

2022 Annual Report

A NOTE FROM THE COUNTY EXECUTIVE

The work done by our Department of Land and Water Resources is unrivaled by any county in Wisconsin and beyond. With four million visitors annually to Dane County Parks, our leadership on water quality, conservation, and outdoor recreation are exemplary and should be the standard bearer for any community that prioritizes its precious air, water, and land.



Dane County's ground-breaking clean lakes program Suck the Muck is now going on its sixth year of cleaning miles of streambeds to help prevent blue-green algae in our lakes. We've removed 180,000 pounds of phosphorus from four miles of Dorn, Token and Six-Mile Creeks that all flow into Lake Mendota, and next we will tackle phosphorus-laden muck in Dorn Creek.

We also know that where we prioritize conservation and restoration we contribute greatly to our goal of reducing carbon emissions. Since 2019, our Continuous Cover Program has converted nearly 2,000 acres into pastures for grazing, native prairies, and pollinator habitats. Those lands alone have helped trap 800 tons of carbon dioxide and stopped the flow of over 15 million gallons of phosphorus-loaded rain runoff from racing toward our lakes.

Some of the most popular work Dane County does is the development and maintenance of our more than 100 miles of bike trails, including the Lower Yahara River Trail that wows users with its picturesque views of Lake Waubesa. With the construction of the next phase of the trail, we are nearing the day when you can get on a bike in Madison and pedal along the water to Stoughton.

Dane County leads the way in protecting our lakes, building bike trails, reducing climate changing emissions, and caring for our farmland. Thank you to our Land & Water Resources Department staff who work so tirelessly to protect and enhance our natural resources for current and future generations.

JOE PARISI

Dane County Executive

DIRECTOR'S STATEMENT

I am pleased to present the 2022 Dane County Land & Water Resources Department Annual Report. The work captured in this report represents just a fraction of what our talented and hard-working staff have accomplished this year.

Inside this report you will find examples of how we continue to expand public lands, diversify recreational opportunities, implement conservation practices, and offer programs to everyone in our community. In addition to our tried and true conservation programs, we have launched some innovative new projects that help further protect and improve the county's land and water resources.

In 2022, County Executive Joe Parisi announced a net-zero carbon by 2030 goal for Dane County facilities and operations. Our department is perfectly primed to help accomplish this goal and has launched a new [Climate Initiatives](#) webpage to help capture our work and track our progress.

I hope you enjoy learning a little more about what we do as you read through this report. Thank you to all of our staff, volunteers and partners for making 2022 a success.

LAURA HICKLIN

Department Director

WANT TO KNOW MORE?



Click on the "information" icon next to a story to take a deeper dive into the project and learn even more.



Speaking at a Clean Lakes Alliance Women in Conservation event.

SOIL HEALTH EQUIPMENT PROGRAM i

This year the Department launched a new Soil Health Equipment Program (SHEP) that helps agricultural landowners and producers offset the cost of purchasing farm equipment to implement soil health practices such as no-till, cover crops, and low disturbance manure injection. The goal is to help prevent soil erosion, improve soil biota, increase water infiltration, and reduce nutrient runoff. The program covers 70% of the equipment cost, up to \$30,000. This program was piloted in the Yahara Watershed in 2021 and made available county-wide this year.

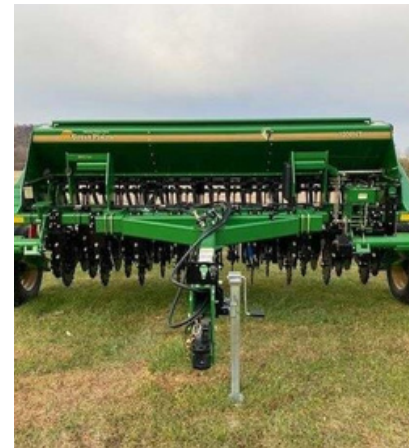
This year we provided over **\$538,000** in funding to **18 producers** to help purchase 14 no-till drills, one set of closing wheels, one seedbox, one roller crimper, two seed tenders, and one mobile shade structure.



A **Shade Structure** can move with livestock when practicing rotational grazing.



A **Roller Crimper** can be used instead of herbicides to kill certain cover crops.



A **No-till Drill** plants seeds in the ground without drastically disturbing the topsoil.

A RECORD YEAR FOR CONSERVATION

Staff had a record breaking year implementing **171 contracts** encompassing a wide variety of conservation practices, including grassed waterways, manure storage closures, cover crops, and soil health equipment. These contracts come out to over **\$3.1 million** in funding assistance to Dane County farmers, producers, and landowners.

URBAN WATER QUALITY GRANT i SPOTLIGHT



The Lincoln Street Stormwater Facility was awarded grant funding in 2020 and the project was completed in 2022. This new facility will receive runoff from approximately **750 acres** of drainage area on the densely populated northeast side of Verona.

IMPROVED COMMUNITY RESOURCES

Department staff continuously work to improve communication about our permit program requirements and provide guidance with our customers and consultants. This past year, staff provided two one-hour lunch-and-learn webinars. One on the use of the Universal Soil Loss Equation to demonstrate compliance with construction site sediment loss regulations and the other on our new ordinance requirements for redevelopment areas and green infrastructure modeling.

In addition, staff have completely overhauled our stormwater manual, moving it i online to provide an improved search and user experience. Permittees will easily be able to find information on control practices, including any requirements specific to Dane County. The format also allows for easy editing and updating, so changes can be quickly made, with new documents and guidance highlighted on the home page.

EROSION CONTROL & STORMWATER MANAGEMENT

Staff issue erosion control and stormwater management permits and perform site inspections to ensure that these permits are being followed. This year, staff performed **4,107 site inspections** and took **42 enforcement actions**.



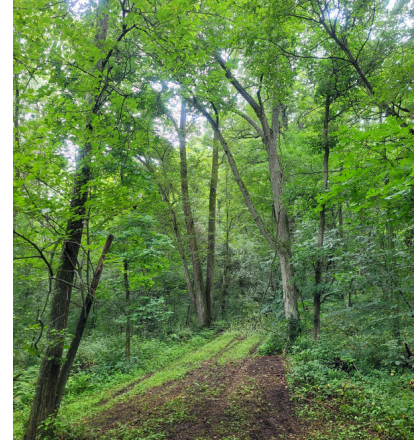
A properly installed **Silt Fence** can prevent sediment from leaving a construction site.

LAND ACQUISITIONS

235 Acres Permanently Protected in 2022

Ice Age National Scenic Trail (40 acres)

Land on the west side of Woods Road in the Town of Verona provides a critical Ice Age National Scenic Trail connection and also provides options for a trailhead and parking. This is a partner project with the City of Madison, City of Verona, and Town of Verona.



New parcel adjacent to Morton Forest

Land Adjacent to Morton Forest (65.5 acres)

New land parcel connects to the south side of Morton Forest and will provide additional recreational opportunities and park maintenance access.

Door Creek Wildlife Area (129.3 acres)

Additional land will extend the Door Creek Wetland complex for wildlife habitat and public recreation and provide options for the Lower Yahara River Trail project.

Falk Wells Sugar River Wildlife Area (0.18 acres)

Land along STH 69 fills in a small gap between county land and the highway.

Dane County Conservation Fund Grant Projects

Grants awarded to:

- **The Prairie Enthusiasts** to purchase 40 acres in the Town of Blue Mounds for its Erbe Grasslands project in the Military Ridge Prairie Heritage Area.
- **Ice Age Trail Alliance** for the purchase of 40 acres in the Town of Dane for its Marsh View Preserve project.
- **Groundswell Conservancy** for the acquisition of 1.26 acres in the Village of Black Earth for a Village park and canoe/kayak launch on Black Earth Creek.
- **Groundswell Conservancy and the Town of Dunn** to acquire a conservation easement on 130 acres on the west shore of Hook Lake.
- **Town of Albion** to purchase 2.2 acres on the northwest side of Lake Koshkonong for a lake access facility with a boat ramp, parking, picnic area, and breakwater.

DOOR CREEK WILDLIFE AREA i

SPOTLIGHT

Dane County purchased 129.3 acres in the Town of Dunn to expand the Door Creek Wildlife Area. The land is a mixture of upland to the north, wetlands to the south with a small area of market gardens operated by Hmong gardeners in the middle. The purchase protects wetlands near Lake Kegonsa and Door Creek while providing opportunities to connect the Lower Yahara River Trail to Fish Camp County Park. It also provides alternative access to the Wildlife Area from the west. Located in the Door Creek Watershed, the uplands on the property will provide a staging area and dewatering site for the county's "Suck the Muck" sediment removal project which is slated to begin removing sediment from Door Creek in 2024.



ICE AGE NATIONAL SCENIC TRAIL i

SPOTLIGHT

In 2018, the county partnered with the City of Madison to purchase land on the west side of Woods Road in the Town of Verona for a critical Ice Age National Scenic Trail connection. This year, the county had the opportunity to partner again with the City of Madison and also with the City of Verona and Town of Verona to acquire an additional 40 acres of mature woodlands, ridges and ponds which sit on the Johnstown Moraine and is adjacent to the City-owned land. This collaboration not only provides land for future public recreation on the Ice Age National Scenic Trail but also provides wildlife habitat and preserves the glacial landscape for future generations.



LAND RESTORATION EFFORTS

Staff and volunteers are continuing restoration projects covering over **1,115 acres of land**, including prairie, oak savanna, oak woodland, and wetland sites. Once restored, these ecosystems will provide an incredible number of ecosystem services.

Seed Collection | **3,676 lbs. seed collected**

Our seed collection program continues to grow! This year, volunteers, staff and partners collected and processed a record breaking **3,676 pounds** of seed from **238 native species** with an estimated worth of over **one million dollars**. Volunteers contributed around **1,944 hours** to this program. This seed will be used to help restore and increase biodiversity in **375 acres** of prairie, oak savanna, and oak woodland habitats. A small amount of seed was also used to help increase biodiversity in the county's Continuous Cover Program, to support our Free Native Plants program, and to create six native seed libraries in the Madison and Monona library system.



Seed collection photo
courtesy John Kalsen

Forestry | **1,500 trees and native shrubs planted**

We continue to see an increase in tree pests and diseases due to climate change and the introduction and spread of harmful organisms.

Ash trees once accounted for 23 percent of Dane County's landscape trees but due to Emerald Ash Borer that number has decreased to just over 5%. Staff have been hard at work removing dead and dying Ash trees and replanting a more diverse mix of species so that, in the future, no single species will make up more than 5% of the tree cover in an area. Tree inventory software and GIS data help track species locations so that our forests are more diverse, resilient and we don't create the possibility for total canopy loss due to a disease and/or pest.

Bur Oak trees account for seven percent of our landscape trees and are increasingly threatened by the spread of Oak Wilt and Oak Blight diseases, as well as Spongy Moth and Two Line Chestnut Borer populations. Oaks support over 800 species of wildlife and are incredibly important to local ecosystem health so treating select oak trees, to provide protection against fungal disease and insect pests, has been a top priority.

Forestry continued...

Staff also monitor for new and emerging pests and diseases, such as the Asian Long Horn Beetle which affects trees across multiple families, genus and species and, if introduced to Dane County, has the potential to impact roughly 75% of our tree population. It is currently in Ohio and has been found as close as Chicago. Our diverse planting plan will help make it harder for new pests and diseases to spread if introduced. This year we planted over **1500 trees and native shrubs** on county-owned lands with the help of volunteers and partner organizations to help replenish areas that have lost a large percentage of trees.

PRAIRIE MORAINES COUNTY PARK SPOTLIGHT



This unique park offers visitors the chance to experience Wisconsin's glacial history with one of the best viewing spots of the Johnstown Moraine, the outermost glacial moraine from the last glacial period.

In several areas of the park, invasive species had taken over, creating challenges for dog park users, blocking views of the unique geologic features, and crowding out native vegetation. Dane County Parks staff and volunteers, including the Ice Age Trail Alliance and Prairie Moraine Friends, Inc., have been working to restore the three primary natural resource communities which historically existed in the park: prairie, oak savanna/opening, and oak woodland.

This year, volunteers removed all invasive buckthorn and honeysuckle from an 11-acre fenced project area. Native shrubs, including hazelnut, elderberry and plum, and twenty-four oaks have been planted in the oak woodland unit. Several gorgeous views of the terminal moraine have been opened up. The fruit orchard was expanded and several of the previously planted trees are now producing fruit.



YAHARA RIVER SEDIMENT REMOVAL i

When floodwaters struck in 2018, the county began a multiyear **Yahara River Sediment Removal** project to remove built up sediment from the river bed to reduce the risk of future flooding and improve water flow in the Yahara Lakes. The county purchased hydraulic dredging equipment and hired a new staff team dedicated to this project.

This year, the crew removed **18,500 cubic yards** of sludge between Babcock Dam on Lake Waubesa and Lower Mud Lake. This was one of several identified shallow constriction points in the Yahara River where water flow slows, causing lake levels upstream to rise. To date, **72,500 cubic yards** of sediment has been removed.



Dredge equipment removes sediment and water from riverbed (left) and pumps it to a dewatering basin (right) where the sediment settles out before the water is returned to the stream.



Sept 2022 Update

Two crews work their way through Lower Mud Lake.

LEGACY SEDIMENT REMOVAL i

Dane County continued implementation of the multi-year **Legacy Sediment Removal** “Suck the Muck” project to remove phosphorus-laden sediment from streambeds within the Yahara River Watershed. Crews removed an estimated **25,000 tons** of sediment, containing around **60,000 pounds** of phosphorus, from Six Mile Creek. Six Mile Creek is one of several streams that feed into Lake Mendota where lab sampling showed had a high concentration of phosphorus in sediment built up along the bottom of the waterway.

To date, Dane County's “Suck the Muck” initiative has removed a combined nearly **60,000 tons** of sludge containing an estimated **180,000 pounds** of phosphorus from several miles of Dorn, Token, and Six Mile Creeks. Next up for “Suck the Muck” is built-up sediment within the Door Creek Wetlands in southeast Dane County.



“With an ever-changing climate...it's important to prepare now to increase our resiliency for what lies ahead. We know bigger storms and heavier rains are occurring more frequently and this work helps us be ready and hopefully minimize future property damage.”

Joe Parisi, Dane County Executive

FLOODING IN FISH LAKE i

Fish, Mud, and Crystal Lakes are located in northwest Dane County and have been experiencing rising water levels for several decades. Water levels in Fish Lake have risen more than 17 feet since they started being recorded in 1966. This year, a technical work group was assembled to assess potential alternatives for mitigating flooding in Fish Lake. The technical work group reviewed eight alternatives and presented the challenges, benefits, and considerations for each in their final report which can be found on our website.

PARK UPGRADES

Below are highlights of some park development and trail expansion projects:



Salmo Pond County Park - Accessibility Improvements

Improvements include an accessible fishing pier, picnic table, bench, and restroom facility. The area was named in memory of long time Park Commission member Dan Wisniewski to recognize his lifetime of conservation and stewardship.



i North Mendota Trail

Completion of the North Mendota Trail through Governor Nelson State Park. This paved half-mile trail completes a 4-mile segment of the trail that connects the Village of Waunakee and the Town of Westport. Parks Operation staff constructed the majority of the trail, only the paving was bid out.



Token Creek Pavement Restoration

The main park road was repaved from the entrance gate to the Group Camp entrance. The existing asphalt was milled, graded and paved over to create a new road surface.

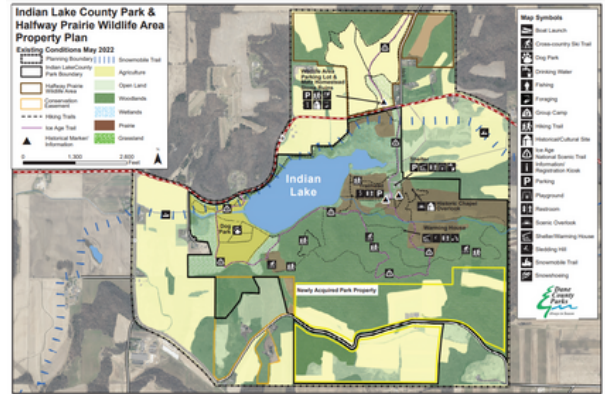


Goodland Tennis & Pickleball court

The tennis and basketball courts at Goodland County Park were reconstructed and new fencing was added. Pickleball court line striping was added giving Dane County Parks our first ever pickleball court.

INDIAN LAKE COUNTY PARK AND HALFWAY PRAIRIE WILDLIFE AREA SPOTLIGHT

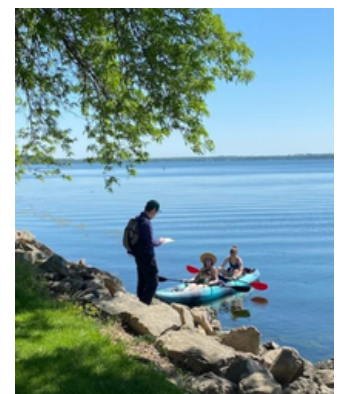
Dane County Parks began working on a property plan that will propose future management, recreation use and park facility development for Indian Lake County Park and the adjacent Halfway Prairie Wildlife Area. The park and wildlife area have extensive Native American and early European settlement history that will also be documented in the plan. The County currently owns approximately 800 acres within the recreation park boundary and 150 acres within the wildlife area boundary.



Staff held two public information meetings and conducted an online survey. Information collected at the meetings and survey responses will be considered in making future decisions related to planning, development and management of these properties. The plan will be completed in 2023.

DANE COUNTY PARKS EQUITY AND ACCESS EVALUATION SPOTLIGHT

In 2021, the Dane County Board of Supervisors contracted with Keen Independent Research to conduct an independent evaluation of equity and access at Dane County Parks and the Henry Vilas Zoo. This study was completed in August 2022. The final report is available on our website and includes a number of recommendations and resources to enhance diverse community participation in park facilities and programs, ultimately becoming a more inclusive, equitable and racially just place for all. We are using the report to help refine our equity and inclusion plan.



Member of the research team conducting public surveys

SUPPORTING VOLUNTEERS

Dane County Parks Volunteers and Events

This year over **1,850 volunteers** donated more than **55,000 hours**. These numbers reflect the community's strong commitment to our parks.

Staff also hosted a winter volunteer training series that was open to park Friends groups, watershed groups and other organizations working to improve and protect Dane County land and water resources. Sessions included Friends Group Organization and Incorporation, Interpretive Signage and Design, Membership and Fundraising, Successful Event Planning, Social Media and Communications, Diversity, Equity, and Inclusion Workshop, and Chainsaw Safety Training, among others.

Friends of Dane County Parks Grant Program

This year Dane County provided over **\$40,600** in matching funds to support Friends groups and other nonprofit organizations that have projects or programs occurring on Dane County Park property.

The Foundation for Dane County Parks, Inc.

Thanks to generous donors like you, the Foundation for Dane County Parks has raised more than **\$2.4 million** to support one of our community's best assets, the Dane County Park System. This has helped fund accessible fishing piers, accessible kayak launches, and outdoor programming that provides local youth with the opportunity to experience and gain confidence in the outdoors. This year, the funding also supported all-terrain wheelchairs that can be used in the parks, outdoor programming for individuals with dementia, and events to help reconnect our community to Ho-Chunk ancestral lands. To learn more about how your support of the Foundation for Dane County Parks is making a difference, please visit the [Foundation's website](#).



Photo far right courtesy Steve Dahlgren

YOUTH INITIATIVES

Our Lussier Family Heritage Center Facility offers a growing number of educational programs and events for both youth and adults. Some of these are described below.



Lil' Explorers

This year, we expanded our Lil' Explorers program to provide five programs a month for preschool age children. Youth in the Lil' Explorers Adventure program learned about insects, colors, wind, and nature. We also partnered with the Madison Public Library's Dream Bus for a Lil' Explorers StoryTime program featuring stories about nature and the outdoors in Spanish and English.



Get Outside

During the fourth year of the Get Outside! program we were able to work with six community centers monthly or biweekly from June - November. Youth were able to canoe, fish, and bike as well as learn about the areas they and the flora and fauna call home. Throughout this program youth were able to explore parks near and far from their communities.



Learn to and Adventure Programs

Lussier Family Heritage Center staff continued to encourage youth to get outside through our Learn-to programs. This year we ran both Learn-to Bike and Learn-to Fish programs that allowed youth to try out new activities with the help of knowledgeable staff. Youth left these programs feeling empowered and excited to try these recreation activities again.



Paddle in the Parks

Staff hosted six events to help the public get out on the water for fun, introductory paddles. Attendees could bring their own boat or rent a canoe from us. Together we explored Lake Waubesa, Upper Sugar River, Black Earth Creek and the Yahara River. These paddles were a huge success and something we plan to continue.

JUNIOR NATURALIST MINI CAMPS SPOTLIGHT



This year we launched Junior Naturalist mini-camps for youth, ages 9 - 14 to give kids the opportunity to spend a part of their summer exploring our parks. Each group was able to bike, canoe, and hike through prairie, woodland, and wetland areas. Students were able to ask their own questions and used teamwork to collaborate, research and problem solve to find the answers. The American Family Dreams Foundation and the Foundation for Dane County Parks helped sponsor this program.

Centro Hispano Partnership

We hosted a Junior Naturalist (Juventuras) session specifically for Centro Hispano to bring 20 middle school students out into the parks. Students and staff played games, worked on teamwork, and spent eight days exploring and learning. The session culminated with a family night for the families of the Junior Naturalist students. The families were able to enjoy a meal together and walk through the surrounding prairies so the youth could share some of what they learned about local plants and wildlife. This partnership was made possible with support from the American Family Dreams Foundation and the Foundation for Dane County Parks. We are grateful for their support of our program!

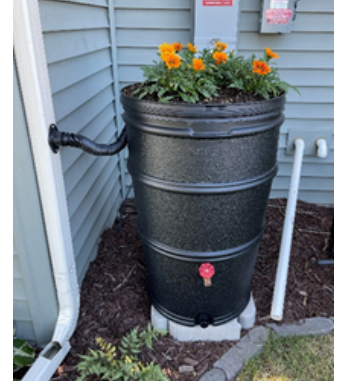


YOUTH FISHING DAY SPOTLIGHT

Approximately 85 kids attended our first ever free Youth Fishing Day event at Stewart Lake County Park. Kids visited different stations, learning about safety, fisheries management, fish identification, fish anatomy, casting, and knot tying. Youth were able to take home their very own fishing rod along with a small selection of tackle after they completed all of the stations.

RIPPLE EFFECTS

There are many practices that reduce and improve stormwater runoff into Dane County lakes, rivers and streams. Ripple Effects, a joint program between our department and the Madison Area Municipal Stormwater Partnership, educates residents about easy actions they can take to protect Dane County waters.



Rain Barrels 📄

Ripple Effects launched a new rain barrel program in the spring. 50-gallon rain barrels were available to purchase from April thru October for \$74. Residents located within Madison Area Stormwater Partnership communities were eligible for an additional \$30 reimbursement. The program was wildly popular with more than 350 rain barrels sold.

Plant Dane 📄

The Plant Dane Native Plant Sale had a record year with more than 31,000 plants sold to Dane County residents and groups. In addition, more than 9,900 native plants were distributed through the free plants program. These plants are donated to school and community organizations through the plant sale or grown by volunteer native plant growers.

ENVIRONMENTAL FUN FAIR

Our Lussier Family Heritage Center facility hosted our first ever Environmental Fun Fair. This free, family friendly event featured 19 hands on activity stations centered around nature, recreation, and science and had learning opportunities appropriate for all ages. The goal was to spark youth interest in science and the outdoors all within the setting of one of our parks. The event included a community shuttle and Spanish interpreters on site to assist people at the event.



BIRD'S-EYE VIEW OF CONSERVATION

The department has three drones and seven licensed staff pilots that can help photograph, video, map, survey, and inspect projects from otherwise inaccessible vantage points. This data helps staff make informed decisions about projects and can help communicate progress to the public and partner agencies. This year, staff conducted 34 flights with 21 hours of flight time.



Orthophotos can be created from individual or multiple drone photos that are adjusted to remove distortions from the effects of topography, camera tilt, and more. Unlike an uncorrected aerial photograph, an orthophoto can be used to measure true distances and areas. Staff have used orthophotos to perform site evaluations, document erosion events, and monitor the construction of conservation practices, buildings, roads, etc.



Topographic data helps staff plan and design projects. One example was a project to address soil erosion on a field next to Vermont Lutheran Church. Drone data was processed into detailed elevation data, which helped staff determine the best method to address the erosion problem – in this case, a small dam was installed to stop the erosion. The drone survey for this project was completed within a few hours whereas a field survey would have taken a day or two.



Photos and videos provide a unique perspective that help staff document and communicate project progress. Examples include the use of drones to capture footage of the following projects: carp removal at Indian Lake County Park, site conditions for a wetland restoration at Cherokee Marsh Wildlife Area, and before and after images of a row-cropped field converted to a perennial prairie through the department's Continuous Cover Program. Drone images and videos can help the public better visualize the work performed by allowing us to communicate a more complete story.

WELCOME NEW FULL-TIME STAFF!



Tom Klein*

Land Restoration Specialist



Claire Lamberg*

Land and Water Volunteer
Coordinator



Chris Cole

Parks Laborer



Michael Spicer

Mechanic



James Brodzeller

Land and Water Scientist




Landon Baumgartner

Conservation Specialist

**Previously worked for the department as an LTE*

The following existing full-time staff were hired into new roles: Shane Otto (Botanist/Naturalist); Lael Pascual (Engagement and Visitor Services Manager); Joleen Stinson (Parks Director)

AWARDS & RECOGNITION

Dane County Parks won the “Outstanding Park  Design Award (\$500,000 - \$999,999 category)” from the Wisconsin Park and Recreation Association for Dane County's First Solar Powered Park.

Dane County Parks won the “Merit Award” from the American Society of Landscape Architects Wisconsin Chapter for the E-Way Model Restoration Exhibit

RETIREMENTS

- Janet Crary, Account Clerk

Thank you for your many years of service!