



2018 Annual Report
Working for our waters



Rock County Conservation Specialist Chris Murphy has been working on a major streambank restoration project to reduce erosion and improve water quality.



PROJECT BACKGROUND

The Yahara Watershed Improvement Network, known as Yahara WINS, is a groundbreaking initiative to achieve clean water goals for the Yahara Watershed. In this effort, community partners led by Madison Metropolitan Sewerage District are collaborating on a strategy called watershed adaptive management in which all sources of phosphorus in the watershed work together to reduce phosphorus. The effort began in 2012 as a pilot project and in 2017 transitioned to a full scale effort.

The 20 year adaptive management project aims to achieve permit requirements and regional Clean Water Act goals identified through the Rock River Total Maximum Daily Load by 2036. To accomplish these goals, the group facilitates partnerships, conducts outreach, pools resources to fund phosphorus reducing practices in the watershed, analyzes stream samples and works with the Wisconsin Department of Natural Resources to address regulatory needs for the project.

As the project moves forward, progress for each year is expected to vary due to a changing combination of new practices and existing practices that continue to hold back phosphorus. Changing precipitation patterns and runoff intensity also may affect water quality data. Over time, however, the Yahara WINS project is designed to produce measurable results and improve water quality.

More information about the activities and partners featured in this report is available on the Yahara WINS webpage, www.madsewer.org/yaharawins.

About the district

Madison Metropolitan Sewerage District began work on adaptive management in 2012, when it collaborated with partners to initiate a successful four year pilot project. The district is pursuing adaptive management to comply with phosphorus requirements in its Clean Water Act discharge permit. Compared with upgrades to the treatment plant, adaptive management offers the potential for a more comprehensive and less expensive route to clean water. The district is one of the first wastewater treatment plants to use adaptive management and is committed to the success of this approach as it works to cost-effectively meet clean water standards.

President's message

Thank you! Thanks to all the partners in the Yahara Watershed Improvement Network who put practices in place to hold back more phosphorus than ever during 2018. 2018 saw significant gains by Yahara Pride Farms, Dane County, Rock County and the recipients of Yahara WINS grants. Thank you for working for our waters.

In many cases the gains came as partners worked together to deploy their resources to the larger group's advantage. This synergy was the genesis for the Yahara WINS partnership, and it continues to grow from an understanding that a shared approach by counties, cities, villages, towns, wastewater treatment plants, farmers, homeowners, businesses and environmental groups can spur innovation and bring the greatest benefits.

Beyond the 47,223 pounds of phosphorus held back in 2018 during Yahara WINS' second full year of operation, the group gained national honors by earning the U.S. Water Prize for cross-sector partnerships from the U.S. Water Alliance.

We believe the relationships established through Yahara WINS deserve credit for the progress to date and will serve us all well in the face of future challenges. Heavy storms, prolonged flooding and rapid spring thaws lead to soil loss and runoff that can periodically overwhelm the conservation practices our partners are putting in place. Yahara WINS' collaborative approach offers the best way to address these challenges through adaptive solutions that may require a combination of local government policy changes, private landowner participation and implementation of new practices by communities and individuals.

As we work toward the ultimate annual goal of holding back some 96,000 pounds of phosphorus from the region's waterways each year, by collaborating with each other we will save local residents \$13.5 million per year while achieving results that improve water quality throughout the whole region. Reducing phosphorus at the source is cheaper and achieves a better environmental outcome than spending resources on expensive infrastructure and energy to recover phosphorus at a single point in the watershed. Going forward, however, we expect it will become more difficult and expensive to implement source reduction as there will be fewer areas available to implement the simpler, cheaper conservation practices.

So, even as we celebrate the national recognition and on-the-ground practices that contributed to our success during 2018, we remain mindful of the need to continue working for our waters in the face of an unpredictable future. We invite you to learn more about the efforts of our partners in the following pages of this report, through our webpage, www.madsewer.org/yaharawins, or by contacting me at marting@madsewer.org.

Martye Griffin
Yahara WINS Executive Committee President
Director of Ecosystem Services,
Madison Metropolitan Sewerage District



Martye Griffin

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Working for our waters...

during 2018

During 2018, work by Yahara WINS partners kept some 47,223 pounds of phosphorus from reaching area surface waters, up 17 percent from the 40,069 reported in 2017 and more than 48 percent of the annual reduction goal of 96,000 pounds per year needed by 2036 to meet project goals.

The reduction came from a combination of efforts by farmers, Dane County, Rock County and area communities to capture nutrients and reduce runoff.

The 2018 total phosphorus reduction included 22,097 pounds by members of Yahara Pride Farms, 21,570 pounds quantified by Dane County, 3,229 pounds supported by Yahara WINS grants and 327 pounds documented by Rock County. Practices implemented by farmers and other partners ranged from streambank restoration and advanced manure management to improved soil retention and more nimble urban leaf collection practices.

As much as this important work contributed to progress on the 20 year water quality goals for the project, 2018 also saw record-breaking storms and prolonged flooding that pushed significant volumes of phosphorus into area surface waters. The 2018 weather-related events and continued above-average precipitation during spring 2019 are expected to produce negative effects on water quality. Meanwhile, county population growth continues to extend the network of roads, housing and other impermeable surfaces throughout the region that generate runoff.

It is for these reasons that the Yahara WINS project focuses on long term improvements at the watershed level and emphasizes conservation practices that provide for recurring phosphorus reductions over longer periods of time without having to install the practice each year. While progress made through phosphorus reducing practices may not be evident in in-stream water quality sampling reports during early

years of the project, over time, implementation of new and continued practices is expected to achieve water quality goals.

In the meantime, progress documented by the partners encourages further innovation and helps sustain momentum to support success in the years ahead.

PARTICIPATION GROWS DURING 2018

The partnership underlying the Yahara WINS project welcomed a new member in 2018 as Columbia County signed a service agreement to participate.

Some 17,700 acres or 5.2 percent of the Yahara Watershed land base lies in Columbia County. While the area represents a relatively small portion of the watershed, meeting Yahara WINS' overall phosphorus reduction goals will require efforts throughout the entire watershed, including the lands surrounding the source of the Yahara River. The river's source lies in the town of Windsor in northern Dane County and it flows for a short distance through Columbia County before continuing south.

The service agreement outlines the activities and expectations for Columbia County in exchange for Yahara WINS funding. The Columbia County service agreement runs from 2018 to 2020 and provides a total of \$105,000 to support implementation of phosphorus-reducing practices. In signing the service agreement, Columbia joins Dane and Rock counties as well as 24 governmental entities that are contributing funds for implementation of practices through intergovernmental agreements.



Chris Murphy of Rock County, right, is joined by David Viney for a check on a streambank restoration project undertaken in partnership with Yahara WINS.

Beyond the service agreements and signatories to the intergovernmental agreement, Yahara WINS draws support from partners in the watershed that share a commitment to phosphorus reduction. Among these partners are county conservation departments, which facilitate implementation of phosphorus reducing conservation practices.

Nonprofit organizations that dedicate volunteer efforts to various aspects of the project also are playing an increasingly important role. By leveraging volunteers' skills and building broader community understanding about regional water quality, Yahara WINS is positioning itself for long term success.

Working for our waters...

through innovation

The flexibility of the Yahara WINS project has made it fertile ground for innovation. From testing new conservation practices to expanding on past research, Yahara WINS was a driving force behind continuing innovation around phosphorus reduction in 2018.

ADVANCED COMPOSTING



Advanced composting practices provide one way to return locally generated nutrients to the soil while controlling phosphorus runoff. Here, Bob Uphoff, YPF board member inspects a compost pile.

Yahara Pride Farms (YPF) is conducting a study on several local farms to gather more information about composting solid manure. This practice has the potential to reduce phosphorus by extending the storage time of solid manure so farmers can avoid land-applying manure during the winter or other times susceptible to runoff. It also decreases the volume of manure that needs to be spread. The goal of the study, which is partially funded by Yahara WINS, is to help provide farmers with better information about composting as they decide whether to adopt this innovative practice.

The study, which began in 2018, is examining the conditions that affect composting and how farmers can implement it effectively. For example, the project is testing whether the type of manure used or the supplementary materials added, such as grasses or cornstalks, affect the quality of the compost. Project participants are also assessing the types of equipment needed so farmers interested in composting can acquire the necessary tools.

During 2018, the efforts generated valuable data about compost consistency, leaching and siting that will be valuable to other farmers considering composting. Continued study in 2019 will complete the project's data set by providing insight into composting during every season.

HARVESTABLE BUFFERS HAVE EXPANDED TO ROCK COUNTY

One of the most popular practices implemented under Yahara WINS, harvestable buffers, spread to additional areas of the watershed in 2018. Many farmers in the Dane County area of the watershed have implemented harvestable buffers, which act as a barrier between nutrients on the land and bodies of water. Farmers in the Rock County area of the watershed are also interested in this practice, and in 2018 most Yahara WINS funding in Rock County went toward harvestable buffers.

While harvestable buffers aren't a new practice, their popularity has been growing among local landowners. The 15 year lifespan of harvestable buffers provides for a longer term phosphorus reduction and more carryover pounds toward Yahara WINS' goals.

“Over the last four years, the U.S. Geological Survey conducted a study to characterize reductions of total and dissolved forms of phosphorus in stormwater through a municipal leaf collection and street cleaning programs in Madison, Wisconsin, USA. Some credit for phosphorus reduction is warranted based on the information.”

DNR Interim Municipal Phosphorus Reduction Credit for Leaf Management Programs

NOVEL LEAF COLLECTION METHODS

Past research into phosphorus leaching from leaves supported by Yahara WINS and others translated into new state guidance in 2018 that allows municipalities to get phosphorus reduction credit for leaf management efforts. Previously, the phosphorus impact of fallen leaves had not been quantified. While many municipalities had leaf collection programs, they were not able to claim this practice as a nutrient reduction credit for their stormwater permits due to the lack of quantified data.

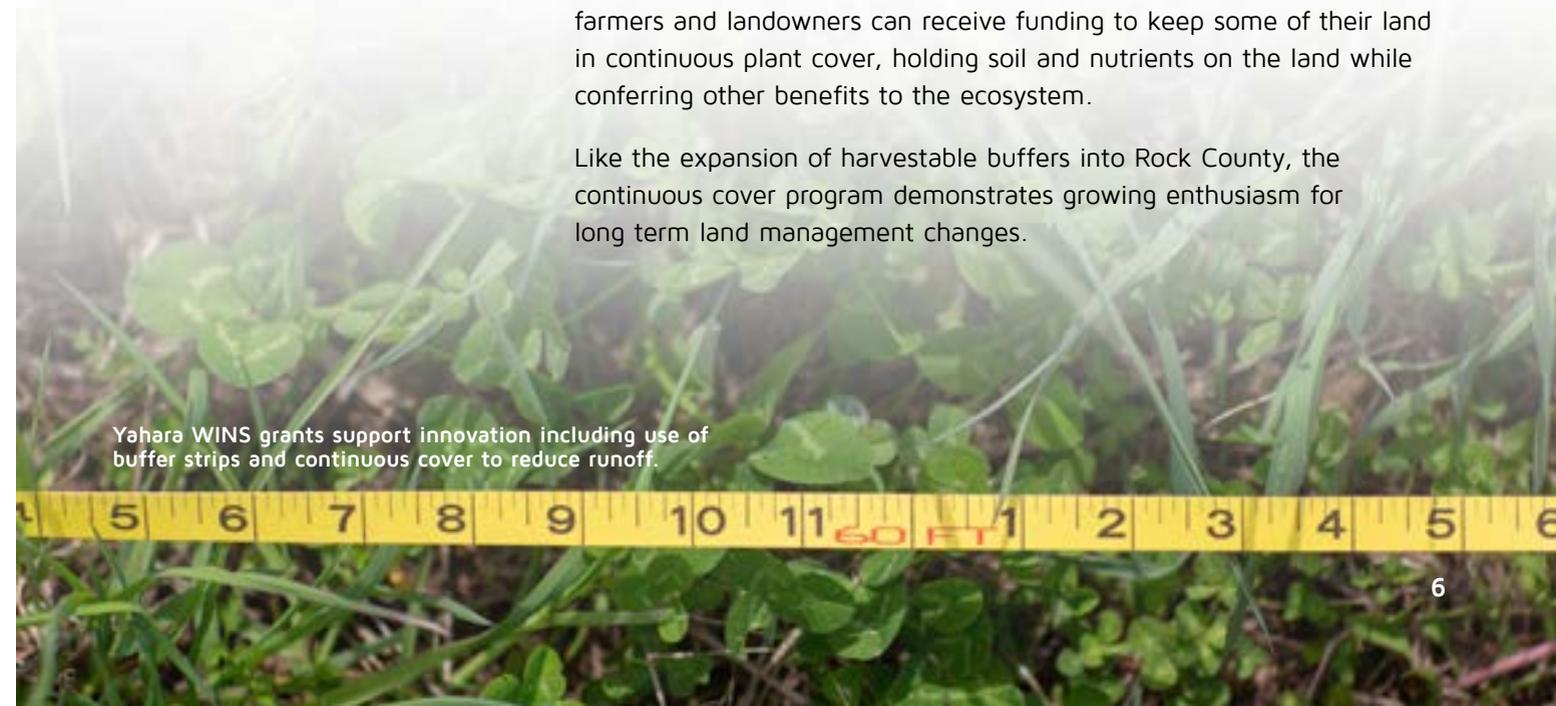
In response to the need for more data, several entities including U.S. Geological Survey, the City of Madison, Clean Lakes Alliance and the Fund for Lake Michigan funded a study to determine phosphorus contributions due to leaves. This study was able to put numbers to phosphorus reductions achieved through leaf management.

Based in part on data from this research, the Wisconsin DNR released guidance that provides instructions for permitted municipalities to calculate phosphorus reduction credits based on certain leaf management practices. This development will benefit municipalities that are already collecting leaves, and may motivate communities that are not collecting leaves to begin doing so.

DANE COUNTY FOCUSES ON CONTINUOUS COVER

An exciting development in 2018 was the inclusion of a continuous cover program in the Dane County 2019 budget. Under this program, farmers and landowners can receive funding to keep some of their land in continuous plant cover, holding soil and nutrients on the land while conferring other benefits to the ecosystem.

Like the expansion of harvestable buffers into Rock County, the continuous cover program demonstrates growing enthusiasm for long term land management changes.

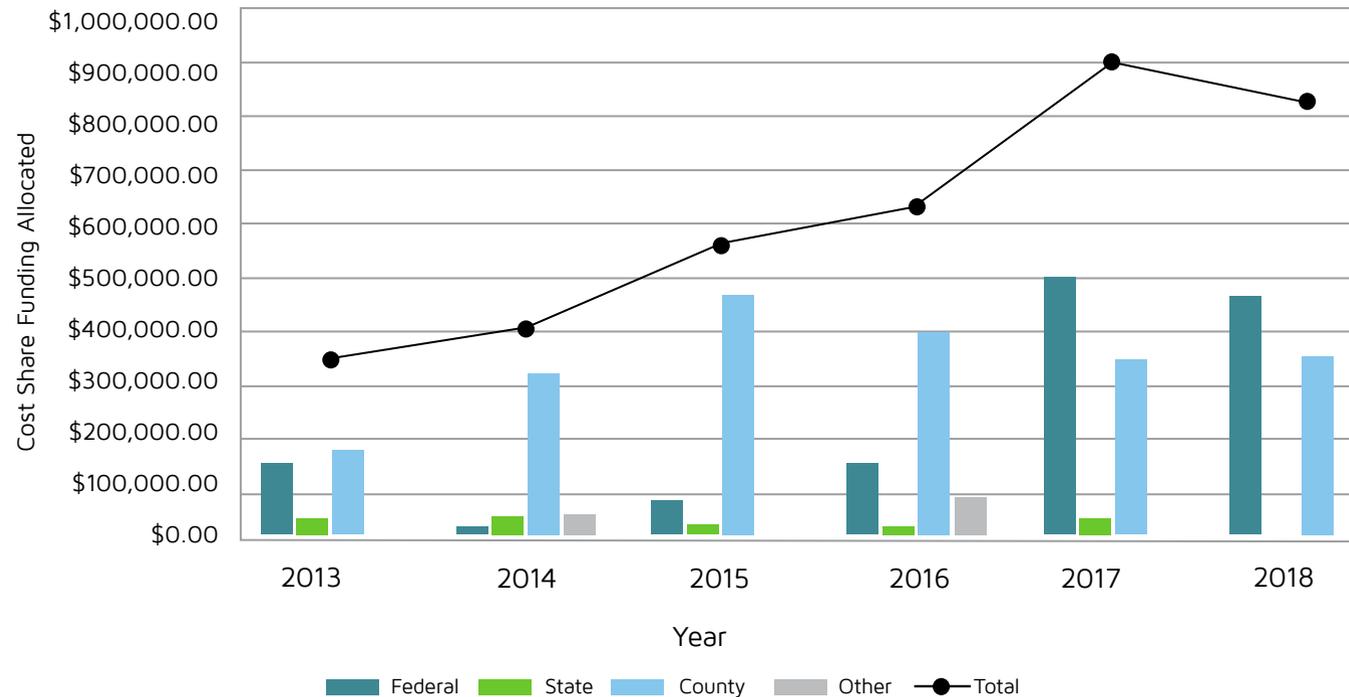


Yahara WINS grants support innovation including use of buffer strips and continuous cover to reduce runoff.

Working for our waters...

through partnerships

Figure 1. Amount of Dane County cost share funding allocated by year since 2013



The Yahara WINS project has united diverse partners around improving water quality in water bodies. Many partners have taken actions that are not directly funded by Yahara WINS, yet still help advance the project and generate phosphorus reductions that count toward the end goal.

One example involves conservation activities supported by a grant through the U.S. Department of Agriculture's Regional Conservation Partnership Program (RCPP), which directs funding to collaborative conservation efforts. A partnership including Dane County, Madison Metropolitan Sewerage District, Sand County Foundation, Clean Lakes Alliance, National Resources Conservation Service and UW-Madison's Center for Integrated Agricultural Systems first secured RCPP funding in 2015, elevated by the already strong partnerships in place through Yahara WINS. The multiyear grant provides cost-share to landowners

to implement phosphorus reducing practices such as barnyard structures, grazing and nutrient management planning.

In the 2018 fiscal year, the RCPP grant supported 10 contracts with landowners that covered more than 35 conservation practices. The practices represent more than \$75,000 of federal funding supplementing local funding sources in the watershed. The grant also supported aerial seeding of cover crops, which allows for planting of these crops earlier in the year increasing the chance that they will successfully establish before the freeze. During 2018, project partners including Dane County, UW-Extension, Yahara Pride farms and private landowners worked to perfect this method of cover crop application. Although traditionally applied, cover crops remained the most popular practice for RCPP funding.

LEGACY SEDIMENT REMOVAL DECREASES IN-STREAM SOURCE OF PHOSPHORUS

A high profile effort in 2018 was Dane County's legacy sediment removal project, known as "Suck the Muck." This \$12 million project involves the removal of phosphorus laden sediment from streambeds in the watershed. This sediment, washed into waterways over decades, slowly releases phosphorus into the water column. Without addressing this legacy sediment, it could take up to a century to reach the phosphorus goals of the Yahara WINS project.

The county began the project in late 2018, removing sediment from a stretch of Dorn Creek in the northwest section of the watershed. A special vacuum sucked up to 4 feet of sediment from the stream bed and deposited it on land to stabilize it and prevent reintroduction into waterways.

The initial phase of the project was a success. The effort removed 11,000 tons of sediment from under three miles of stream, taking 75,000 pounds of legacy phosphorus out of the waterway. With 30 more miles of stream planned for additional sediment removal, this approach holds promise to remove a significant amount of phosphorus from local waters and make on-land phosphorus reduction activities that much more effective.



Dane County's "Suck the Muck" project involves removing phosphorus laden sediment from streams in the Yahara Watershed.

Working for our waters...

by the numbers

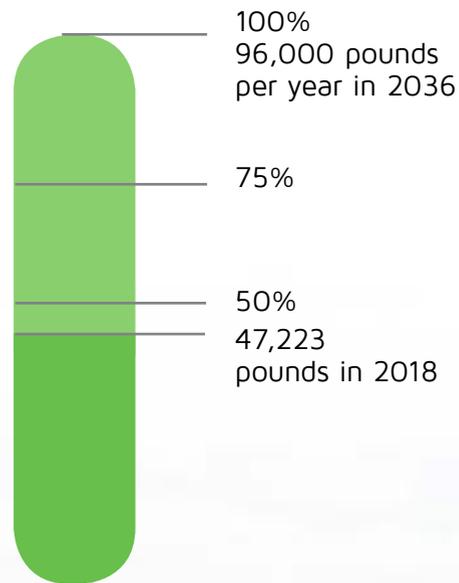


Figure 2. 2018 progress compared to 20 year annual target

PARTNERS MAKE PROGRESS TOWARD PHOSPHORUS REDUCTION GOALS

In 2018, completed or projected phosphorus reductions were documented by Dane County, Yahara Pride Farms, Rock County and Yahara WINS grant recipients. Together, the practices these partners implemented added up to 47,223 pounds of phosphorus kept out of waterways in the Yahara watershed.

Figure 2 provides context for how this annual reduction compares to the eventual project goal. The Yahara WINS project is designed to ramp up over time, with annual phosphorus reduction goals increasing over time toward a final goal of 96,000 pounds reduced per year. The documented reduction in 2018 exceeded the phosphorus reduction goal for the year.

Figure 3. Partners contribute to shared success



Figure 4. Dane County Yahara Watershed phosphorus reductions



YAHARA PRIDE FARMS SUCCESS CONTINUES

Yahara Pride Farms, a local farmer led group in the watershed, has successfully partnered with Yahara WINS for six straight years, receiving Yahara WINS funding to support agricultural conservation practices. In 2018, Yahara Pride Farms received \$150,000 from Yahara WINS to support phosphorus reducing conservation practices, in addition to a separate grant to study manure composting.

Figure 5 summarizes phosphorus reduction achieved by each practice in 2018. As demonstrated in Figure 6, these practices have expanded across the watershed, resulting in greater phosphorus reductions over time.

Practice	Average phosphorus reduction (pounds per acre)	Total predicted phosphorus reduction (pounds in 2018)
Cover crops	2.1	11,497
Low-disturbance deep tillage plus cover crop	2.6	1,165
Low-disturbance manure injection	1.1	3,945
Strip tillage	1.3	3,110
Headland stacking of manure	2.0	1,855
Combined practices	0.8 (additional)	525
Total		22,097

Figure 5. Summary of 2018 Yahara Pride Farms phosphorus reductions

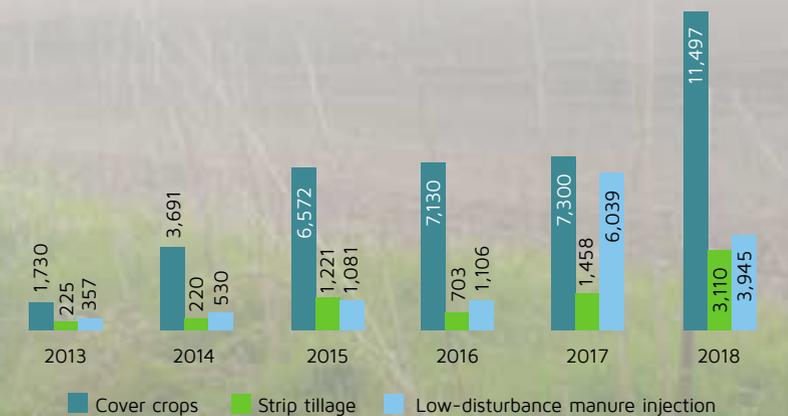


Figure 6. YPF Yahara Watershed phosphorus reductions

Working for our waters... through science

Figure 7. Annual tributary phosphorus loads to Lake Mendota calculated by U.S. Geological Survey

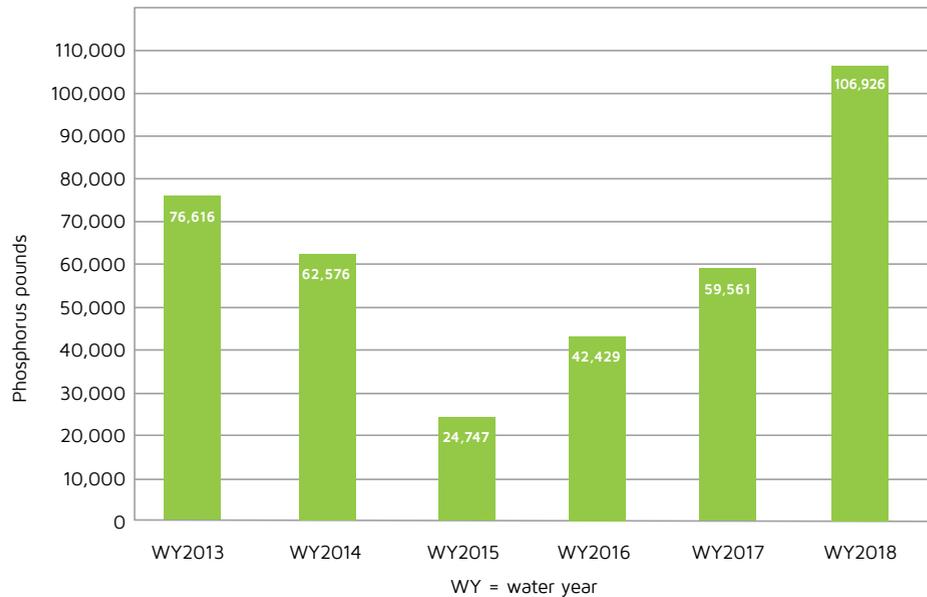
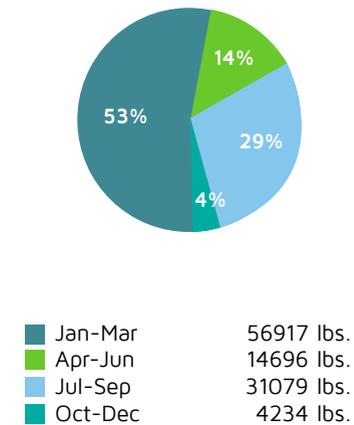


Figure 8. 2018 Total Phosphorus Seasonal Loads



From volunteer stream sampling efforts to permanent monitoring stations operated by the U.S. Geological Survey, data drives the Yahara WINS effort.

Water quality monitoring is a required element of adaptive management projects and over time, demonstrates the benefits of phosphorus reducing practices on in-stream water quality. Yahara WINS supports substantial water quality monitoring throughout the basin including permanent installations and citizen monitoring.

The U.S. Geological Survey monitors water quality for Yahara WINS under a joint funding agreement. The work includes collecting water quality samples from five gauging stations in the watershed to help evaluate water quality trends, collecting samples after storm events and calculating annual tributary loading to Lake Mendota.

As shown in Figure 7, the annual tributary loading to Lake Mendota offers further insights about challenges and opportunities in the watershed. During 2018, overall tributary loading rose sharply, reaching a total of 106,926 pounds of phosphorus, up from 59,561 pounds of phosphorus during 2017. Figure 8 shows that more than 50 percent of the loading in 2018 occurred during January through March with additional heavy loading (nearly 30 percent of the total) occurring during July through September in conjunction with late summer flooding.

Figure 9 summarizes the median phosphorus concentration for each of the five gauging sites during the growing season (May through October) from 2013-2018. This is the same measure that serves as the basis for Wisconsin's phosphorus criteria. For Dorn and Sixmile creeks, the criterion is 0.075 mg/l of phosphorus while for the Yahara River at Fulton, the criterion is 0.10 mg/l.

Figure 9. Median total phosphorus concentrations for U.S. Geological Survey sites reported in milligrams per liter during the growing season.

Year	2013	2014	2015	2016	2017	2018
Dorn Creek at Hwy Q	0.10	0.13	0.11	0.15	0.17	0.13
Dorn Creek at Hwy M	0.22	0.26	0.25	0.28	0.24	0.20
Sixmile Creek at Hwy 19	0.22	0.34	0.13	0.31	0.19	0.19
Sixmile Creek at Hwy M	0.14	0.20	0.18	0.25	0.17	0.17
Yahara River at Fulton		0.14	0.19	0.11	0.11	0.15

There was a new of computing these values in 2018 compared to past years, in that the samples were taken on/near the 15th of the month rather than at baseflow conditions

The total phosphorus loading in any given years depends on a variety of factors including the amount, intensity and timing of precipitation. Over the course of the 20 year Yahara WINS project, a downward trend is anticipated.

ROCK RIVER COALITION MONITORING

For the sixth consecutive year in 2018, the Rock River Coalition operated a citizen science monitoring program thanks in part to financial support from Yahara WINS. The samples collected by volunteers contribute to water quality monitoring and provide for a more nuanced understanding of changing conditions in the watershed.

Volunteers collect samples for nutrient analysis, record stream temperatures during the growing season and check for dissolved oxygen. During 2018, volunteers monitored 53 stream stations on a monthly basis for dissolved oxygen concentrations, stream temperature, water clarity and stream flow (when possible.) Volunteers also use a biotic index to assess stream health.

A total of 27 stream stations feature continuous water temperature monitoring using automated data loggers while volunteers collected and delivered samples from 35 stations that serve as active nutrient sampling sites. The district's lab analyzes the samples for total phosphorus, total suspended solids, total Kjeldahl nitrogen, ammonia, nitrate, nitrite and ortho-phosphorus.

DNR PROVIDES BIOLOGICAL MONITORING

As a signatory to the intergovernmental agreement, Wisconsin DNR makes an annual contribution to the Yahara WINS project in lieu of financial support. Through its agreement, DNR provides biological monitoring services above and beyond those the agency would normally undertake in the watershed.

Yahara WINS has invested heavily in monitoring chemical indicators of stream health, such as phosphorus and dissolved oxygen levels. The biological monitoring complements the chemical monitoring and increases the Yahara WINS partners' ability to understand more complex dynamics at work in the watershed.

DNR has selected the Yahara River at Windsor as a reference site to be surveyed annually so that year-over-year-variability may be considered against samples from other sites through the years. The agency's work focuses on stream biology including fish sampling, macroinvertebrate collection and qualitative habitat assessment each year.

The department then provides Yahara WINS with a report identifying key findings at the monitored sites. In recent years, the reports have documented presence of game fish including brown trout, walleye, bass and panfish, reinforcing the recreational value of the watershed.

Working for our waters...

through grants

Yahara WINS has annually provided grants for rural and urban practices that reduce phosphorus and demonstrate how practices can be implemented successfully. These grants are offered in two categories: conventional grants, which fund practices that are commonly accepted conservation practices, and innovation grants, which fund research and testing of practices that are less understood, but demonstrate promise as phosphorus reduction strategies.

Five projects were awarded Yahara WINS grants in 2018 and are described below. Most of these projects will be completed in 2019.

CONVENTIONAL GRANTS INCLUDED:

Rock County sediment control basin

Recipient: Rock County Land Conservation Department

Projected phosphorus reduction: 276 pounds per year over 20 years.

Description: The county is installing a water and sediment control basin in a harvestable buffer to capture runoff through an underground outlet from a farm field before it reaches a nearby stream. The basin will function as a seasonal wetland.



Yahara Watershed communities are paying increasing attention to leaf collection and management as a way to control phosphorus. Yahara WINS funding is supporting a leaf management project by the Town of Dunn.

Town of Dunn leaf management

Recipient: Town of Dunn

Projected phosphorus reduction: 312 pounds per year over 20 years (calculated reduction in 2018: 295 lbs).

Description: Building on a Yahara WINS grant that the town received in 2017, this project is expanding the scope of leaf collection efforts. Many residents live near Lake Waubesa and Lake Kegonsa, so phosphorus from unmanaged leaves can easily reach the lakes. With the grant, the town purchased a pull-behind leaf vacuum to make collection more efficient. The town also worked to educate residents about the importance of leaf management.

INNOVATION GRANTS INCLUDED:

Cover crop with manure application demonstration

Recipient: UW-Extension

Description: Dane County UW-Extension is working with a UW-Madison soil scientist to host an educational field day for farmers to learn about manure application to cover crops and the effects of rainfall. Data was collected in 2018 and field days will occur in 2019.

City of Madison alum treatment

Recipient: City of Madison

Description: This pilot project will assess the effectiveness of adding alum to stormwater detention basins to reduce the release of dissolved phosphorus. The project will take place in Wexford Pond on the west side of Madison. From this pilot, the city hopes to learn appropriate dosing for alum and the amount of phosphorus that can be expected to be sequestered by the added alum.

Verona alum treatment

Recipient: Upper Sugar River Watershed Association

Description: As in the City of Madison project, this project involves adding alum to a pond in an effort to reduce phosphorus loss by binding phosphorus in the water to alum. However, this project is different from the Madison project in that it's taking place in a natural pond, rather than a constructed stormwater pond. This pilot is taking place outside the Yahara River watershed in the nearby Badger Mill Creek watershed. However, the project received Yahara WINS funding because of its potential to provide lessons that could inform similar projects within the watershed.



Volunteers Julie and Wil Limp collect samples for nutrient analysis, record stream temperatures during the growing season and check for dissolved oxygen.

Working for our waters...

through communication



Michael Mucha, Kathy Lake, Jeff Rau, Martye Griffin and Jeff Endres accepted the U.S. Water Prize on behalf of Yahara WINS at the 2018 U.S. Water Alliance's One Water Summit. The award honored the partnership's commitment to collaboration and adaptive watershed management approach.

The U.S. Water Prize, awarded each year by the U.S. Water Alliance, celebrates outstanding achievement in the advancement of sustainable, integrated and inclusive solutions to our nation's water challenges.

During 2018, Yahara WINS earned the U.S. Water Prize in the U.S. Water Alliance's cross-sector partnership or coalition category thanks to its collaborative approach to improving water quality. Communication, coordination, outreach and education underpin the group's success and will be critical in the years ahead. As phosphorus reducing practices are successfully implemented on the most sensitive agricultural land, there will be fewer opportunities to implement the simpler, cheaper conservation practices.

The channels for communication and collaboration established by Yahara WINS offer the best path forward for developing adaptive solutions that may require a combination of local government policy changes, private landowner participation and implementation of new practices by communities and individuals.

As highlighted by the 2018 U.S. Water Prize, the project's achievements include:

Integration: The structure of the Yahara WINS project is by design an integrated approach to water quality management. Adaptive management is a way for regulated point sources to achieve compliance with water quality standards by reducing phosphorus from a variety of sources rather than through expensive facility upgrades. Instead of focusing on wastewater or agricultural runoff or other individual sources, adaptive management employs a holistic "One Water" approach involving participation among all sources of phosphorus in the watershed. The project also integrates environmental, social and economic benefits by shifting the focus away from identified point sources to all sources including individuals.

Partnership: The defining characteristic of Yahara WINS is partnership. The adaptive management approach requires engaging different sources of phosphorus in a watershed with a phosphorus impairment due to a combination of nonpoint and point source pollution. Establishing the relationships required hundreds of meetings between WINS and potential participants to obtain buy-in for the project and flesh out project structure.

Innovation: Watershed-based projects have been implemented before and elsewhere, but Wisconsin is the first to allow an adaptive management approach to be tied to a discharger's compliance with Clean Water Act requirements and its National Pollutant Discharge Elimination System permit. The Yahara WINS project was the first to try and test this new regulatory approach, beginning with a pilot project in 2012.

Education: The beginning of the project involved significant stakeholder education and communication to encourage participation. To make this project work, resources must be continually pooled and invested where phosphorus can be cost-effectively controlled. This meant that governments would be investing municipal taxpayer and rate-payer funds outside of municipal boundaries, in other communities and/or on private farms. This has proven challenging for many elected officials yet over time has achieved strong buy-in as recognition of the benefits has evolved.



Vegetation around Badfish Creek helps absorb nutrient runoff before it reaches the waterway.

STRATEGIC COMMUNICATIONS PLAN DEVELOPED

To advance the Yahara WINS effort, a strategic communications plan was completed during 2018. The plan identifies: objectives and goals, core messages, target audiences and preferred channels, communication tools and a timeline and metrics to advance communications in support of Yahara WINS' mission and goals.

Consistent with the collaborative approach of the partnership, the communication strategy seeks to foster engagement with participants to leverage their ideas and communication capabilities for the benefit of all. The plan is designed to:

- Provide critical and timely information (technical, environmental and social) to help keep member communities and other partners informed and engaged in this long-term effort.

- Help achieve broader community recognition and support.
- Provide avenues for member communities and partners to amplify and extend messages about their project successes.
- Create opportunities for member communities and partners to participate in the communications effort.
- Help maintain and potentially expand broader community investments directed toward water quality improvement.
- Help identify and secure new funding sources for the Yahara WINS effort.

To date, communication efforts have involved successful development and dissemination of a variety of materials including a video, news releases, newsletters, annual reports, a brochure, fact sheet, presentations and social media posts, as well as participation in various events promoting regional water quality improvements.

Working for our waters...

through financial stewardship

YAHARA WINS FINANCES PROVIDE FOR FUTURE

The 2018 Yahara WINS revenues totaled \$1,494,600 million, an increase from \$1,485,500 in 2017 and expenditures totaling \$1,194,100 million, an increase from \$1,075,500 in 2017.

Over time, the cost for needed phosphorus reduction is expected to exceed the projected income. The Yahara WINS executive committee established a designated operating reserve policy. In 2018, Yahara WINS moved \$315,000 to a designated operating reserve.

Actual revenue from the intergovernmental agreement (IGA) partners totaled \$1,438,400, down from \$1,457,000 in 2017. During 2017, three partners; Village of Deforest, City of Middleton and Village of Waunakee, submitted updated storm water modeling information that resulted in a reduction of costs allocated to the communities in 2018.

Other income included a 1 year grant of \$100,000 from the Clean Lakes Alliance through a memorandum of understanding and a 3 year \$15,000 grant from the MGE Foundation.

Actual expenditures included \$982,200 for phosphorus reduction. Outgoing funds supported work by Dane County, Rock County and Columbia County, as well as Yahara Pride Farms.

Yahara WINS funding also covered \$177,100 in water quality monitoring and analytical work. The funding supported efforts by U.S.G.S. and the citizen monitoring program operated by the Rock River Coalition.

2018 Adopted Budget (rounded to nearest \$100)

	Budget
Unencumbered carryover from 2017	\$14,500
Revenue	
IGA Participants	\$1,438,400
Income from grants, Other MOUs, etc.	\$50,000
MGE Foundation	\$5,000
Savings account interest	\$1,200
Total Revenue plus unencumbered carryover	\$1,509,100
Expenditures	
Phosphorus reduction	
Dane County phosphorus reduction services agreement	\$540,000
Columbia County phosphorus reduction services agreement	\$50,000
Rock County phosphorus reduction services agreement	\$180,000
Yahara Pride Farms phosphorus reduction services agreement	\$130,000
Yahara Pride Manure Composting Grant	\$21,400
General P reduction practice funding	\$20,000
Phosphorus reduction grant program	\$34,200
Subtotal	\$975,600
Water Quality Monitoring or modeling	
Water quality monitoring analytical services (MMSD)	\$40,000
USGS Joint funding agreement	\$75,000
Rock River Coalition water quality monitoring	\$25,000
Subtotal	\$140,000
Supporting services	
WINS Staffing	\$46,000
Financial audit	\$7,500
Communications	\$12,000
Miscellaneous	\$5,000
Legal services agreement	\$8,000
Subtotal	\$78,500
Total Expenditures	\$1,194,100
Transfer of Funds to designated Operating reserve	\$315,000
Total Expenditure and transfer to reserves	\$1,509,100

2019 BUDGET ADVANCES PROGRESS

For 2019, the Yahara WINS budget totals \$1,491,400 in revenues and \$1,229,400 in expenditures with reserves.

Expenditures for phosphorus reductions will increase to \$1,050,600 during 2019 with increases slated for Columbia County, Rock County and Yahara Pride Farms. Among other things, this money will support grants for an innovative manure composting program and phosphorus reduction grants.

A total of \$155,000 has been designated for water quality monitoring services and \$23,800 for supporting services, which include financial audit costs. For 2019, the budget includes a transfer of \$262,000 to the designated operating reserve.

EXECUTIVE COMMITTEE GUIDES YAHARA WINS EFFORTS

For 2018, members of the Yahara WINS executive committee included:

Voting members

Martye Griffin, president, Madison Metropolitan Sewerage District

Gary Huth, vice president, City of Middleton

Jeff Rau, treasurer, Village of Oregon

Greg Fries, secretary, City of Madison

Tom Wilson, at-large, Town of Westport

Nonvoting members (named in IGA as advisory)

Bob Uphoft, Yahara Pride Farms

Laura Hicklin, Dane County

James Tye, Clean Lakes Alliance

2019 Adopted Budget (rounded to nearest \$100)

Revenue

IGA participants	\$1,433,900
Income from grants, other MOUs, etc.	\$50,000
MGE Foundation	\$5,000
Savings account interest	\$2,500

Total Revenue plus unencumbered carryover \$1,491,400

Expenditures

Phosphorus reduction

Dane County phosphorus reduction services agreement	\$540,000
Columbia County phosphorus reduction services agreement	\$55,000
Rock County phosphorus reduction services agreement	\$250,000
Yahara Pride Farms phosphorus services agreement	\$150,000
Yahara Pride Manure Composting Grant	\$31,600
Phosphorus reduction grant program	\$24,000

Subtotal \$1,050,600

Water Quality Monitoring or modeling

Water quality monitoring analytical services (MMSD)	\$55,000
USGS joint funding agreement	\$75,000
Rock River Coalition water quality monitoring	\$25,000

Subtotal \$155,000

Supporting Services

WINS staffing	\$5,000
Financial audit	\$7,500
Communications	\$5,000
Miscellaneous	\$2,300
Legal services agreement	\$4,000

Subtotal \$23,800

Total Expenditures \$1,229,400

Transfer of funds to designated operating reserve \$262,000

Total Expenditures and transfer to reserves \$1,491,400

Yahara WINS
1610 Moorland Road
Madison, WI 53713

On the front cover: Eric Krueger and Marie Raboin of Dane County's Land Conservation Division help landowners plan, design and implement conservation practices with the goal of protecting water quality and conserving soil. These positions are funded by Yahara WINS as part of the Dane County Service Agreement.

Compiled by Madison Metropolitan Sewerage District