



Land & Water Resources Department  
**2018 Annual Report**



Photo credits: Paolo Veglio (heron); Mariah Haberman (wooden beam)



## Greetings from the County Executive

Nothing hits the spot quite like taking in one of Dane County's parks, trails, or lakes to enjoy our area's beautiful surroundings. With over two dozen recreational parks and over 100 miles of trails, we work hard to protect and enhance our natural resources for future generations.

In 2018, the Dane County Land and Water Resources Department won awards for improving area fisheries and cleaning our lakes through our "Suck the Muck" initiative. We also worked tirelessly to keep Dane County residents informed and mitigate additional flooding during the heavy rain events that took place during the summer of 2018.

Our community values our natural resources. It's imperative we continue our shared efforts to preserve this area's natural beauty for future generations. That's why county government prioritizes investments in clean air and water and maximizes opportunities for families to get outside and enjoy our lakes and lands. I look forward to another successful year in 2019.

### **Joe Parisi**

County Executive



## Greetings from the Land & Water Resources Department Director

In this annual report, we are excited to share with you a snapshot of our department accomplishments. Whether you're on staff, an elected official, a volunteer, or one of our many partners, we all work together to protect and enhance our local natural resources and to make them accessible to all.

2018 was marked by record volumes of rainfall in Dane County, highlighting our work and bringing renewed community interest to address long-standing resource challenges. I appreciate all of the time and effort that is invested in our natural resources and I want to thank everyone for engaging in thoughtful and civil discussions that create positive change.

The bookends of 2018 were the adoption of the updated [Dane County Parks and Open Space Plan](#) and the updated [Dane County Land and Water Resource Management Plan](#). You'll find more information on both plans in this report and the full plans can be found on our website. Spend 20 minutes perusing these two plans and you'll have a good understanding of the foundation of our work.

Please don't ever hesitate to reach out to me to share your ideas for the Land & Water Resources Department and how we can best serve our community.

### **Laura Hicklin**

Director



**The Dane County Land & Water Resources Department works to:**

- Protect and enhance** Dane County’s natural, cultural, and historic resources (Pages 4-9)
- Provide** the county’s residents with a broad array of accessible, high quality resource-based recreational services and facilities (Pages 10-12)
- Support** residents, communities, local governments, and other agencies and organizations in their resource management and protection activities (Pages 13-14)

**The following programs help carry out the department’s mission:**



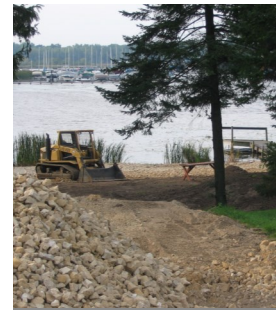
Agricultural Planning and Technical Services



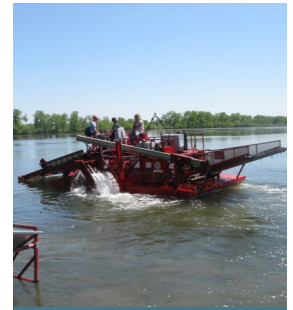
Watershed Coordination



Dane County Parks Planning and Management



Stormwater Management and Erosion Control



Lake Management

**Thank you to all of the generous donors and event sponsors that have supported our department over the past year, including:**

Fish and Wildlife Service  
Pheasants Forever  
Dane County Conservation League  
Madison Fishing Expo  
Madison Audubon Society  
Trout Unlimited

Sally Wilmeth and Terry Geurkink  
Steven Morton  
Sustainable Wildlife Habitat  
Rock River Coalition  
Tree Stuff  
All of our government agency partners

**A special thank you to the **Foundation for Dane County Parks** and the nineteen friends groups that have adopted specific parks. The dedication of these groups and individuals is what brings the parks to life.**

Friends of Anderson Farm County Park  
Badger Prairie Community Garden  
Friends of Brigham County Park  
Friends of CamRock County Park  
Friends of Capital Springs Recreation Area  
Friends of Cherokee Marsh  
Friends of Donald County Park  
Friends of Festge County Park  
Friends of Indian Lake County Park  
Friends of Lake View Hill Park

Friends of Old Halfway Prairie School  
Friends of Mazo Marsh and Walking Iron Prairie  
Friends of McCarthy Youth & Conservation County Park  
Friends of Pheasant Branch Conservancy  
Friends of Prairie Moraine County Park  
Friends of Schumacher Farm  
Friends of Stewart Lake County Park  
Friends of Silverwood County Park  
Friends of Viking County Park

# Protect and Enhance

*Keeping soil and nutrients on the land and out of our waterways*

## Agricultural Conservation in Action



**731**

Landowners assisted



**17,601**

Feet of fencing for grazing & water resource protection



**5,031**

Acres of cover crops planted with our assistance

### 2018 Snapshot

## Land and Water Resource Management Plan Update

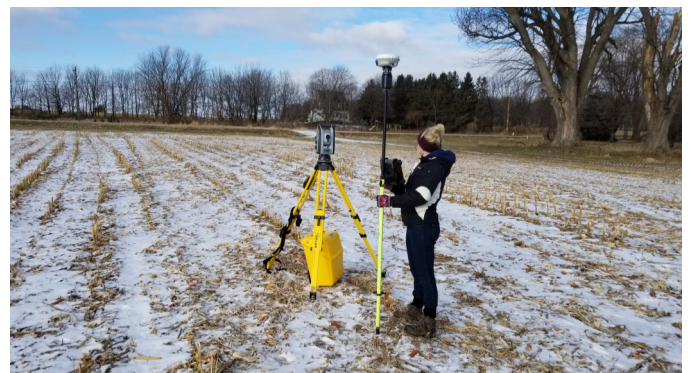
The **Dane County Land and Water Resource Management Plan** is a 10-year strategic plan that is used to develop annual work plans and as a resource for applying for conservation grant funding. The plan includes an assessment of the natural resources conditions and needs of the county and provides a holistic approach to land and water resource management that focuses on partnerships and collaboration.

This year, the plan was updated through a yearlong process that included working with a local advisory committee made up of citizens and resource professionals representing different interests. A public hearing and comment period was held in November by the Land Conservation Committee and in December, the final draft of the plan was presented to the Wisconsin Land and Water Conservation Board where it was approved.

## New Conservation Tools

The department purchased some exciting tools this year to help support our conservation efforts. A new **Rainfall Simulator** can be used to help educate residents about soil and water conservation practices, soil health, and water infiltration in urban and agricultural settings. The trailer can be used during field days and events and a smaller [table top version](#) can be used for presentations at meetings or in classrooms.

The department also purchased a new **Robotic Total Station** to help with conservation practice planning. This will allow staff to conduct surveys faster and more efficiently while also being able to access areas of the county that have traditionally been difficult to survey, such as the valleys and ravines, along tree lines, and near buildings on farmsteads.





# Water Quality

Improving and enhancing water quality is fundamental to the mission and services provided by the department. Staff approach water quality issues from a holistic systems approach addressing both rural and urban pollution sources. An example of this systems approach from this year includes staff support of the Healthy Farms Healthy Lakes Task Force. This task force was charged with formulating recommendations that balanced both agricultural viability and improved water quality. A full report on the approved recommendations can be accessed on the [Dane County Board website](#).

Several other programs and initiatives were created or strengthened this year. A small sample of these is listed below and others are described in more detail throughout this report:

## Urban Water Quality Grant Program

This year, six municipalities were approved to received funding for six different projects that once constructed, will result in the removal of an estimated: **165,000 pounds** of sediment and **440 pounds** of phosphorus annually.

## Leaf-free Streets Program

When it rains, water runs through leaves left in the street and creates a nutrient rich “leaf tea” that flows through storm sewers into local waters. In the fall, timely removal of street leaves before the rain can greatly reduce phosphorus in urban stormwater. This year, the [Leaf-free Streets Program](#) sent rain alerts to nearly **400 residents** reminding them to remove their leaves from the street prior to a rain event.

## Erosion Control and Stormwater Management

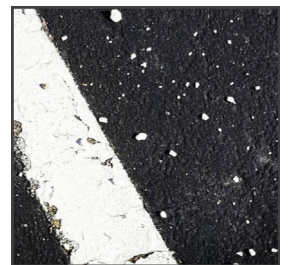
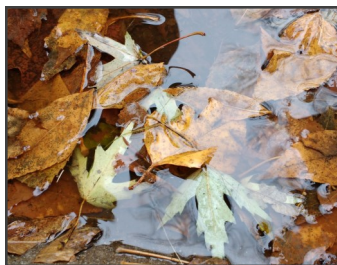
Department staff issue erosion control and stormwater management permits and perform site inspections to ensure that these permits are being followed. This year, staff performed **4,057** site inspections and took **46** enforcement actions.

## Storm Drain Mural Program

A new [Storm Drain Mural Program](#) was launched this year in partnership with the Madison Area Municipal Stormwater Partnership and Dane Arts Mural Arts. The program uses colorful storm drain murals to capture the attention of those who pass by, help them understand where the stormwater that enters their storm drain flows, and get them thinking about what they can do to “Keep It Clean.”

## Wisconsin Salt Wise Partnership

The department is an active participant in the [Wisconsin Salt Wise Partnership](#), a coalition of organizations working together to reduce salt pollution in our lakes, streams, and drinking water. This year we supported trainings for the new [Winter Salt Certification Program](#), hosted a calibration training for local winter maintenance professionals, and helped to create [outreach materials](#) to help concerned residents take action.



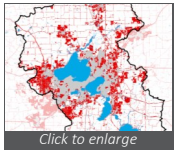
# Flood Facts and Initiatives

In the summer of 2018, flooding occurred in many Dane County communities due to heavy rains and other factors. Western Dane County experienced large amounts of rainfall over a short period of time which overloaded the capacity of stormwater drainage infrastructure, resulting in rapid or flash flooding. The flash flooding damaged roads/bridges, residential and commercial property, and recreation trails.

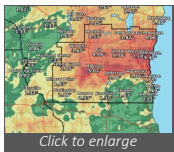


The Yahara Watershed, the area of land that drains to the Yahara River and lakes Mendota, Monona, Waubesa and Kegonsa, also experienced flooding due to large amounts of rainfall and challenges moving water out of the system.

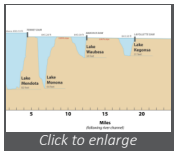
Some of the factors that contributed to flooding included:



**Urbanization:** the Yahara River Watershed has approximately two times more urban area than it did in 1970. Urban areas have more roads, parking lots and other impervious surfaces which reduces the amount of water that soaks into the ground and increases surface water runoff into the lakes.



**Rainfall Patterns:** heavy downpours are increasing nationally, especially over the last three to five decades. In 2018, heavy rainfall resulted in lake levels that were approximately 12-18 inches above summer maximum goals prior to additional rainfall in August 2018 which further raised lake levels to new historic highs.



**Slope:** during normal conditions, the slope of the Yahara River is very flat with a drop of only 1.5 feet over 4 miles (0.007% slope) between lakes Waubesa and Kegonsa and 0.4 feet over 2 miles (0.004% slope) between lakes Monona and Waubesa. This causes water to move very slowly through the river and out of the system.



**Constriction Points and Friction:** the river channel narrows or becomes shallower in several locations due to shallow riverbeds and layers of sediment. There are also areas with tree trunks, boulders, and heavy aquatic plant growth. These factors cause friction and slow the water flow.

These are only a few of the factors that contributed to flooding in the Yahara River Watershed. Additional information can be found on the [Flood Facts and Initiatives webpage](#).

## Initiatives

In response to the flooding, several initiatives were started to reduce future flooding and improve Dane County's ability to respond to flooding:

**2019 Dane County Budget:** the adopted [2019 budget](#) contains several new areas of funding directly related to flooding.

**Task Force:** The Dane County Board adopted [2018 Res-227](#) that calls for a technical report to identify ways to address flooding on the Yahara chain of lakes and the creation of a task force to make policy recommendations. The technical report and information about the [Yahara Chain of Lakes - Lake Levels Task Force](#) is available online.



# Legacy Sediment Removal Project

This year, Dane County completed the first phase of the **Legacy Sediment Removal Project** by removing **11,000 tons** of phosphorus-soaked legacy sediment from a nearly three-mile stretch of Dorn Creek northwest of Lake Mendota. Three to four feet of sediment was removed from the creek bed, up to twice as much as initially anticipated. The sediment removed was used to fill in a former gravel pit and was planted with native prairie plant species. During the project, the stream was also re-meandered to its historical location (see photos) and the banks were stabilized to prevent future erosion. Dorn Creek was a spawning area for northern pike 50 years ago, and hopefully the recent improvements will allow the species to thrive in the creek once more.



Dorn Creek had left its original channel and was flowing through a nearby agricultural ditch. Part of this project included restoring the stream to its original, meandering river channel.



**569** permanently protected  
**Acres** in 2018



**Token Creek County Park and Natural Resource Area** (11 acres)

*Provide access to Token Creek*



**North Mendota Trail** (9-acre easement)

*Off-road bicycle and pedestrian trail to connect to Governor Nelson State Park*



**Door Creek Wildlife Area** (160 acres)

*Segment for future Lower Yahara River Trail connection*



**Ice Age Trail** (40 acres)

*Trail connection project with City of Madison*



**Sugar River Wildlife Area** (60 acres plus 110-acre easement)

*Wetland and river frontage provides opportunities for public recreation*

## Grant Projects



**Badger Mill Creek Natural Resource Area** (13 acres)

*City of Verona*



**Cherokee Marsh Natural Resource Area** (106 acres)

*Groundswell Conservancy*



**Patrick Marsh Natural Resource Area** (25 acres)

*Groundswell Conservancy*



**South Waubesa Wetlands Natural Resource Area** (35 acres)

*Groundswell Conservancy*

## Forestry Highlights

One of the biggest challenges for Dane County's forests this year has been the emerald ash borer. Prior to this invasive insect's arrival in the county, ash trees accounted for approximately 20% of the landscape trees on county-owned lands. Staff have been working for the past four years to remove Ash trees that could pose a risk to the public and, with the help of local partners, replace them with a diverse variety of new trees (70 species so far). Species diversity is very important to maintaining a healthy urban forest as it creates a buffer from future diseases and pests. The goal moving forward is that no single species represents more than five percent of the total canopy cover in Dane county.

Traditionally, the limiting factor for tree planting is the number of tree seedlings that can be watered and maintained until they are large enough to plant. To increase the number of trees grown and also decrease costs, the county created a gravel bed tree nursery program. The gravel bed allows the trees to grow an extensive root structure in a very short amount of time so that they are ready to be planted sooner. This year, staff and partner groups were able to plant around **4,000 trees** in Dane County.

The gravel bed program has driven planting cost down dramatically. A balled and burlaped tree costs around \$200, whereas bare root trees grown in the gravel bed costs between \$20-40 to grow. The county also received tree donations from DNR, Rock River Coalition, and Sustainable Wildlife, a local nursery, which further reduced our costs down to around **\$2 per tree**.

## New Orchard Program

Last year, staff started installing new accessible fruit tree "orchards" on county lands. These orchards are located in economically disadvantaged neighborhoods where the county has underutilized lands. In 2018, the program was expanded. With the help of youth volunteers, over **1,000 fruit trees** have been planted on nine different properties. Types of fruit trees planted include: apples, pears, plums, peaches, sweet cherries, apricots and some paw paw. Thanks to the gravel bed process, most trees have started bearing some fruit within the first year of planting.





## Native Plantings

Our department works to increase native plants and natural spaces that help absorb water and protect soil through a variety of different programs such as Plant Dane, an annual discounted native plant sale in partnership with the Madison Area Municipal Stormwater Partnership, a free plants program, and a large-scale seed program. The photo on the right shows students from Glenn Stephens Elementary, one of the schools that received free plants this year.



**7,800+**

Discounted Plants Sold

through the **Plant Dane** program which allows Dane County residents to purchase discounted native plants.



**2,800+**

Free Plants Distributed

through our free native plants program, which provides plants donated or grown by volunteers to schools and community groups.



**850 lbs.**

Of native plant seeds

collected by parks staff and volunteers from 189 species of plants.

## 2018 Snapshot

## Seed Program

This year, staff and volunteers collected and processed over **850 pounds** of native seed species. This seed is estimated to be worth approximately **\$300,000** and will be used to help plant over 90 acres across 26 project sites for Dane County Parks and partner organizations. Additional seed will be sent to support various non-profits for whom the cost of purchasing seed would be prohibitively expensive.

Partners helped make this year more successful than ever. Holy Wisdom Monastery and Swamp Lovers both hosted seed collection days. The U.S. Fish and Wildlife Service loaned seed hammering mills and cleaning and drying equipment and also provided volunteers for seed collection and cleaning. A longtime volunteer, Ron Endres, spent many hours collecting rare and high value species which will be used to increase species diversity in other areas of the Dane County Park System.



This year, volunteers donated **1,038 hours** to support the seed collection program!

# Provide

*Clean, safe, and accessible natural areas to play and recreate*

## Engaging Youth in Nature

This year, staff, partners, and volunteers led ten **Arbor Fairs**. More than 3,500 youth had the opportunity to climb trees while they and their parents learned about invasive species, tree planting, and tree diversity. Participants also got a glimpse into natural resource and forestry careers. Parks staff also hosted three adaptive climbing events including **Dream Night**, a program for terminally ill and critically ill children and their families. This event gives the kids a fun outdoor experience and a day away from the hospital.

Staff also worked with numerous youth groups including Operation Fresh Start, Shabazz Green Teen, GROW Academy, Madison Metropolitan School District, STAR Academy, Madison College, Wander Wisconsin, OASIS, and a number of other schools and classrooms throughout the county. Activities included tree planting, pruning education, tree measurements, statistics and modeling, invasive species education and removal, tree risk assessment training, water education programs, native plant growing, and other nature-related topics.



## Parks & Trails Unite Festival

Dane County Parks teamed up with United Madison, the Foundation for Dane County Parks, and the Village of McFarland to host a one-of-a-kind Parks & Trails Unite Festival in June. The festival celebrated the county's amazing parks and trails and the community connections they provide. This event took place in Lake Farm County Park and McDaniel Park which are now connected by the Lower Yahara River Trail which provides an off-road trail connection between Madison and McFarland that didn't previously exist.

The festival included live music, food carts, cultural displays, and a number of outdoor activities that festival attendees could try. Staff also used a table-top rainfall simulator to educate the public on stormwater runoff and erosion. Proceeds will be used to help build the capacity of Dane County Parks volunteers and the 19 friends groups that support individual county parks.



This year Dane County Parks welcomed over **3 million visitors** to our parks, trails and facilities!



# 2018-2023 Parks and Open Space Plan Adopted

The **Dane County Parks and Open Space Plan** is a countywide comprehensive outdoor recreation and natural resource plan that is updated every five years. Updates to the plan include identifying recreational needs and significant natural, cultural, and historical resources in the county to be considered for protection. The plan was adopted by the Dane County Board on April 12, 2018.

Parks staff facilitated five public information meetings throughout the planning process to solicit input from citizens and stakeholders. A survey to further explore the overall public awareness of the park system and any improvements that could be made to promote a larger and more diverse group of users received over 1,178 responses. The survey results are one of multiple planning considerations to determine park system needs and guide the planning process. Thank you to everyone who participated!

## Lussier Family Heritage Center

The **Lussier Family Heritage Center** is a Dane County Parks facility that provides opportunities for learning, volunteerism, outdoor recreation and special events. This year the center welcomed:

 **24,000+** Visitors  
 **300+** Events  
 **32** Weddings



## Planning and Development Projects

This year, staff worked on construction and implementation of 22 projects that will provide additional recreational opportunities and increase public access. Staff also worked on ten planning projects, including the Dane County Parks and Open Space Plan, property management plans, and future site development plans.



 **Lussier County Park**  
**Lake Access Site**



 **Sun Shade at Capital Springs Dog Park**



 **Lake View Hill Park**  
**Interpretive Signs**



 **Anderson Farm County Park Building Demo**



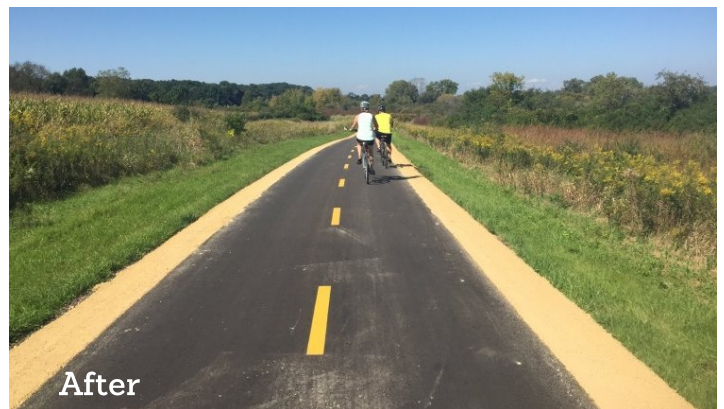
 **Morton Forest Parking Lot and Toilet**

# Capital City Trail Pavement Restoration Project

This year marked the beginning of the **Capital City Trail Pavement Restoration Project**. This three-year project will improve the safety and ride of approximately 10 miles of trail and is the first major upgrade to the Capital City State Trail since its completion in 2000. Phase one, completed this year, included 6.5 miles of trail from Nob Hill Road to Glacier Valley Road. The restoration work included pavement resurfacing, drainage improvements, ADA improvements, and signage upgrades including new wayfinding signage. A new trailhead parking lot was also constructed where the Capital City Trail crosses Lake Farm Road, providing trail users better access to the new Lower Yahara River Trail and Capital City Trail.

“Dane County has a vibrant culture of biking, and we are home to some of the best bike trails in the country. We will continue to invest in our quality of life, our lakes, our parks, and our trails.”

– Joe Parisi, Dane County Executive –



Dane County is recognized nationally as a bronze level bike-friendly community.

## New Visitor Center at Silverwood County Park

In October, a new Silverwood Stone House Visitor Center was completed and turned over to the Friends of Silverwood County Park for operation. The 1850's era stone house and 300 acres of land were donated to Dane County Parks in 2001 by Irene Silverwood. In 2014, an architectural firm was hired to come up with preliminary plans for the reuse of the Stone House. The county then contracted with Operation Fresh Start Inc. to complete the preliminary work on the new center using a youth skills development crew. Over a two and half year period



more than 120 youth worked on the visitor center project, guided by two leaders with significant experience working on historical sites.

The completed Stone House Visitor Center includes a public meeting hall, a kitchenette, and public restrooms. Solar panels were also installed as part of Dane County's renewable energy initiative. The **Friends of Silverwood County Park** will use the new center for public events and activities.



# Support

*Assisting local partners with resource management and protection*

## Supporting Land and Water Volunteers

### Dane County Parks Volunteers

Staff work with 19 friends groups that have adopted specific parks. These groups advocate for park properties, fundraise, provide maintenance, and host a variety of exciting public events. We depend on their dedication to help bring our parks to life! In 2018, over **3,000 volunteers** supported our parks by donating more than **65,400 volunteer hours**.

### Trainings and Support

The department offers a number of trainings and workshops throughout the year to help build capacity of volunteers working on protecting and improving Dane County Parks and other land and water resources. This year, staff hosted **33 trainings and workshops**.

### The Foundation for Dane County Parks, Inc.

Staff support the Foundation for Dane County Parks, Inc in their work to promote the county park system and fundraise for the Dane County Parks Endowment Fund, which is held by the Madison Community Foundation. The Endowment is now over **\$500,000**, and has already provided the parks volunteer program with new tools, an event tent, trailers, and event supplies.

### Dane County Watershed Network Gatherings

Staff coordinate gatherings throughout the year so organizations with a connection to lakes, rivers, streams, wetlands, and more share ideas, solve problems, and learn from each other. This year **98 people** attended these gatherings.



To find trainings, volunteer opportunities, and other events, visit our [event calendar](#).

*Photo credits: Glenn Stephens Elementary (top left); John Kalson (top right and bottom left)*



# We welcomed seven new staff members in 2018!



**Kaci Baillies**  
Erosion Control Specialist



**Sharene Smith**  
Real Estate Coordinator



**Lael Pascual**  
Lussier Family Heritage  
Center Manager



**Jim Pugh**  
Park Maintenance  
Technician



**Katie Nicholas**  
Conservation Specialist



**Carlos Rubio**  
Parks Laborer



**Chris Schwoerer**  
Park Laborer

## Retirements

**Sue Jones**  
Watershed Management  
Coordinator

**Linda Mittnacht**  
Lussier Family Heritage  
Center Manager

**Jan Zimmermann**  
Real Estate Coordinator

*Thank you for your  
many years of  
service!*

## Awards

- 🍃 **Dane County Land & Water Resources Department** won the Wisconsin DNR Bureau of Fisheries Management “External Partner Award” for invasive species removal and habitat improvements.
- 🍃 **Dane County “Suck the Muck” Project** won the Clean Lakes Alliance Community Awards “Project of the Year.”
- 🍃 **Lower Yahara River Trail Phase 1** won the Wisconsin Chapter ASLA “Merit Award”; The Daily Reporter “Top Project”; and Engineering News-Record Regional Best Projects “Merit Award.”
- 🍃 **Lewis Nine Springs E-Way** won the APA WI “Great Places in WI Award.”
- 🍃 **Dane County Dog Parks** won several awards. Prairie Moraine Dog Park won the Isthmus Mad Faves Reader’s Choice Award “1st Place— Best Dog Park.” Dane County Dog Parks won all three spots in Madison Magazine’s Best of Madison reader poll (1st Badger Prairie, 2nd Prairie Moraine, 3rd Token Creek).
- 🍃 **Dane County Parks Operations Staff** won the Safety and Working Conditions Study Committee “Departmental Safety Award.”
- 🍃 **Shane Otto** (Land Restoration Specialist) won the Fish and Wildlife Service Region Three “Torch Award.”
- 🍃 **Adam Alves** (Forester Specialist) was elected President of the Wisconsin Arborist Association.
- 🍃 **Jan Zimmermann** (Real Estate Coordinator, retired) won the Harold “Bud” Jordahl “Lifetime Achievement Award.”
- 🍃 **Sue Jones** (Watershed Management Coordinator, retired) won the APA WI “Service Award.”