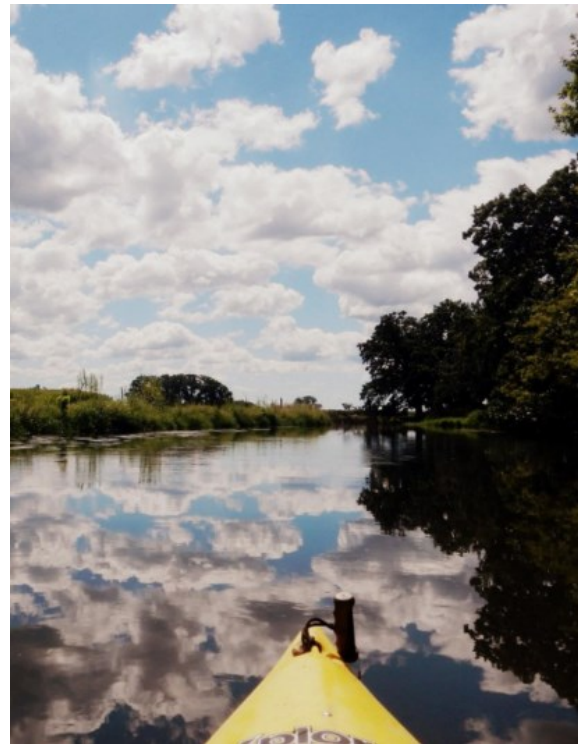




Land & Water Resources Department

2016 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. 2016 marked another year of sustained success and incredible accomplishment for Dane County's parks, our lakes, waters, lands, and trails.



From our breakthrough efforts to clean up our lakes, to adding a new county forest, to groundbreaking for the Lower Yahara River Trail, 2016 was a year to remember. While most will remember this year as a game changer in our effort to clean up our lakes, in 2016 Dane County was named a top biking county in the country.

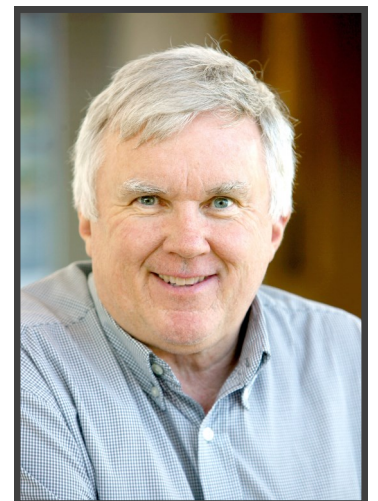
Protecting and investing in our quality of life keeps our economy growing and our communities strong. Our work is not done yet. 2017 holds some exciting new trail openings, park improvements and lakes improvements.

Thank you to our Land & Water Resources Department staff that work so tirelessly and with such heart to make Dane County natural resources world class.

Joe Parisi
County Executive

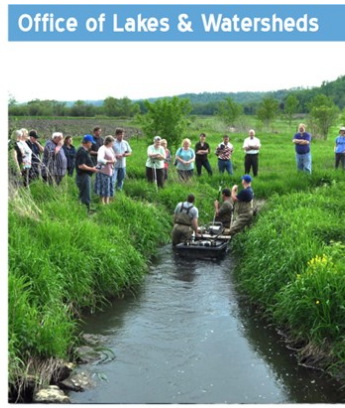
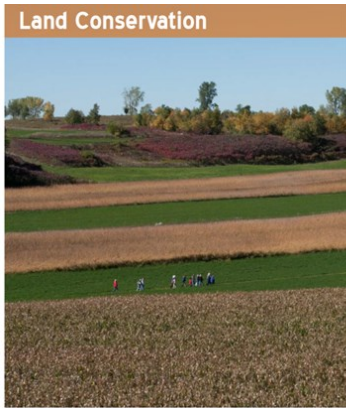
Greetings from the Land & Water Resources Director

Welcome to the 2016 Dane County Land & Water Resources Department (LWRD) Annual Report. The pages in this report are only a small representation of the hours, commitment, and dedication that LWRD staff gave during 2016. Our mission has always been about ensuring the protection and enhancement of Dane County's natural, cultural, and historic resources, providing area residents and visitors with accessible, high quality resource-based recreational services and facilities, and supporting individuals, communities, local governments and other agencies and organizations in their resource management and protection activities.



I want to thank each and every member of our staff for working hard to again fulfill that mission for the people of Dane County, and for the sake of the amazing resources we have the privilege to protect and maintain. My pride is showing, if you can't tell, for our staff and all they accomplished in 2016. As you read this report, I think you'll see what I mean!

Kevin Connors
Director



The Dane County Land & Water Resources Department works to:

protect and enhance

Dane County's natural, cultural, and historic resources
(Pages 4-7)

provide

the county's residents with a broad array of accessible, high quality resource-based recreational services and facilities
(Pages 8-10)

support

residents, communities, local governments and other agencies and organizations in their resource management and protection activities
(Pages 11-12)



Our **new logo** represents the work our department does to protect, enhance and preserve local land and water resources.

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. Land Conservation staff work with agricultural producers to implement conservation practices that hold soil and nutrients in place. This year they continued implementation of the innovative new Harvestable Buffer Program. The buffers help to capture nutrients before they enter local waterways and also allow the farmer to harvest the buffer vegetation, providing a source of animal feed and bedding. Buffers are one of many conservation practices that farmers can implement to conserve soil and protect local waters.

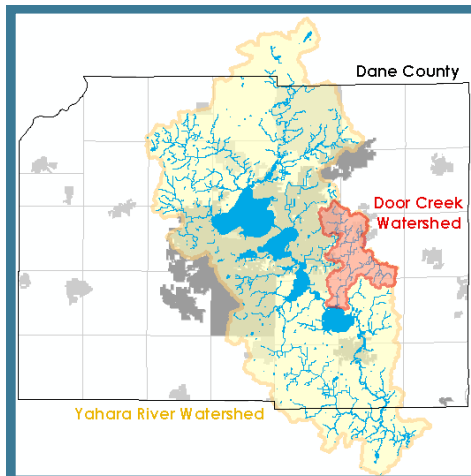


Conservation Specialist Eric Krueger talks with a central Dane County farmer.

 **903**
Landowners Assisted

 **242,045**
Acres Covered by Nutrient Management

 **305**
Acres of Grassed Buffers & Filter Strips Installed

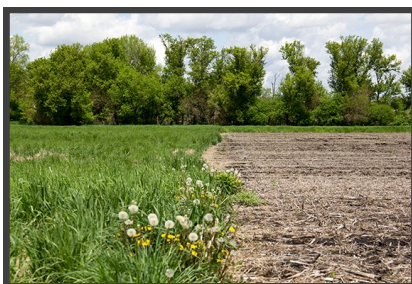


Door Creek Watershed Plan

In 2015, staff developed a **watershed plan** for Door Creek focusing on conservation practices, information and educational efforts, water quality monitoring to address phosphorus issues, and habitat improvement. 2016 marked the first full year of implementation.

Highlights include:

- Staff and volunteer water quality monitoring at 10 sites.
- Installation of an informational kiosk at Fish Camp County Park.



Installation of harvestable buffers to reduce sediment and nutrient runoff (in cooperation with local agricultural producers).



Hosting a tour of the creek with watershed residents and the Friends of Lake Kegonsa Society.



Meeting with agricultural producers in the watershed to highlight conservation opportunities.

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 2016, three municipalities received funding for projects that will result in the removal of an estimated **82,861 pounds** of sediment and **194 pounds** of phosphorus annually, once constructed.



Orchard Heights, Middleton
2014 cost-share recipient



268 Acres permanently protected in 2016



Anderson Farm County Park (8 acres)
Future home of agricultural programming



Token Creek Natural Resource Area (68 acres)
A cold water trout stream



Silverwood County Park (10 acres)
On the south shore of Rice Lake



Blue Mounds Natural Resource Area (6 acres)
Partnered with Prairie Enthusiasts



Military Ridge Prairie Heritage Area (53 acres)
Partnered with the Driftless Area Land Conservancy



Morton County Forest (114 acres)
Donated by Steve Morton



Socha Baer Natural Resource Area (9 acres)
Donated by Joyce Baer

Exchanged lands with the Natural Heritage Land Trust (NHLT). **Patrick Marsh Natural Resource Area** is now owned by NHLT. **The North Mendota Legacy Site** is now owned by Dane County.

Native Plantings

In natural landscapes, rain soaks into the ground gradually. Today, much of the land is covered by impervious surfaces – streets, parking lots, roofs, compacted turf grass, and heavily tilled agricultural fields – 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.

The **Plant Dane!** program aims to increase native plantings in Dane County and reduce stormwater runoff. Each spring, residents can purchase discounted native plants through the Plant Dane! cost-share program. Local schools and community groups can also apply to receive free plants that are donated or grown by volunteers.

13,700



Discounted Plants Sold

1,200+



Free Plants Distributed



Forestry Specialist Adam Alves leads a forestry field day for Malcolm Shabazz High School students to teach them about the measurements used in the tree inventory.

Assessing the Health of our Trees

Every few years, staff do a complete inventory of landscaped trees on Dane County properties as part of our **[Emerald Ash Borer and Wood Utilization Management Plan](#)**. This plan outlines proactive steps that helped prepare for the arrival of emerald ash borer in order to reduce the environmental impacts, reduce economic and social costs, and find ways to put this “waste” wood to positive and profitable use.

As of this year, we have over 5,200 landscaped trees on park properties. Due to Emerald Ash Borer, we have lost about half of our ash tree population with 525 trees remaining. This data helps us understand how to protect the surviving ash trees and plan for future management.

Understanding the Impacts of Legacy Sediments

One of the top priorities for Dane County is improving water quality within the Yahara River watershed. Conservation efforts have been occurring for decades throughout the county and the Yahara to help reduce the amount of nonpoint pollution entering nearby streams, rivers, and lakes. However, measuring improvements in the Yahara’s overall water quality has been difficult, partially due to legacy sediments in our waterways.

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.

Legacy sediments usually consist of large amounts of accumulated silt and are capable of transporting significant amounts of phosphorus and other nutrients which degrade water quality at the source point, as well as downstream. For the past two years Dane County Land & Water Resources Department (LWRD), in collaboration with the Wisconsin Department of Natural Resources (WDNR), has been working on collecting and evaluating legacy sediments within a portion of Dorn Creek, located on the northern side of Lake Mendota. As part of the project, LWRD staff were able to successfully remove legacy sediments from a small stretch within Dorn Creek.

Dane County has committed \$12 million over the next four years (\$4 million available in 2017) for the removal of legacy sediments throughout the Yahara, including Dorn Creek and other streams with accumulations of sediment and phosphorus. This removal, combined with the continued implementation of additional conservation practices, will aid in the ability to see measurable improvements in water quality sooner rather than later throughout the Yahara.



*Top: DNR Staff assessing Sediments
Bottom: Dorn Creek legacy sediment*

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 2016 include:

1,496



Boats Inspected

3,769



People Contacted



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

Leaf-free Streets Pilot Program

When it rains, water runs through leaves left in the street and creates a nutrient rich tea that flows through storm sewers into local waters and can cause algae blooms, deplete oxygen levels and reduce water clarity. The Madison Area Municipal Stormwater Partnership, in conjunction with the Friends of Pheasant Branch Conservancy and the City of Middleton, conducted a pilot program encouraging residents to remove leaves before rain events. After the pilot, 100% of participants surveyed said they would continue removing leaves from the street next fall.



Read the pilot program report at: www.ripple-effects.com/Leaf-free-Streets

Erosion Control & Stormwater Management

The Water Resources 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 **2674** site inspections and took **44** enforcement actions.

WI Salt Wise Partnership

Once you put salt down, it doesn't go away. It alters the composition of soil, slows plant growth, weakens the concrete, brick and stone that make up our homes, garages, and travels into our surface and groundwaters, endangering freshwater resources and our drinking water.

The department is a proud participant in the WI Salt Wise Partnership - a coalition of organizations working together to reduce salt pollution in our lakes, streams and drinking water. This year, to help educate the public, the partnership developed outreach and media kits, five educational videos, and attended fourteen local events. Learn more at www.wisaltwise.com.

Raising awareness about conservation options

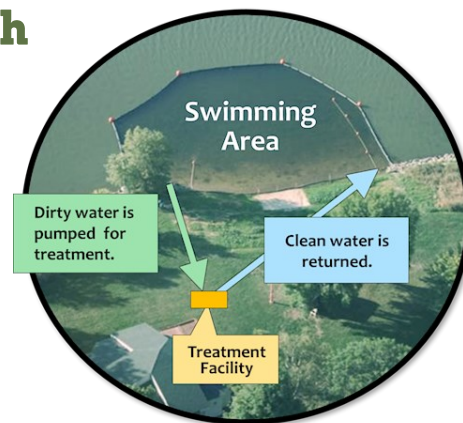
Provide

Clean, safe and accessible natural areas to play and recreate

Mendota 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! A pilot program installed in Mendota County Park uses a flexible curtain and a water treatment system to create a safe swimming area that removes algae and bacteria that might be present in the rest of the lake.

A study showed that, on average, bacteria levels in the swimming area are nearly **25 times lower** than in the rest of the lake.



Introducing Phase One of the Lower Yahara River Trail



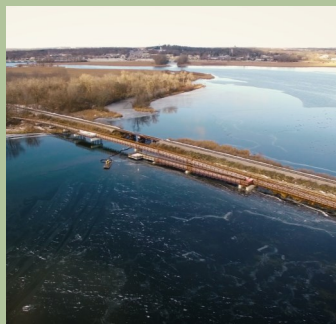
Planning for the trail began in 2008.

Phase 1 will be completed in the summer of 2017.



This multi-use pedestrian bicycle trail will connect the city of McFarland to the Capital City Trail and the City of Madison.

The trail extends approximately 2.5 miles from the Capital City Trail at Lake Farm County Park to McDaniel Park in the Village of McFarland.



Harvested trees will be reused for park shelter building materials and shoreline fish habitat on Lake Waubesa



One of the longest non-motorized boardwalk bridges in North America!

Morton Forest Opens with a BANG!

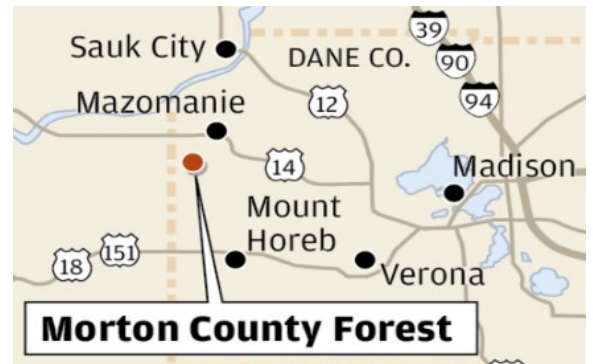
The ribbon cutting ceremony and opening of Morton Forest made the front page of the newspaper this year! Hearing the news, visitors flocked to Morton Forest this fall to take in the fall colors and beautiful scenery. Winter snowshoeing and hiking were other popular activities. The forest is named after Stephen Morton who donated the property to Dane County Parks in 1999. In January 2016, he turned it over to Dane County Parks and it was officially opened to the public in October.

Morton Forest has a hilly terrain with scenic rock outcroppings; classic characteristics of the Driftless Area. From one of the overlooks, you can see all the way to Blue Mound, the highest point in southern Wisconsin.

Stephen Morton also made significant donations for developing and maintaining the property; a portion of which was used for a gravel parking lot, establishment of trails, vegetation clearing to open up scenic overlooks, signage, and painting of the buildings. He also had two timber frame overlooks constructed before turning the land over to Dane County Parks. Furthermore, he set aside a permanent endowment fund through the Madison Community Foundation that will provide up to \$10,000 annually for future operations and maintenance.



The 114-acre forest features hiking trails, two scenic overlooks with timber frame covered seating, and a nature center for outdoor education or special events. Recreational opportunities include hiking, snowshoeing, cross-country skiing, wildlife observation, foraging and archery hunting (with permit).



“We are extremely thankful for Mr. Morton’s contribution and his dedication to preserving this incredible piece of land for future generations to enjoy. It’s truly one of the gems of our 12,000-acre Dane County Park system.”

– Darren Marsh, Parks Director –



“I donated my land to Dane County Parks because I felt, given our expanding population, it was important to protect open space and create places of solitude for people to visit as an escape from their more crowded urban environments.”

– Stephen Morton –

Planning and Development Projects

Development

This year staff worked on construction and implementation of fourteen projects that will provide additional recreational opportunities and increase public access:



🍃 Mendota County Park Beach Restoration 🍃



🍃 Lake View Hill Park Nurses Dormitory Memorial 🍃



🍃 Indian Lake Shelter Timber Harvest & Milling 🍃

- Libby Road Shop Building
- Lake Farm Overlook Tower Repair
- Crystal Lake Wildlife Area Parking Lot
- Cherokee Marsh Natural Resource Area Yahara Parking Lot
- Prairie Moraine Parking Lot Removal & Stabilization
- Silverwood County Park Parking Lot & Stabilization
- Silverwood County Park House Interior Restoration
- Capital Springs Recreation Area E-Way Parking Lot Paving
- Lower Yahara River Trail Phase 1 Clearing/Stone Base
- Falk Wells Wildlife Area Sunset Road Parking Lot

Planning

Staff also worked on seven planning projects, including master plans and future development projects:



🍃 Silverwood County Park Master Plan 🍃

- 🍃 Mendota County Park Master Plan
- 🍃 Bicycle Wayfinding Plan
- 🍃 Lussier County Park Boat Landing Construction Documents
- 🍃 Schumacher Farm Barn Architectural/Civil/Site Construction Documents
- 🍃 Indian Lake Shelter & Restroom Architectural/Civil/Site Construction Documents
- 🍃 Cherokee Marsh Hiking Trails and Trailheads

Support

Assisting local partners with resource management and protection

Supporting Dane County Parks Volunteers

The Parks Division works with seventeen friends groups who have adopted specific parks. These groups advocate for the park properties, fundraise and provide maintenance as well as host a variety of exciting public events. We depend on their steadfast dedication to help bring our County Parks to life! In 2016, over **3,100 volunteers** supported our parks by donating over **65,740 volunteer hours**.



Learn how you could become a volunteer at: www.countyofdane.com/lwrp/parks/

Dane County Parks also sponsors all of the parks friends groups and the Friends of Dane County Parks Endowment events and activities along with other select events that take place in our park system.

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, and the Dane County Watershed Network brings together organizations with a connection to lakes, rivers, streams, and wetlands to share ideas, solve problems and learn from each other.



2016 Highlights:

2400+
volunteers



7,300+
volunteer hours



\$168,000+
dollars leveraged



Take a Stake in our Waters

Participants included

69 individuals representing



37 groups



53 of these individuals gathered in April to learn, network, and collaborate on phosphorus and other priorities at the **Yahara Watershed Summit**.

Watershed Network

Two New Division Websites

Launched

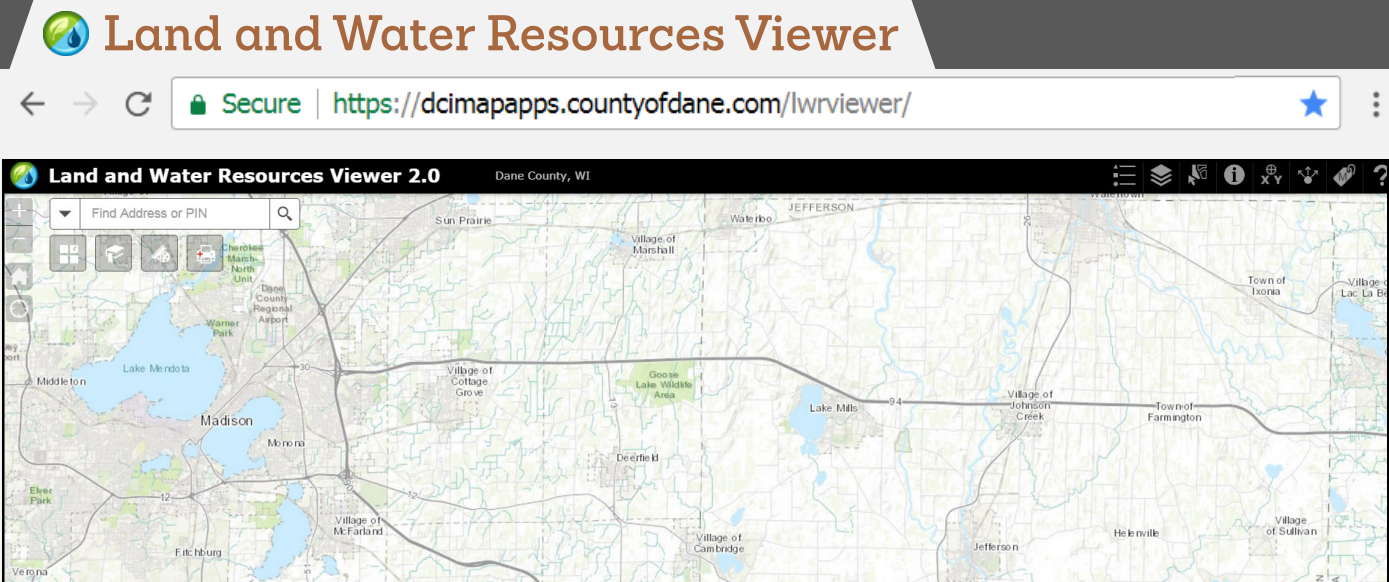
Parks Division

www.danecountyparks.com

Office of Lakes and Watersheds

<https://olw-lwr.dane.countyofdane.com/>

These new websites are more user friendly, making it easier than ever for the public to find the information they are looking for.



The Land & Water Resources Viewer is an **online interactive mapping application** that allows users to view land and water related map features including parcels, county and municipal parks, water access sites, wetlands, rivers/lakes, soil features, and much more. The Land & Water Viewer can be used to determine if your property is in a shoreland zone. The shoreland zone includes all lands within 1,000 feet of a lake or pond, 300 feet of rivers and streams and 75 feet of wetlands. Development and certain land use activities within the shoreland zone have a greater potential to negatively impact those resources. A permit is often required for construction and land disturbing activities.

We welcomed six new staff members in 2016!



Seth Ebel
Conservation Engineer



Marie Raboin
Conservation Specialist



Lars Higdon
Naturalist



David DeGolyer
Parks Laborer



Roland Arndt
Parks Mechanical
Repair Worker



Shawn Esser
Soil & Water
Conservationist

Image Credits

Cover:

Corn—Gabbey Piper

Butterfly — Sara Foelker

Prairie—RFarrell

Page 4:

Farmer outreach— Scott Hennelly/Wisconsin Land + Water Conservation Association

Harvestable buffer — Scott Hennelly/Wisconsin Land + Water Conservation Association

Page 6:

Leaf Illustration by Xueyan Wang

Page 10:

1st and 3rd photo in "Parks Volunteers" section — Kalston

Water image —Jonah Westrich