safety shelf and woody vegetation becoming more severe.

![](_page_42_Picture_3.jpeg)

Looking north from the northernmost end of the sediment forebay. Failures near this location around the riprap are present.

![](_page_43_Picture_0.jpeg)

Rills are present under the ECM just to the south of the area in the previous photo. Drainage channels from the woods have followed alternate routes from the riprap and are cutting out the bank.

![](_page_43_Picture_2.jpeg)

A close up of the channels being cut in the soil surrounding the riprap from the first photo. There is a drainage way leading from the north entering the pond that can be seen here behind the riprap. Obviously riprap was installed higher than the surrounding ground elevation, so an alternate channel is being cut in.

![](_page_44_Picture_0.jpeg)

Looking south down the riprap on the northern berm of the pond. Sediment washout is present at the end of the riprap lined channel.

![](_page_44_Picture_2.jpeg)

Adjoining property owners are disposing of landscape material along the eastern pond bank.

![](_page_45_Picture_0.jpeg)

Looking east from the western berm of the pond. The cattail and phragmites growth is getting more severe around entirety of the pond along the safety shelf. Some woody vegetation also popping up along perimeter of pond bank.

![](_page_45_Picture_2.jpeg)

A close-up of one of many of the animal burrows along the pond bank.

![](_page_46_Picture_0.jpeg)

Rills along the safety shelf are common from animal burrowing.

![](_page_46_Picture_2.jpeg)

The outfall structure appear to be functioning as planned. The channel leading to the outlet structure has sediment deposits and vegetation growth through entirety.

## Be Salt WIse!

![](_page_47_Picture_1.jpeg)

Follow WI Salt Wise on:

f 🖸 灯 www.wisaltwise.com Reduce your winter salt use to help protect our lakes, streams and drinking water.

#### Once you put salt down, it doesn't go away

![](_page_48_Figure_1.jpeg)

This doesn't include what we use on sidewalks, driveways, and parking lots.

#### Reduce your salt use to help protect our lakes, streams, and drinking water.

#### **1. Shovel**

![](_page_48_Picture_5.jpeg)

Clear walkways and other areas before the snow turns to ice. The more snow you remove manually, the less salt you will have to use and the more effective it will be.

#### 2. Scatter

![](_page_48_Picture_8.jpeg)

If you use salt, scatter it so that there is space between the grains. Believe it or not, a coffee mug of salt is enough to treat an entire 20-foot driveway or 10 sidewalk squares.

#### 3. Switch

![](_page_48_Picture_11.jpeg)

When pavement temperatures drop below 15 degrees, salt won't work. Switch to sand for traction or a different ice melter that works at lower temperatures.

#### 4. Select a Certified Applicator

![](_page_48_Picture_14.jpeg)

Encourage your maintenance professional to get certified through the City of Madison's Winter Salt Certification Program and ask businesses in your community to do the same.

#### 5. Love the Lines

![](_page_48_Picture_17.jpeg)

Stripes on roads before a storm are anti-icing. They show that your professional maintenance crew is concerned about safety and is saving money, time and protecting our environment!

#### 6. Be Salt Wise All Year

![](_page_48_Picture_20.jpeg)

Water softener salt ends up in local freshwater bodies. If your household softener uses more than 1 bag of salt per month, have a professional tune it up or replace it with a high-efficiency model.

# 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 Garden Facts:**

- Stormwater can collect pollutants such as vehicle fluids and lawn care chemicals
- Those pollutants travel 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

![](_page_49_Picture_8.jpeg)

Rain gardens help us protect our waterways and help clean your drinking water

![](_page_49_Picture_10.jpeg)

## How can you help?

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

Want to start your own rain garden? Visit your local nature center, and reach out to Heckrodt Wetland Reserve or City of Menasha Public Works

![](_page_49_Picture_18.jpeg)

![](_page_49_Picture_19.jpeg)

## **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 impervious surfaces block stormwater from soaking into the ground. This increases the amount of runoff, resulting in larger faster floods.

## **The Province Terrace Stormwater**

## Wet Pond Benefits:

- 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, fertilizers, and vehicle fluids are captured in stormwater ponds.
- Stormwater ponds help improve water quality in urban areas
- Province Terrace pond captures 18,000 pounds of sediment each year, which is equivalent to half a dump truck.

![](_page_50_Figure_10.jpeg)

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

![](_page_50_Picture_12.jpeg)

## How can you help?

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

Want more information? Reach out to the City of Menasha Public Works Department

![](_page_50_Picture_20.jpeg)

![](_page_50_Picture_21.jpeg)

## **Underground Stormwater**

Urban development often includes constructing more acres of hard impervious surfaces like concrete and asphalt leading to more stormwater runoff. Underground stormwater retention/detention systems capture and store runoff in large pipes or subsurface structures. Stormwater enters the system through riser pipes connected to catch basins or curb inlet and flows into a series of chambers or compartments for storage. Once a storm event ends, the treated stormwater is slowly released through an outlet pipe.

![](_page_51_Picture_2.jpeg)

## **Advantages:**

- duce runoff from impervious surfaces.
- larly in developed urban areas where redevelopment is occurring.
- tems.
- Underground pipes are normally half full of water and act similarly to quire removal and landfill disposal of the accumulated sediment.

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

![](_page_51_Picture_9.jpeg)

Captures and stores stormwater runoff to improve water quality and re-

• Ideal for areas where ponds or surface treatment is not an option; particu-

More land space can be made available by installing features such as parking lots or athletic fields above underground stormwater treatment sys-

above ground wet ponds. Stormwater quality treatment is provided within the normal water depth by allowing time for particles to settle out and fall to the bottom of the pipes. In time, the sediment builds up and will re-

![](_page_51_Picture_14.jpeg)

![](_page_51_Picture_15.jpeg)

# Wetlands

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.

![](_page_52_Picture_2.jpeg)

![](_page_52_Picture_3.jpeg)

## Wetland Facts:

- 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 their roots act like a filter, removing sediments from the water
- When wetlands are destroyed, the many creatures that depend on them often disappear too.

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

![](_page_52_Picture_13.jpeg)

![](_page_52_Picture_14.jpeg)

![](_page_52_Picture_15.jpeg)

![](_page_52_Picture_16.jpeg)

## Be on the lookout for:

- White-tailed deer
- Muskrat
- Blueflag iris
- Red twig dogwood
- Painted turtle
- Leopard frog
- Wood duck
- Great Blue Heron
- Dragonflies