



Land & Water Resources Department

2017 Annual Report



Greetings from the County Executive

Dane County has some of the best trails, parks, lakes, and other natural resources in the entire country. With more than two dozen parks and nearly thirty recreational areas protected for future generations, together we have done so much. 2017 marked another year of sustained success and incredible accomplishment for Dane County's parks, waters, lands, and trails. From our breakthrough efforts to clean up our lakes by removing years of legacy sediment in our streams, to opening the new Lower Yahara River Trail, to winning an award for our one-of-a-kind Bicycle Wayfinding Manual, 2017 was a year to remember. Thank you to our Land & Water Resources Department staff who work so tirelessly to make Dane County's natural resources world class.



Joe Parisi
County Executive

Greetings from the Land & Water Resources Department Director

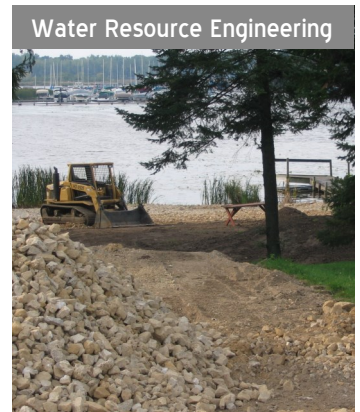
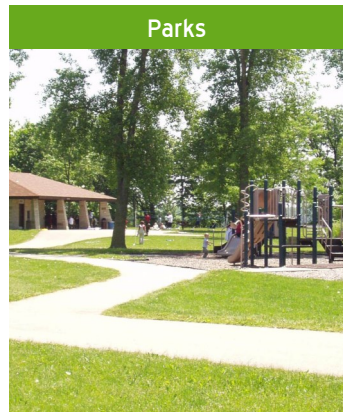
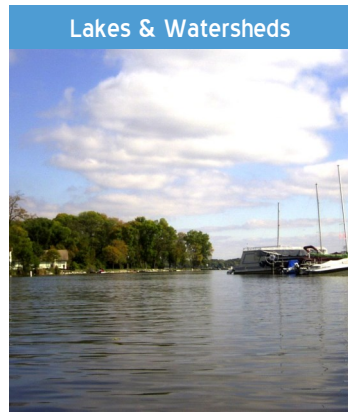
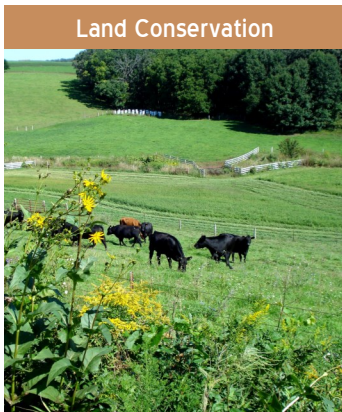
This was a year of change for the Land & Water Resources Department; a trend that will continue through 2018. Several new initiatives launched this past year, including our collaborations with Yahara WINS to help reduce phosphorus loss, the Simpson Street Free Press to bring interns to our department, and with the Madison Area Municipal Stormwater Partnership to create the Leaf-Free Streets Rain Alert system. We also ramped up fundraising for our parks and began discussions on how to think less about each division and more about our work as a whole.

Another significant change was the retirement of our valued Director, Kevin Connors. Kevin began his career with Dane County in the then Land Conservation Department. He was the County Conservationist when the Land & Water Resources Department was created in 2005 and became the first department Director. One of Kevin's greatest strengths was his enthusiasm for partnerships and his willingness to give a little extra to make projects happen. Kevin also respected the hardships that we all go through and was perpetually gracious in giving both staff and our customers the space they needed to do the right thing for themselves and for our natural resources. Kevin's retirement was offset by the hiring of seven new staff members who are bringing great ideas and energy to our work. I expect that we'll continue to see significant turnover as we head into 2018.



Thanks to robust local support and collaboration with residents, community organizations, commission members, and elected officials, we have a long list of accomplishments that create positive local change. Please 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 5-7)
- 🍃 **Provide** the county's residents with a broad array of accessible, high quality resource-based recreational services and facilities (Pages 9-11)
- 🍃 **Support** residents, communities, local governments, and other agencies and organizations in their resource management and protection activities (Pages 12-13)

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 - Partners for Fish and Wildlife Program
Pheasants Forever – Habitat Restoration
National Turkey Federation – Habitat Restoration
Dane County Conservation League – Public Access, Habitat Restoration, Parks Endowment
Madison Fishing Expo – Public Access and Parks Endowment
Trout Unlimited – Habitat Restoration
Sally Wilmeth and Terry Geurkink – Development and Public Access
David R. Schreiber Estate - Development
Steven Morton – Development and Habitat Restoration
Madison Community Foundation – Tree Planting and Youth Development
Badger Fly Fishers – Habitat Restoration
Madison Orvis – Habitat Restoration
Sitka Salmon – Habitat Restoration



This year we launched a new Department website! The new-user friendly platform makes it easier than ever for the public to find information about our land and water resources.

<https://lwr.dane.com/>

Our Commitment to Equity and Inclusion

Our department believes that everyone deserves to live in a community with healthy land and water resources and with access to the parks, trails, and other land and water resources in the county. We are committed to ensuring that our policies and practices promote equitable access to these resources, and the jobs, opportunities, and programs that our department offers. Dane County has made progress, but some groups continue to face more barriers than others and we recognize that we have a lot of work to do to reach our goal.

In 2017, we developed an equity and inclusion plan and submitted a working draft to the Dane County Office of Equity and Inclusion. We expect that this plan will help increase our understanding of equity issues and how we can be a constructive part of a more equitable and inclusive department and county. The plan includes actions and ideas to increase the diversity of our workforce, and identify and remove barriers so that all county residents have equal access to our programs and services. This plan builds on equity initiatives already underway in our department. A few examples include:



Youth Apprenticeship and Career Pathways Program

Expanding the diversity of youth exposed to parks-related careers.



Interactive Watershed Model at Henry Vilas Zoo

Providing information in Spanish and Hmong at this new exhibit.



Free Native Plants Program

Reducing financial barriers so schools and communities can install natural spaces.

Our department is also working to support the natural resources committees and commissions within the county that are working on equity and inclusion goals. For example, the Lakes and Watershed Commission adopted its own equity and inclusion commitment statement in January 2017, and other natural resources committees and commissions are starting to do the same.

This year, we were also pleased to host five student writers from the **Simpson Street Free Press**, a nonprofit newspaper and youth center that teaches critical thinking and writing skills in hopes of bridging Madison's achievement gap. The students wrote a number of articles highlighting Dane County parks, conservation careers, water volunteer efforts, and many other articles that helped us spread our message far and wide in the county. A few of these articles were also translated into Spanish.



Simpson Street Free Press student writers interviewing Parks Ranger Lael Pascual (far left) and learning about citizen stream monitoring from the Upper Sugar River Watershed Association (left).

Protect and Enhance

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

Agricultural Conservation in Action

While phosphorus is good for croplands, it becomes a problem when it runs off the landscape and enters local waterways, where it fuels algae growth. This year, staff partnered with UW-Extension to develop the Dane County Grazer's Network which allows producers to share their experiences with managed grazing. Managed grazing uses portable fences to rotate livestock regularly to new fields, allowing grazed areas to regrow. This leads to healthier pastures with diverse plant communities, continuous cover which reduces runoff and erosion, increased livestock performance, and lower costs for the producer. A total of **142** individuals participated in four unique field days to learn about managed grazing and the new network.



Pleasant Valley Branch: a restoration success story!

From 1998 to 2014, our department worked with a number of local partners in the Pleasant Valley Branch of the Gordon Creek Watershed to improve water quality and stream habitat. As a result, Pleasant Valley Branch has now been removed from the Wisconsin's impaired waters list. A full report can be found on the Environmental Protection Agency's [website](#).



1,034
Landowners
assisted



8,527
Feet of fencing for grazing
& water resource protection



2,527
Acres of cover crops planted
with our assistance

2017 Snapshot

Native Plantings

In natural landscapes, rain soaks into the ground gradually. Today, much of the land is covered by impervious surfaces where the water cannot soak into the ground. Instead, it runs off over the land, picking up pollutants, sediment, and nutrients, and transporting them to streams, rivers, and lakes. Our department works to increase native plants and natural spaces that help absorb water and protect soil through a variety of different programs:



12,600
Discounted Plants Sold

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



2,000+
Free Plants Distributed

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



1,000 lbs.
Of native plant seeds

collected this fall by parks staff and volunteers from 184 species of plants. With this seed we can plant over 50 acres of prairie!

Urban Water Quality Grants

Since 2005, Dane County has made cost-sharing funding available to municipalities to help them improve the quality of urban stormwater runoff, increase public awareness of urban water quality issues, and provide public education for urban stormwater quality improvement practices.

In 2017, two municipalities were approved to received funding for six different projects that once constructed, will result in the removal of an estimated **82,176 pounds** of sediment and **329 pounds** of phosphorus annually.



Cherokee Pond, Madison
2015 cost-share recipient

What do these projects look like once constructed?



344 permanently
Acres protected
in 2017



Walking Iron County Park (40 acres)
Western county sand prairie and woodland



Lewis Nine Springs E-Way (15 acres)
A cold water trout stream



Cherokee Marsh Natural Resource Area (123 acres)
Includes a 75-acre easement on the Yahara River



Falk Wells Wildlife Area (4 acres)
Key land linkage along the Sugar River



Spring Creek/Lodi Marsh (58 acres)
Partnered with the Groundswell Conservancy



Token Creek Natural Resource Area (54 acres)
Contains a cold water trout stream



CamRock County Park (48 acres)
Koshkonong Creek recreation destination



Sugar River Streambank Easements (2 acres)
Bordering a Class 1 trout stream



Brigham Park Bike Spur Easement
Donated by Ebenezer Brigham



Lincoln Street Channel Restoration (1/3 mile)
Donated by City of Verona



**SMALL ACTIONS MAKE
A BIG DIFFERENCE!**

This year we worked with the Madison Area Municipal Stormwater Partnership to launch a new Ripple Effects brand, making it easier for Dane County residents to understand the many actions they can take to help protect our local waters. This brand will give all of our water action programs a similar look and feel and promotes the message that “Small Actions can have Ripple Effects on our Waters.” This replaces the My Fair Lakes brand that was used in the past. Visit www.ripple-effects.com to learn how you can make a Ripple Effect on our waters.

Aquatic Plant Management Plan Updates

Aquatic plant management plans provide an inventory of plants in area lakes and streams; and detail how native plants will be protected, how nuisance vegetation will be controlled, and ways in which recreational access will be provided. The plans also guide aquatic plant harvesting that staff may conduct in these waters. These plans are updated every five years to monitor how plant communities have changed, and to satisfy Wisconsin Department of Natural Resources permit requirements.

During the summer of 2017, staff, consultants, and WDNR researchers surveyed aquatic plant communities at more than 6,000 different points in Lake Mendota, Lake Monona and Monona Bay, Lake Wingra, Lake Waubesa, Lake Kegonsa and Lower Mud Lake, and Yahara River and Upper Mud Lake. Staff analyzed the plant data and public input, mapped plant species distribution in each waterbody, and consulted with aquatic plant and fisheries experts at the Wisconsin DNR.

The updated plans were approved by the County Lakes and Watershed Commission and submitted to Wisconsin Department of Natural Resources for final approval. Once approved, these updated plans will be used to guide aquatic plant harvesting and other management in Dane County waters.

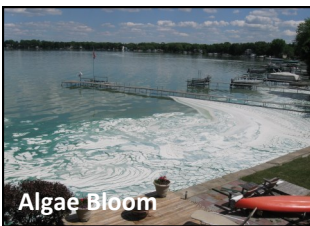


Staff surveying aquatic plants on Lake Mendota and collecting data.

Understanding the Impacts of Legacy Sediments

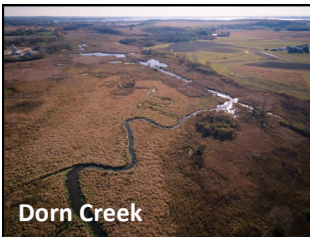


Legacy sediments are upland sediments that have accumulated in local waterways over decades due to erosion from human uses and impacts on the landscape. These sediments usually consist of large amounts of silt and are capable of transporting significant amounts of phosphorus and other nutrients which contribute to algae blooms in the lakes. One study found that phosphorus concentrations in the stream sediments of Dorn Creek (northeast of Lake Mendota) were seven times greater than in nearby crop fields.



In 2017, in order to improve water quality, Dane County began an innovative project to assess 33 miles of streambeds in six streams in the Yahara Watershed for the potential removal of phosphorus-laden sediment. The goals of the project are:

- Rehabilitation of water quality
- Restoration of streambank habitat
- Realignment of the stream channel to historical location
- Reclamation of a former gravel pit to prairie/wildlife habitat



In 2018, approximately 2.3 miles, or 16,000 cubic yards, of legacy sediment will be removed from Dorn Creek. This equates to an estimated 75,000 pounds of phosphorus removed from the watershed.

Follow this project at: <https://lwrp.countyofdane.com/Legacy-Sediment-Project>

Preventing the Spread of Aquatic Invasive Species (AIS)

To combat the problems caused by existing AIS and potential future threats, the department developed an **Aquatic Invasive Species Prevention and Control Plan** in 2009. One of the key components of implementing this plan is our Clean Boats, Clean Waters program, now in its seventh year. Program accomplishments for 2017 include:

2,403



Boats Inspected

4,633



People Contacted



Clean Boats Clean Waters staff inspect boats and educate water users about AIS detection and prevention.

New “Leaf-free Streets” Program Protects Water

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 and can cause algae blooms, deplete oxygen levels, and reduce water clarity. In the fall, timely removal of street leaves before the rain can greatly reduce phosphorus in urban stormwater. In an effort to encourage residents to remove street leaves before the rain the Madison Area Municipal Stormwater Partnership and our department created a **Leaf-free Streets** Rain Alert system. This tool allows residents to sign up to receive email or text reminders days before a rain event prompting them to remove street leaves. In 2017, 128 residents signed up for email alerts and 66 residents signed up for text alerts.



Erosion Control & Stormwater Management

The Water Resource Engineering Division issues and enforces erosion control and stormwater management permits in Dane County and performs site inspections to ensure that these permits are being followed. This year, staff performed **4,184** site inspections and took **48** enforcement actions. We also had a record year in permit application submittals. There were **1,026** submittals reviewed, up **17%** from 2016, and our highest ever number of permits issued in a single year.

Helping Dane Co. be Salt Wise

This year staff developed locally-tailored **application rate guidelines** for winter maintenance materials containing chloride salts that are applied to parking lots, sidewalks, and trails. These guidelines, coupled with best practices such as first mechanically removing snow and ice, will help professionals safely and effectively confront winter storms, while having the least impact to our lands, waters, and infrastructure.

An advisory group, consisting of local private and public sector professionals, Fortin Consulting, and Dane County UW Extension all played a critical role in creating guidelines tailored to Dane County by sharing their local knowledge and experiences. These guidelines are being piloted and evaluated during the winter of 2017-2018.

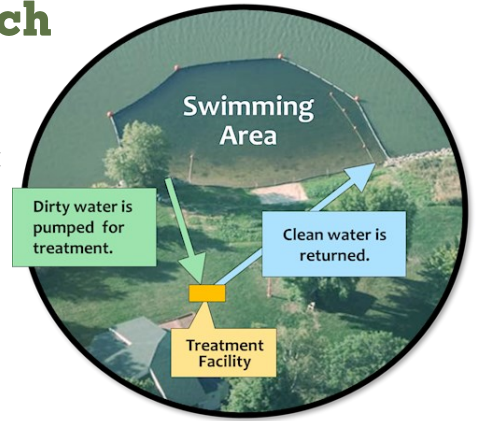
Provide

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

Goodland County Park Gets a Clean Beach

Improving water quality is a long-term effort but in the meantime, it's our goal to provide the residents of Dane County amazing resources they can enjoy right now! This year, we installed a Clean Beach Treatment System at Goodland County Park beach. The system uses a flexible curtain and chemical-free water treatment system to create a safe swimming area that is free of algae and bacteria that might be present in the rest of the lake.

This is the second Clean Beach Treatment System installed in Dane County. The system is also installed at Mendota County Park beach for area residents and visitors to enjoy.



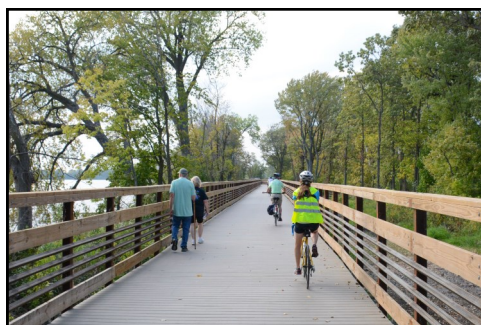
Phase One of the Lower Yahara River Trail Now Open!

We opened Phase one of the Lower Yahara River Trail on August 28 with County Executive Joe Parisi hosting a ribbon cutting event that was attended by hundreds of hikers and bicyclists. The 2.5 mile segment of trail connects the Capital City Trail to the Village of McFarland, providing an off-road connection between Madison and McFarland that did not previously exist. It spans Lake Waubesa and includes a mile-long bridge, one of the longest non-motorized boardwalk bridges in North America. Future phases of the trail will extend all the way down to Stoughton.

“Very beautiful, especially the view from the boardwalk. Looking forward to the future developments!”

“Awesome ride from the Cap City trail. The bridge and the lake are spectacular!”

– Comments from trail users –



Modernizing Tenney Lock and Dam

The Tenney Lock is a popular recreation facility located on the Yahara River at the outlet of Lake Mendota. The lock provides passage of approximately **10,000 boats** every year between lakes Mendota and Monona. This year, the Tenney Lock and Dam was updated and the existing infrastructure was modernized with mechanical and electrical upgrades. A few notable upgrades include:

- Refurbishment of four motors and drive hubs that operate the lock
- Replacement of framing and skins on the lock gates
- Sandblasting and painting lock gates
- Replacement of corroded steel hydraulic lines with stainless steel
- Replacement of all electrical wiring
- Installation of new motors on the dam for offsite water level management



Above: Old lock gate
Below: Newly-installed lock gate

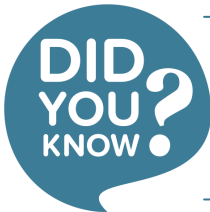
Barks for Parks! Fundraiser Raises Money for Dog Parks



In honor of the 25th anniversary of the Dane County dog parks, we held the first ever "Barks for Parks!" celebration and fundraiser at the Wisconsin Brewing Company in Verona, WI. The afternoon included live music, food, and entertainment for both two- and four-legged attendees and attracted nearly 600 people.

In total, we raised over **\$7,600** which will be used to install unique amenities in our dog parks, including a shade sail structure at Capital Springs Dog Park that will be installed in 2018. There is very little natural shade in that park and this will provide a nice, cool place to rest on hot summer days. Dane

County Parks has always been a leader in dog park design and is continually working to improve in creative, unique ways. Fundraisers like this one help us reach that goal!



Dane County Parks was one of the first park systems in the nation to develop off-leash dog exercise areas (dog parks) and is recognized as a national leader.

Planning and Development Projects

This year, staff worked on construction and implementation of fourteen projects that will provide additional recreational opportunities and increase public access. Staff also worked on seven planning projects, including master plans and future development projects.



2018-23 Parks & Open Space Plan



Phase 1 Lower Yahara River Trail Construction



Lussier County Park Boat Landing

Improvements at Indian Lake County Park

Dane County Parks and Public Works teamed up to complete a new timber frame shelter, playground and restroom facility at Indian Lake Park in July. Trees harvested from forest management practices throughout the park system were repurposed into the timber framing architecture of the shelter and restroom.



Dane County Park Facts: Did you know?



2.5 million+
Visitors annually



New mobile payment system

Making it easier for park and trail users to purchase permits.



100+
Miles of trails

Support

Assisting local partners with resource management and protection

Supporting Dane County Parks Volunteers

Parks staff work with seventeen 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 2017, over **3,000 volunteers** supported our parks by donating more than **65,500 volunteer hours**. This year also marked the founding of a new group, the **Friends of Dane County Parks, Inc.** This group supports Dane County Parks and Commission through promotion of the county park system and fundraising for the Dane County Parks Endowment Fund held by the Madison Community Foundation. The Friends of Dane County Parks Endowment is now over \$450,000 and has already provided the parks volunteer program with new tools, an event tent, trailers, and event supplies.



Dane County Parks also sponsors all of the friends group and endowment events and activities, along with other select events that take place in the park system.

Supporting Water-related Efforts

The Office of Lakes and Watersheds has two programs that support groups and individuals working to protect and improve water quality. The Take a Stake in our Waters program supports water-related volunteer efforts by providing promotion, tools, and t-shirts. This year we held a design contest and selected a fun new design for our 2018 volunteer t-shirts. The office also hosts the Dane County Watershed Network which brings together organizations with a connection to lakes, rivers, streams, and wetlands in order to share ideas, solve problems and learn from each other.



2018 Take a Stake in our Waters t-shirt. Design by Ryann Staton.

2017 Highlights:

2,000+ volunteers	7,400+ volunteer hours	\$175,000+ dollars leveraged
Take a Stake in our Waters		

Participants included	
73 individuals representing	39 groups
Watershed Network	

We welcomed seven new staff members in 2017!



Frank Fosdal
Parks Maintenance
Technician



Kyle Whalley
Conservation Data
Management



Elliott Mergen
Conservation Engineer



Alex DeSmidt
Parks Facility Planner



Lael Pascual
Park Ranger



Shane Otto
Land Restoration

Not Pictured: **S. Larson** - Parks Ranger

Retirements



Kevin Connors
Director

Thank you Kevin for your 40+ years of service!

Awards

- 🍃 **Dane County Bicycle Wayfinding Manual** won an Innovations in Planning Award from the American Planning Association Wisconsin Chapter. [Read more.](#)
- 🍃 **Curt Diehl** (Conservation Specialist) won the Joan & Lee Wulff Conservation Leadership Award from the Badger Fly Fishers.

Image Credits

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Corn, Barn—Gabbey Piper

Page 9:
Biking images (L to R): Flormaria Erazo Zurita, Samantha Haas, Diane Schwartz (Outdoors 123)