

2013 Wisconsin Land & Water
Annual Progress Report

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Conservation in Wisconsin: Strength in Differences



Photo: WI DNR

Conservation professionals know what a gift it is to work in Wisconsin, with its dramatically diverse lands and waters -- and what a challenge that diversity can be. There are no off-the-shelf answers to conservation questions in Wisconsin.

Wisconsin's diversity comes about because it is a land of intersections. It's where 45 north latitude and 90 west longitude meet, right in the middle of North America, where the southern prairies meet the northern forests at the tension line – the same line that often marks where rain turns into snow. It's where the hills and valleys of the driftless region bump up against lands flattened by glaciers. It's where the land meets the inland seas; only Alaska, Florida and Michigan have more shoreline than Wisconsin's 800 miles of Great Lakes coast.

Those intersections create landscapes that differ as much as California differs from Kansas. There is the karst topography of northeastern Wisconsin, where the same limestone that creates Niagara Falls pokes up through the soil and opens down to the groundwater. There are the Central Sands, wide open spaces of soil that yields crops with the help of irrigation. There are the ridges of Vernon County, where the nation first learned

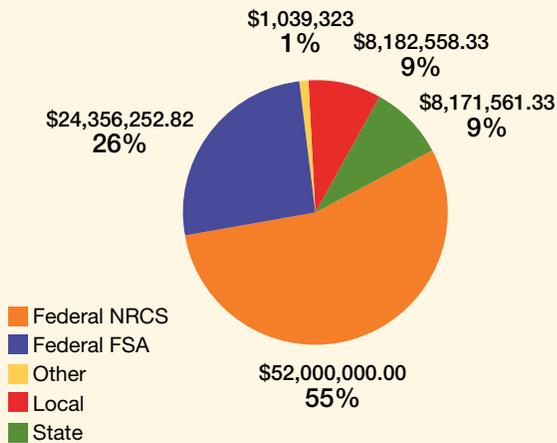
how to stop water from carrying away the soil. There are the North Woods, with their 15,000 lakes. There are major urban areas where shipping ports grew up, and smaller towns and villages that grew up along rivers and rail lines.

Geographical diversity breeds agricultural diversity. Wisconsin hosts organic and conventional dairy herds ranging from 70 to 7,000 cows, and it's not just America's Dairyland. Cranberry marshes, potato fields, and organic vegetable farms are as much a part of Wisconsin's agricultural scene as pastures and barns.

“This report highlights the diversity of issues that conservation professionals in Wisconsin encounter every day...”

While raising cows, pigs, and poultry remain a strong part of our agriculture, other farmers are seeking new opportunities to profit from less conventional livestock operations such as deer farms, fish farms, and even rabbit farms.

WI Conservation Funds Spent in 2013



Distribution of conservation funds spent by Wisconsin county conservation departments in 2013. (As reported to DATCP) The Soil and Water Resource Management annual staffing grant makes much of this work possible.



A pick-your-own berry farm in northern Wisconsin.

This report highlights the diversity of issues that conservation professionals in Wisconsin encounter every day as they work with this diversity of landscapes, cityscapes and farmscapes to protect the state’s natural resources. It tells the stories of:

- Brown County and Oconto County’s project to restore habitat for Northern pike in Green Bay
- Milwaukee County’s efforts to clear the way for green infrastructure
- Chippewa County’s partnership with the Leinenkugel brewery to improve water quality
- Monroe County’s work with a rabbit farmer who needed better manure management

Wisconsin needs top-notch conservation professionals to deal with such an array of issues. It takes training to maintain that level of professionalism and provide the best assistance possible to farmers and other land owners. This report also details

a renewed training effort called the State Interagency Training Committee to help conservation professionals stay updated in the newest technologies, conservation practices, and farming trends.

Throughout the report, the reader will find tables and charts that detail the year’s conservation work – practices installed, expenditures, costs shared and reimbursed. What those tables and charts show is a diverse array of work statewide, demanded by Wisconsin’s diversity.

While this report is a joint effort between the Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) and the Wisconsin Department of Natural Resources (DNR), landowners and conservation programs also rely on the USDA Natural Resources Conservation Service (NRCS), county land conservation departments (LCD), the University of Wisconsin- College of Agricultural and Life Sciences, University of Wisconsin-Extension (UWEX), Wisconsin Land and Water Conservation Association (WI Land and Water) and many other partners.

For more information or to obtain copies of this report, please contact DATCP’s Bureau of Land and Water Resources, 608-224-4622.

2013 DATCP Expenditure	
Local Staffing Support	\$8,603,377
Local BMP Cost-Share	\$4,505,107
Total	13,108,484

This report fulfills requirements under Wisconsin Statutes 281.65(4)(o) and 92.14(12).

2013 DNR Expenditure		
DNR Grant Type	Total Project Costs	State Share Reimbursed 2013
Targeted Resource Management	\$4,880,449	\$2,418,850
Notice of Discharge	\$896,169	\$666,068
Urban Planning	\$473,630	\$252,639
Urban Construction	\$6,245,658	\$1,032,345
Total	\$12,495,906	\$4,369,902

** Not all 2013 reimbursements were processed and recorded at the time this report was created.*

Monroe County

Manure Runoff: Hare Today, Gone Tomorrow

At some point in your career, you might have to pull a rabbit out of a hat. Monroe County Conservationist Bob Micheel never guessed he would come so close to the literal interpretation of that phrase.

Bob has been working for the Monroe County Land Conservation Department for more than 25 years, and now serves as the Monroe County Conservationist. During his time with the County, he's worked with a lot of resource concerns and provided technical and financial assistance to many landowners in the area. After all, the majority of Monroe County is located in Wisconsin's driftless region, characterized by coulees, valleys, and trout streams, but also home to dairy operations and a few poultry farms. The highs and lows of the landscape, combined with various land uses, can make some areas very susceptible to soil erosion. The northeast area of the county is in Wisconsin's glaciated area, commonly referred to as "cranberry country," and home to the famous Warrens Cranberry Festival.

Monroe County is also home to Randy Nierling's farm southwest of Tomah. Randy and his family started a New Zealand White and California White rabbit farm by converting an old dairy barn. There the rabbits are bred and raised before being sent to a processing facility in Iowa, where the meat is distributed to high-end restaurants. Randy's farm currently holds about 5,000 rabbits, but he is looking to expand to 10,000.

When Randy was in the early stages of building and expanding his operation, he reached out to the Farm Service Agency for an operating loan. The FSA loan officer who initially visited the farm was concerned about uncontained manure on the property. Before approving the loan, the FSA officer asked the Monroe County Land Conservation Department to get involved.



Manure storage construction in progress at the Nierling farm.

You wouldn't think rabbit manure could be problematic, but 5,000 rabbits can produce about the same amount of waste as 25 dairy cows. However, rabbit manure does not behave like typical cow manure. It is much more concentrated and nutrient rich, making it a valuable fertilizer, but it has different physical and chemical properties. In this situation, the rabbit waste collected in a center alley in the barn, then was flushed with water, and piped to the outside. The waste exiting

You wouldn't think rabbit manure could be problematic...

the barn was a lava-like, slow-moving mass, burning the grass and releasing pungent odors on its way.

In October 2012, Bob and NRCS engineer Amanda Crowe visited the farm. They found that the manure was moving slowly toward a ditch adjacent to the town road. In a heavy rainfall, it could quickly reach Lemonweir

Creek, a stream that feeds into Lake Tomah. Lake Tomah is on DNR's 303(d) list of impaired water bodies because of excessive phosphorus levels, and the extra nutrients from this manure wouldn't help.

"Working with farmers and producers for 25 years, you think you've seen it all, but then something like this pops up," Bob says. "This was definitely a first for me."

Bob and Amanda's experience with conservation approaches and techniques honed over the years working with dairies and other livestock producers helped them address the manure runoff. They decided a manure storage facility would solve the problem and worked together to secure \$70,000 in financial assistance for Randy through the Environmental Quality Incentives Program. Monroe County, through its Soil and Water Resource Management staffing grant, was able to provide free technical assistance in the form of project design work, oversight for construction and installation, and securing a manure storage permit. Using funding provided by NRCS, Randy contracted with two local businesses to perform concrete and earth work. Monroe County's manure storage ordinance requires a nutrient management plan in order to get a permit, so Amy Finley of Western Wisconsin Technical College helped Randy write his plan. The nutrient management plan ensures that the stored rabbit manure is spread to match crop nutrient needs and minimizes nutrient runoff into nearby waters. This provided a win-win situation, because Randy's neighbor needed additional fertilizer and was able to use the nutrient values of the rabbit manure on his nearby cropland.

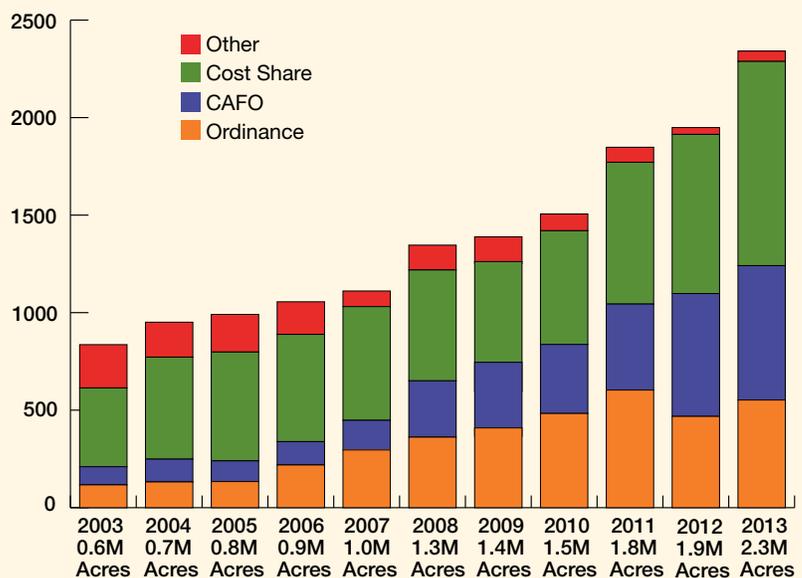
Thanks to the assistance provided by the Monroe County LCD and NRCS, Randy was able to upgrade his facility, build enough manure storage capacity for 10,000 rabbits, and secure his operating loan. The new storage also reduced odors, and prevented waste from oozing into Lemonweir Creek.



Rabbit manure exiting the facility had potential to runoff during a rain event.

The farm, creek, and community all benefitted from the skill and problem solving of Wisconsin conservation professionals. And despite all of those rabbits, they didn't need a single top hat.

2003-2013 Nutrient Management Plan Acres Reported by County



Acres covered by nutrient management plans on Wisconsin farms have been steadily increasing since 2003.

2013 DNR and DATCP Notice of Discharge Cost Sharing Grants

The DNR and DATCP work together to offer cost-share grants through the Notice of Discharge (NOD) Grant program. The program allows County Land Conservation Departments to apply for a grant on behalf of small and medium farm owners to cost-share best management practices to correct a discharge of manure or process wastewater from the farm to waters of the state. The grant helps landowners achieve compliance with soil and water conservation objectives and provides a higher level of funding to farmers more quickly than other DNR and DATCP conservation grant programs. In 2013, DNR and DATCP awarded approximately \$1,425,242 to resolve problems on twelve different farms.



Clark County:

Construction of a manure storage system, installation of a barnyard runoff control system, abandonment or roofing a barnyard and an updated nutrient management plan enabled a 145 animal unit operation to resolve significant, on-going manure discharge issues to the South Fork of the Eau Claire River resulting from barnyard runoff and winter manure spreading.

Eau Claire County:

Chronic manure overflows from an inadequate manure storage facility and excessive winter manure spreading posed risks to surrounding groundwater and surface water. Construction of a new manure storage system and development and implementation of an updated nutrient management plan eliminated the risk from this 630 animal unit operation.

Clark County:

A suite of practices, including clean water diversions, improving the barnyard runoff control system, and updating the manure storage and transfer systems to code helped resolve frequent and significant discharges to Rock Creek from a medium-sized livestock facility.

Marathon County:

Significant discharges of manure to the Little Rib River from a barnyard at a 500 animal unit operation were addressed through construction of a manure storage facility adjacent to the barnyard, and installation of roof gutters and underground outlets. These practices, coupled with the elimination of winter spreading of manure, enabled the farm to better manage the sources of manure to remove the discharge.

Clark County:

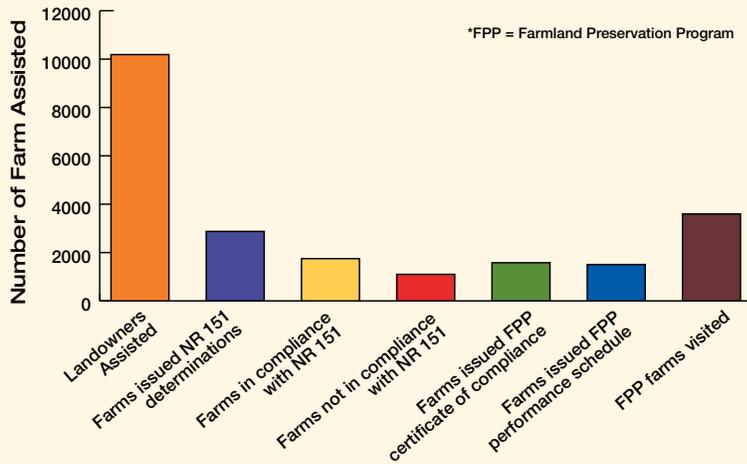
Significant discharges to the North and South Forks of the Eau Claire River resulted from the overland flow of manure and process wastewater from the production area and from land applications of manure. To address the discharge, a 189 animal unit operation developed and implemented an approved nutrient management plan, constructed a manure storage facility and a barnyard runoff control system, and reduced the size of one of the barnyards to construct a vegetated treatment area.

Manitowoc County:

Site investigations and water samples indicated groundwater contamination resulting from spring and winter application of manure from a 270 animal unit farm. By updating and improving the manure storage facility to meet current standards, winter and early spring manure applications were eliminated.



Farm Assistance by Counties in 2013



In 2013, county conservation staff provided technical or financial assistance to over 10,000 producers to help achieve compliance with soil and water conservation standards (As reported to DATCP).

Racine County:

Well contamination as a result of manure spreading on fields near the wells was resolved by eliminating the spreading of manure on the suspected fields and the development and implementation of a nutrient management plan.

Shawano County:

Well contamination as a result of a 142 animal unit operation was resolved through collaboration between the owner, USDA – Natural Resources Conservation Services, the Shawano County Land Conservation Department and DNR. Construction of a manure storage system, installation of barnyard runoff controls and the development and implementation of a nutrient management plan will help the farm manage manure to prevent future discharge.

Marathon County:

Significant discharges of manure to the Little Rib River from a barnyard at a 500 animal unit operation were addressed through construction of a manure storage facility adjacent to the barnyard, and installation of roof gutters and underground outlets. These practices, coupled with the elimination of winter spreading of manure, enabled the farm to better manage the sources of manure to remove the discharge.

Oconto County:

Runoff contaminated with manure from a manure loading area and access driveway discharged to the Pensaukee River from a 137 animal unit operation. By building a temporary storage structure to hold excess liquids during the winter, installing roof gutters, and developing a buffer outside the lot, the runoff issues from this site were resolved.

Pierce County:

Discharge to a tributary of Missouri Creek from a failing manure storage structure on a 100 cow dairy facility was resolved through the construction of a new manure storage structure and the development and implementation of a nutrient management plan.

Taylor County:

Through installation of a series of practices, including a manure storage facility, a barnyard runoff control system, vegetated treatment area, roof runoff system, and development and implementation of a nutrient management plan, an 82 animal unit operation was able to resolve discharge to the Fisher River from an unconfined manure stack and runoff from the barnyard and milk house.



Brown County

Tackling Northern Pike Restoration

If you are in the Green Bay area and take some time to venture away from Lambeau Field, you might run into locals who have lived on the inlets and tributaries to the Bay their whole lives. They will all tell you the same story. Years ago, the rivers ran black with northern pike. When the pike were running, it was a big event. People would bring out lawn chairs and coolers to sit and watch the fish spawn up and down the streams.

Now when the pike run, there are only a few to be seen here and there. Gone are the days when watching northern pike in the spring was a sight to see. Commercial fisherman in the Bay will tell you that predator fish populations, including northern pike, are down and the food chain is out of balance. Sadly, Green Bay is not the world-class northern fishery it once was.

That will change if the Brown County Land and Water Conservation Department (LWCD) has anything to do with it. Jim Jolly and Mike Mushinski of the LWCD have been working for eight years to restore the northern pike population to Green Bay. The project was conceived in 2007 and work began in 2008 when the LWCD started doing basic inventories of areas where northern pike spawning habitat could be restored.

“It is vital to the northern pike that we improve wetlands and reconnect them to streams.”

Spawning habitat is critical for the northern pike. They need healthy streams and wetland areas that are connected to Green Bay, but some distance away. Instead of spawning in the Bay as many other game fish do, they migrate up streams and road ditches to more protected areas that have dense grass in shallow waters. When the females drop eggs, the eggs stick to the grass where they can be fertilized.



Rachel VanDam, a graduate student at UW-Green Bay, holds a northern pike measured at a project monitoring site.

For many years, the goal for northern pike conservation had been to try to protect the little habitat that remained. Over time, seventy percent of original habitat along the west shore of the Green Bay had been lost to urban development and drainage for agricultural production. So instead of working to just protect what remained, the LWCD and WDNR decided to focus on isolated wetlands that were no longer functioning and turn them back into prime spawning habitat.

To get started, the LWCD applied for and received a National Fish & Wildlife Foundation Grant for initial staffing costs and a Natural Resources Damage Assessment grant to cover incentive payments and construction costs. After completing an inventory of sites within one mile of the Bay, they developed a strategy to tackle the highest priority sites first. The LWCD then began implementing conservation projects on as many of those high priority sites as they could.

Oconto County, also home to Green Bay tributaries, received a grant as well and joined the project. Together, the two counties have worked with nearly 70 families who own property on tributaries feeding into Green Bay. Working in partnership with landowners, farmers, and local contractors, the county LWCDs have



Northern pike spawn in shallow, protected areas with dense vegetation.

installed buffers, restored wetlands, and seeded down severely eroding stream banks. Agricultural producers also agreed to use setbacks when tilling soil or applying agrichemicals in areas adjacent to streams. Funding provided incentive payments to participating landowners and paid for conservation practices. In return for incentive payments, landowners agreed to keep woody vegetation out of buffer areas and protect buffered areas with conservation easements.

Mushinski says, “It’s all about connectivity to the stream network and Green Bay. It is vital to the northern pike that we improve wetlands and reconnect them to streams. When water quality benefits, everything benefits: plants, reptiles, amphibians, insects, and fish.”

LWCD staff played a critical role by completing stream and site assessments, contacting landowners, completing engineering and design work, performing construction inspections, securing funding, writing contracts, obtaining permits, and coordinating with the register of deeds. However, much of their work would not have been possible without the help of partner agency staff. Dick Rost, a now retired DNR fisheries biologist,

laid the groundwork for the entire effort with fry trapping and wetland research. His work is what inspired the Brown County LWCD to submit the initial grant proposal. Robert Rosenberger, a DNR Water Management Specialist out of Peshtigo, is a big supporter of constructing wetlands for the betterment of fish and wildlife populations. Rosenberger guided LWCD staff through the DNR’s permitting process, visited sites, reviewed conditions, and provided recommendations. In addition, Tammie Paoli, a DNR Fisheries Biologist also out of the Peshtigo

office, was instrumental in reviewing wetland projects, helping with spring fish monitoring, and helping to guide northern pike rescue efforts. Gary VanVreede of the U.S. Fish and Wildlife Service provided habitat evaluations of sites and construction funding through Partners for Fish and Wildlife. DATCP engineering specialist Drew Zelle, and NRCS area engineer Dean Sylla also provided design assistance for conservation practices.



Photo: WI DNR

Wetlands store and filter water, remove sediment and pollutants, and provide habitat for fish and wildlife.

Over time, a whole host of additional partners joined the effort. The US Environmental Protection Agency provided funding through a Great Lakes Restoration Initiative grant. The Green Bay chapter of the Great Lakes Sport Fishermen, Green Bay Northeast Lion's Club, Izaak Walton League, Brown County Conservation Alliance, Nature Conservancy, Trout Unlimited, and Ducks Unlimited also contributed funds. Even the Green Bay Packers provided financial support. To date, a total of \$1,144,650 has been dedicated to the project.



Northern pike migrating along Brown Road near Green Bay during the spring of 2012.

Some local governments have also been big proponents of the restoration. The Village of Suamico and Town of Pittsfield had conservation projects installed on public land and have promoted efforts in their newsletters. The project also piqued the interest of researchers. Chicago's Shedd Aquarium, the University of Wisconsin-Madison, and the University of Wisconsin-Green Bay are performing research at select sites on reproduction rates, movement, and temperature and flow impacts on spawning success.

Every spring, you can find Mushinski and his crew out in the streams setting traps and looking for pike, recording their locations with GPS units, and mapping their whereabouts. They are looking for adult and "young of the year" pike between March and June as

fish migrate to Green Bay. The location data guides future efforts to target money and resources to the most valuable and potentially productive sites. In the winter months, the cycle begins again as staff work on surveys, construction designs, and permits for the next season.

Although it is too soon to tell the impact this project is having on the northern pike fishery in Green Bay, the results are promising. Every year project partners find new areas that northern pike are attempting to use, including tributaries to the Fox River- something that has not been previously documented. This year monitoring efforts counted 30,000 migrating young; in previous years, counts were at 300. Eventually, the increased spawning should result in an increase in the adult pike population in Green Bay.

The benefits could be huge. The economic value of a harvestable size northern pike is \$115 per fish, which can translate to a lot of extra income for the local economy. And that doesn't include the environmental benefits from the numerous wetlands and buffers installed: flood control, improved water quality, and reduced amounts of sediment and nutrients flowing into Green Bay.

Each year shows signs of improvement, and everyone involved hopes one spring the rivers will once again run black with northern pike and the restoration effort will be considered a success for Green Bay.



Photo: WI DNR

Shoreland restoration projects stabilize eroded streambanks and improve water quality.

Wisconsin's Statewide Interagency Training Committee (SITCOM)

Preparing the Next Generation of Conservation

If you live in the conservation “world” you may have recently heard people refer to “SITCOM” and wondered what they were talking about. After all, TV shows and conservation don’t have much in common. SITCOM is short for the State Interagency Training Committee, making a renewed commitment to build a statewide team of well-trained professionals who deliver soil and water conservation services. SITCOM’s goal is to identify training needs and provide free and low-cost training to conservation employees at the local, state and federal levels as well as in the private sector.



SITCOM originated in the 1990s, allowing DATCP, DNR, NRCS, the WI Land+Water, UW-Extension, and private sector professionals to deliver conservation training in the state. This was partially due to the Priority Watershed Program, effective from 1978 to 2009, which focused on conservation practice installation. At the same time, NRCS began conservation technician certification and job approvals for core engineering practices and engaged technical service providers (TSPs) in the private sector to complete project design and installation. Local branches of SITCOM were established

A lot has changed in the past decade, including conservation training needs.

in some areas of the state, and they still provide some training today. Over time, SITCOM slowed down in the early 2000s and eventually funding and agency involvement came to a halt.

A lot has changed in the past decade, including conservation training needs. Experienced conservation staff have retired, new staff are on the job, county conservation departments have been consolidated with other departments, and funding has been reduced

at all levels of government. However, the workload for Wisconsin’s conservation partners continues to increase. Today, sharing training resources between agencies working towards a common goal is more important than ever.

New employees bring enthusiasm and fresh perspectives to their work in any field. Experience comes with time on the job, but the training component has been a limiting factor in recent years. Today’s new conservation employees tend to have less farm experience than in the past, and agriculture is constantly changing, becoming more complex and specialized. Employees without farm experience may be at a disadvantage, whether they actually design or review conservation practices, or need to explain the benefits of conservation to landowners and farmers. A strong training program can help build confidence and conservation potential for the “boots on the ground” who are out working with the public every day.

Training also helps both public and private sector professionals interpret conservation related laws and statutes. It provides credibility, assuring farmers, land owners, and tax payers that public dollars are being used properly and efficiently to design and install conservation practices that will not fail or collapse.

Wisconsin's Conservation Professionals at a Glance

NRCS employs soil conservationists, engineers, and technicians who work with landowners and county and state conservation employees to install conservation practices. NRCS requires certified conservation planners for practice installation that earn and maintain certification. They also maintain a Technical Service Providers program that certifies private sector professionals working on federally funded projects.

DATCP employs state soil and water conservation engineers and nutrient management specialists, most of who work in regional offices with county and federal staff on engineering certification, plan development and review, and practice installation.

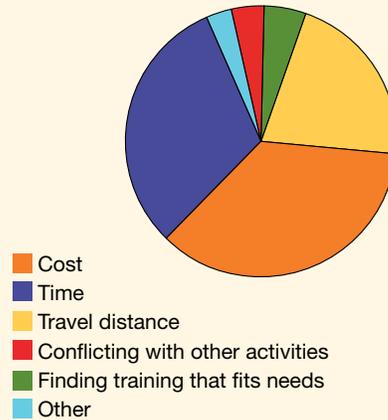
DNR provides training, review, and approval for private consultants and county staff who submit plans and interpret standards for CAFOs (Concentrated Animal Feeding Operations). DNR also manages the agricultural nonpoint source pollution program which provides funding and works closely with conservation staff on compliance with state agricultural performance standards and prohibitions. County staff apply for these cost sharing grants to work with farmers and implement projects. On the urban side, DNR provides training for consultants who develop storm water plans using urban technical standards to meet required permits.

UWEX is the state expert in continuing education and contracts with state and federal agencies to create training sessions now known as the Conservation Professional Training (CPT) program. CPT attendees include private sector professionals, agronomists, engineering firms, and some state, local and federal staff.

WI Land & Water, or the Wisconsin Land and Water Conservation Association, is the nonprofit organization representing Wisconsin's county land conservation committees and land conservation department employees. There are approximately 340 land conservation department employees hired by these local committees to work on various programs in all 72 Wisconsin counties.

Private Sector Professionals are consultants who provide valuable assistance to landowners and farmers by providing a variety of services. PSPs include certified crop advisors, co-op agronomists, Technical Service Providers, conservation planners, engineering firms, and more.

Barriers to Conservation Training



County identified barriers to attending conservation professional development opportunities in 2013 (As reported to DATCP).

In the coming months, the SITCOM will work together and engage with stakeholders to provide free and low-cost training online, in the classroom, and in the field. A newly revamped CPT website will organize opportunities made available by multiple agencies to include curriculums, course tracks, registration, event calendars, and feedback opportunities. This tool will provide a one-stop shop for available training and allow conservation professionals easy and timely access to course



DATCP and UWEX staff provide SnapPlus nutrient management training to farmers and conservation professionals.

Chippewa County

New Opportunities through Locally Led Conservation

In Wisconsin, we are committed to “Locally Led Conservation.” Resource management challenges vary widely across the state. It is the responsibility of each County Land Conservation Committee to work with stakeholders to define the resource management issues of local concern, and to work with those stakeholders to meet community needs.

There is a growing awareness that “Government” cannot do it all, and that local leadership and collaboration are the keys to success. In Wisconsin, there is also a growing interest by industry leaders to invest in community-based projects that protect and improve the environment.

About the Project

The Little Lake Wissota Stewardship Project is a good example of a public and private partnership, co-sponsored by the Jacob Leinenkugel Brewing Company and the Chippewa County Land Conservation Committee to meet local conservation needs.

Why would a company sponsor a major watershed project? As explained by corporate leaders in a recent call for volunteers; “At Leinenkugel’s, our connection to water quality and love of the outdoors is at the core of who we are and what we do”.

Little Lake Wissota is an impounded embayment of Lake Wissota, located in the Chippewa Falls Urban Area, and is an important community asset. The lake receives its water from a 67 square mile watershed and has been listed as an “impaired water”. The DNR established a Total Maximum Daily Load limit (TMDL) for the lake, and established phosphorus reduction goals to reduce the frequency of late summer algae blooms.

In creating the project, the sponsors wanted to develop and evaluate a new community-driven business model for lake and watershed

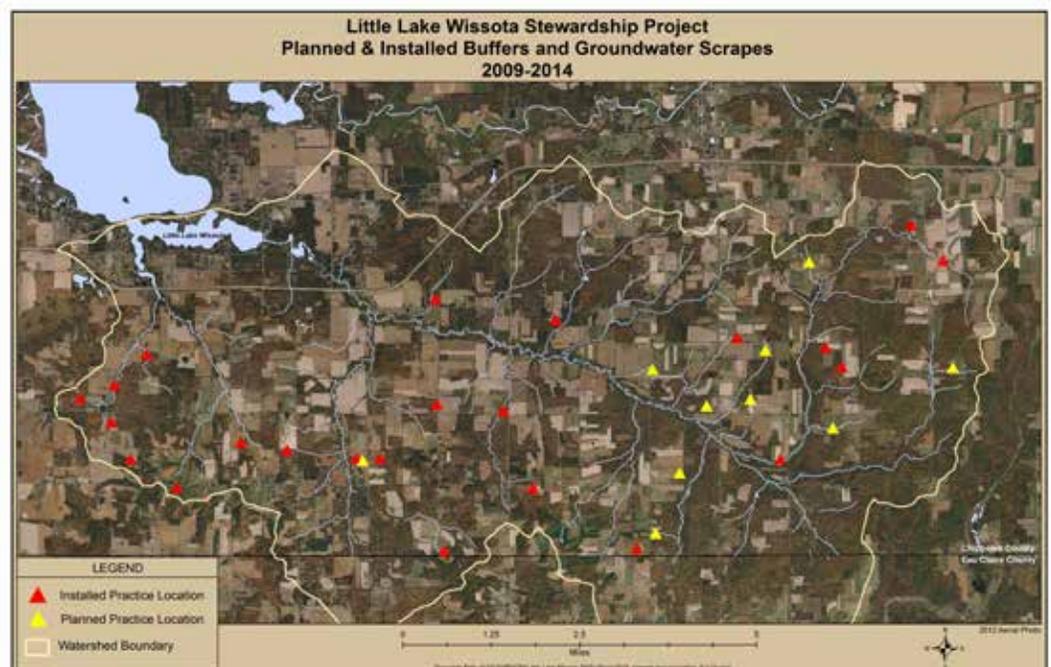
management. The environmental goals of the project were established in collaboration with the funding agencies to reduce phosphorus loads to target levels, keep the lake fishable and swimmable, and increase the number of recreational user days.

The project is funded through community contributions provided by area businesses and corporations, community organizations and foundations, and by individual citizens. These private contributions are augmented by a large-scale WDNR TMDL watershed grant, DATCP Soil and Water Resource Management funds, and by USDA Conservation Reserve Enhancement Program (CREP), and Environmental Quality Incentive Program (EQIP) funds.

Progress to Date

Initiated in 2009 as a five year pilot project, significant progress has been made. During the initial stage of project development, the project oversight team met with state and federal agencies, including the DNR, DATCP, UW-Extension, and the USDA Farm Service Agency and Natural Resources Conservation Service to review TMDL goals and project objectives.

The team then developed a detailed project design and framework, drafted a cooperative agreement that defined the specific roles and responsibilities of





On May 17, 2014, community volunteers, led by the Leinenkugel's family and corporate staff, planted over 1,000 trees to establish a permanent stream buffer that will improve the water quality of Little Lake Wissota.

the project sponsors, and established performance measures to track progress and to assure accountability. To implement the project, the project team developed a framework for community giving (working through the local community foundation), secured state and federal funding sources, and developed a multi-year operational plan that outlined the work to be done.

For simplicity, the project has been planned and is being managed using three components common to most watershed projects: community outreach, getting “conservation on the land”, and resource monitoring. To date, the project has been well received with significant progress being made under each component.

To advance community outreach, a public information and education plan has been prepared, fact sheets and Power Point presentations developed, and a Facebook page created. Members of the project team routinely present progress reports to community organizations, supporting agencies, and donor groups. Most recently, there have been volunteer opportunities created by the Leinenkugel's “Canoes for a Cause” program to encourage direct citizen involvement through tree planting and lake shore clean up.

To get “Conservation on the Land”, the project team completed an extensive watershed inventory to define areas for targeted resource protection, and conducted direct mailings to rural landowners and agricultural producers to inform them of program opportunities. Field visits are then arranged to explain the project and to present site specific cost estimates for water conservation practices, including riparian tree buffers, wetland restorations, and upland sediment

basins and groundwater infiltration scrapes. To date, 25 landowners have participated, installing over 125 acres of riparian buffers and wetland restorations, with nearly all areas permanently protected through use of conservation easements.

To reduce implementation costs, the project developed and implemented a turn-key process for group contracting and installation of conservation practices.

To track and monitor progress toward achieving lake and water management goals, the project team keeps a cumulative record of modeled phosphorus reduction,

compiles available lake water quality monitoring records, and met with DNR lake and water quality specialists to evaluate long-term lake management and monitoring needs. Most recently, the project gained a commitment from each of the five Chippewa Falls area Boy Scout Troops to conduct lake monitoring on a bi-monthly basis following DNR Citizen Science protocols over the next five years.

Moving Forward

The project team is now developing an outline of the methods used to plan and implement the project with the hope that some of the lessons learned may be transferrable and of benefit in other projects. The project team is also reaching out to the local lake association and the town government to explore long-term institutional arrangements that can be used to further advance lake management needs.

Ongoing project updates, including the 2013 project summary, are routinely posted online to keep the community engaged and moving forward. These can be viewed on Facebook by searching for “Little Lake Wissota Stewardship Project”.

For more information about the Little Lake Wissota Project, please contact Jane Tetzloff- Jensen, Project and Grants Manager, Chippewa County Dept. Land Conservation & Forest Management, at (715) 726-7922 or Dan McCabe, Jacob Leinenkugel Brewing Company, LLC., General Manager & Plant Manager at (715) 720-2218.

Milwaukee County

It's Not Easy Being Green



Photo: WI DNR

Rain gardens are one example of green infrastructure that can benefit water quality.

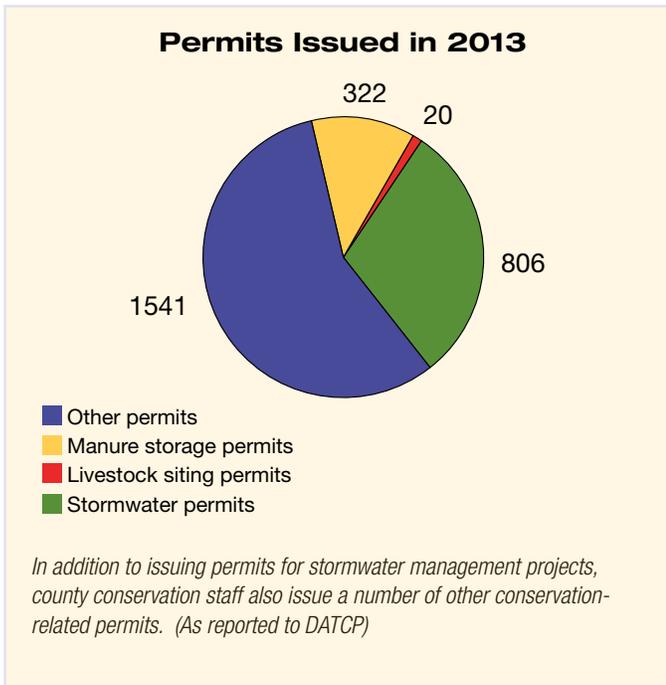
Green infrastructure has the ability to revamp the way municipalities manage stormwater as well as potentially improve the overall water quality in local rivers, lakes and streams. By design, green infrastructure is intended to create a balance between land use and water resources while including natural processes into the built environment. Some examples of green infrastructure include green streets, green walls and roofs, multi-use storm water treatment systems, planter boxes, rain barrels, rainwater harvesting, permeable pavements and surfaces, and sidewalk or parking lot bio-retention areas. Local ordinances and policies can play a significant role in implementing green infrastructure.

Kate Morgan with 1000 Friends of Wisconsin has been working with municipalities on sustainable ways of building communities since 2008. With the progress of key water quality initiatives like the DNR's Menomonee River TMDL, the requirement of watershed-

based stormwater MS4 permits, and the Menomonee River Watershed Restoration plan, the use of green infrastructure made sense. Kate approached the Milwaukee Metropolitan Sewerage District (MMSD) for their support of a project proposal addressing barriers to green infrastructure in local regulations. At the same

Partnerships are the foundation of this project.

time, Steve Keith, a Sustainability and Environmental Engineer from Milwaukee County met with MMSD regarding a similar proposal that used predictive models to show the benefits code changes and green infrastructure could produce. As a result, 1000



Friends of Wisconsin, MMSD, and Milwaukee County collaborated to submit a successful grant application to the Fund for Lake Michigan in 2012.

With the expertise from Julie Beth Hinds from Birchland Planning Inc., the group began reviewing and discussing municipal codes and ordinances within the Menomonee River Watershed. They identified regulations that created barriers to implementing green infrastructure and recommended tailored revisions that met the individual needs of participating municipalities. Participating municipalities including Germantown, Menomonee Falls, Butler, Brookfield, Wauwatosa, Elm Grove, City of Milwaukee, West Milwaukee, and Greenfield then adopted the new ordinance language.

To show how changes could mitigate runoff, Tim Detzer, Managing Environmental Engineer for the Milwaukee County Department of Environmental Services, modeled a typical parking lot. The computer model replaced a berm (a mound of earth commonly used in landscaping) and street trees with bioretention (a treatment area for stormwater that filters out sediment and contaminants). The results showed a 72.8% reduction in runoff and a 79.3% reduction in sediment runoff when bioretention was used, which illustrates the positive impact green infrastructure can have on managing stormwater runoff. According to Tim, "It's good to see that the modeling corroborates what we believed- significant improvement in water quality with relatively simple changes to codes and infrastructure."

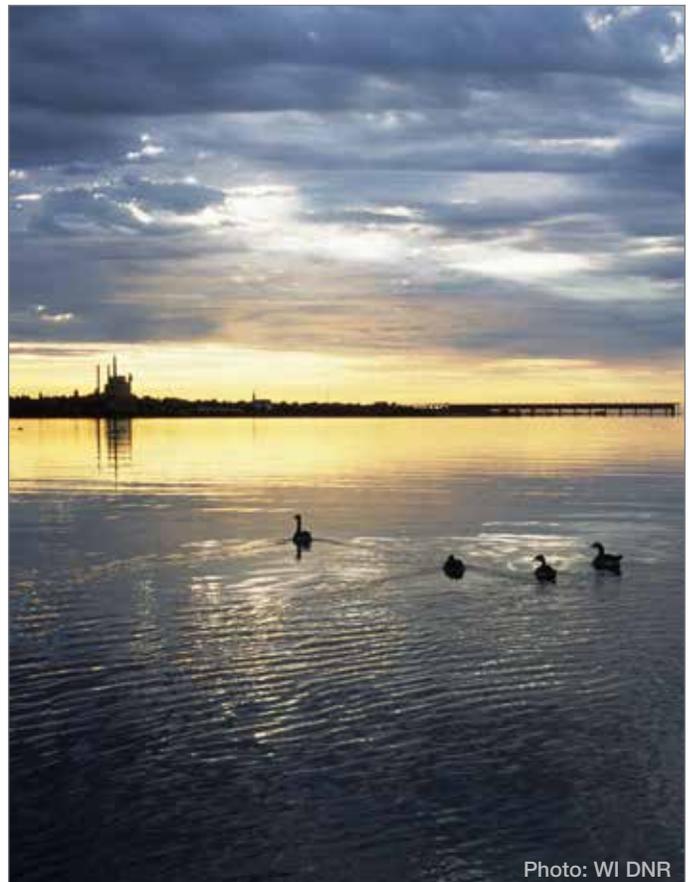


Photo: WI DNR

Waterbodies near urban areas can benefit from green infrastructure.

Beyond changing codes and ordinances, this project illustrates that working together and sharing information can engender powerful change and ultimately improve the environment we live in.

Morgan states, "Partnerships are at the foundation of this project. The team brought together the expertise of Birchline Planning's understanding of the relationship between ordinances and stormwater management, MMSD's leadership in green infrastructure, 1000 Friends of Wisconsin experience in working with communities and Milwaukee County with its broad experience in implementation of green infrastructure and leadership in government relations."



Best Management Practices Installed – 2013

DNR Nonpoint Source Funded Practices for Targeted Runoff Management Grants, Notice of Discharge Grants, Urban Targeted Runoff Management Grants, Urban Nonpoint Source and Storm Water Management Construction Grants, and Planning Grants.

Table 1: WI DNR Agricultural Best Management Practices Installed in 2013

Best Management Practice	Units Installed
Access Roads and Cattle Crossings	1611 feet
Animal Trails and Walkways	300 feet
Barnyard Runoff Control Systems	17
Critical Area Stabilization	10 acres
Diversions	2,338 feet
Filter Strips	0.5 acres
Heavy Use Area Protection	3,003 acres
Livestock Fencing	2,980 feet
Livestock Watering Facilities	8
Manure Storage System Closure	4
Manure Storage Systems	23
Milking Center Waste Control Systems	6
Nutrient Management	200 acres
Roof Runoff Systems	2
Roofs	4
Sediment Basins	1
Streambank/Shoreline Rip-rapping (incl. associated fencing)	1,190 feet
Underground Outlets	1,101 feet
Waste Transfer Systems	11
Wastewater Treatment Strips	2 acres
Waterway Systems	4 acres

** Not all 2013 reimbursements were processed and recorded at the time this report was created.*

Table 2: DNR Urban Stormwater Best Management Practices Installed in 2013

Best Management Practice	Total Installed Units
Land Acquisition	3 acres
Street Sweeping	1 sweeper
Urban Detention System	2
Urban Infiltration System	1
Urban Practice Design	2
Urban Stormwater/Erosion Plan	3

** Not all 2013 reimbursements were processed and recorded at the time this report was created.*

Continued on next page

Table 3: Environmental Quality Incentives Program, Top 40 Practices by Financial Investment - FY 2013

Practice	Contracts	FY 2013 Dollars
Waste Storage Facility	94	\$10,144,896
Streambank and Shoreline Protection	168	\$2,117,720
Heavy Use Area Protection	208	\$2,048,583
Nutrient Management	453	\$1,556,834
Manure Transfer	124	\$1,550,554
Cover Crop	273	\$1,300,231
Fence	342	\$1,055,085
Pumping Plant	94	\$898,798
Grade Stabilization Structure	152	\$844,110
Comprehensive Nutrient Management Plan - Written	94	\$725,440
Seasonal High Tunnel System for Crops	98	\$649,099
Grassed Waterway	310	\$605,141
Closure of Waste Impoundment	54	\$589,444
Prescribed Grazing	324	\$557,031
Mulching	517	\$518,233
Access Road	72	\$486,008
Irrigation System, Sprinkler	19	\$429,095
Irrigation Water Conveyance	25	\$378,378
Stream Crossing	151	\$371,598
Pasture and Hay Planting	123	\$358,390
Stream Habitat Improvement and Management	74	\$346,907
Forest Stand Improvement	87	\$315,908
Subsurface Drain	88	\$294,541
Tree/Shrub Establishment	101	\$290,242
Lined Waterway or Outlet	42	\$283,287
Pipeline	32	\$278,774
Waste Facility Cover	8	\$277,945
Underground Outlet	128	\$253,837
Roof Runoff Structure	77	\$246,960
Obstruction Removal	218	\$241,300
Tree/Shrub Site Preparation	134	\$192,999
Brush Management	198	\$185,895
Wastewater Treatment Strip	49	\$176,393
Critical Area Planting	647	\$175,822
Spoil Spreading	101	\$167,303
Pest Management	36	\$126,955
Forest Trails and Landings	25	\$99,161
Sediment Basin	10	\$95,980
Pond Sealing or Lining, Compacted Clay Treatment	6	\$92,961
Conservation Cover	69	\$84,645
Herbaceous Weed Control	19	\$81,122

Table 4: Environmental Quality Incentives Program, Top 40 Practices by Number of Contracts - FY 2013

Practice	Contracts	FY 2013 Dollars
Critical Area Planting	647	\$175,822
Mulching	517	\$518,233
Nutrient Management	453	\$1,556,834
Fence	342	\$1,055,085
Prescribed Grazing	324	\$557,031
Grassed Waterway	310	\$605,141
Cover Crop	273	\$1,300,231
Obstruction Removal	218	\$241,300
Heavy Use Area Protection	208	\$2,048,583
Brush Management	198	\$185,895
Streambank and Shoreline Protection	168	\$2,117,720
Grade Stabilization Structure	152	\$844,110
Stream Crossing	151	\$371,598
Tree/Shrub Site Preparation	134	\$192,999
Pipeline	132	\$278,774
Underground Outlet	128	\$253,837
Manure Transfer	124	\$1,550,554
Pasture and Hay Planting	123	\$358,390
Watering Facility	116	\$68,049
Spoil Spreading	101	\$167,303
Tree/Shrub Establishment	101	\$290,242
Seasonal High Tunnel System for Crops	98	\$649,099
Comprehensive Nutrient Management Plan - Written	94	\$725,440
Pumping Plant	94	\$898,798
Waste Storage Facility	94	\$10,144,896
Subsurface Drain	88	\$294,541
Forest Stand Improvement	87	\$315,908
Roof Runoff Structure	77	\$246,960
Stream Habitat Improvement and Management	74	\$346,907
Access Road	72	\$486,008
Conservation Cover	69	\$84,645
Closure of Waste Impoundment	54	\$589,444
Diversion	50	\$54,860
Wastewater Treatment Strip	49	\$176,393
Forest Management Plan - Written	46	\$51,711
Well Decommissioning	46	\$23,790
Upland Wildlife Habitat Management	43	\$17,175
Irrigation Water Management	42	\$28,900
Lined Waterway or Outlet	42	\$283,287
Prescribed Burning	40	\$12,206
Residue and Tillage Management, No-Till/Strip Till/Direct Seed	40	\$68,640

Table 5: DATCP Best Management Practices Installed in 2013

Crop Erosion Control Practices	Amount Installed (Acres, Feet or Number)
Riparian Land Taken Out of Production	23 Acres
Animal Trails and Walkways	4,133 Feet
Cover Crop	283.30 Acres
Critical Area Stabilization	34
Diversions	5,505.50 Feet
Field Windbreaks	34,882 Feet
Filter Strips	0.40 Acres
Grade Stabilization Structures	56
Riparian Buffers	23.37 Acres
Sinkhole Treatment	2
Streambank and Shoreline Protection	32,009 Feet
Subsurface Drains	6
Terrace Systems	875 Feet
Underground Outlets	14
Water and Sediment Control Basins	5
Waterway Systems	72.67

Manure Management Practices	Amount Installed (Acres, Feet or Number)
Manure Storage Systems	19
Manure Storage System Closure	35
Barnyard Runoff Control Systems	17
Access Road	12,515.23 Feet
Heavy Use Area Protection	6.46
Livestock Fencing	35,978 Feet
Livestock Watering Facilities	23
Milking Center Waste Control Systems	5
Nutrient Management	55,203.89 Acres
Roof Runoff Systems	15
Sediment Basins	2
Waste Transfer Systems	13
Wastewater Treatment Strips	30,230

Continued on next page

Table 6: DATCP Best Management Practices Installed in 2013 Continued

Other Practices	Amount Installed (Acres, Feet, or Number)
Prescribed Grazing Fencing (permanent)	85,230 Feet
Prescribed Grazing Establish Permanent Pasture (seeding)	2,008.70 Acres
Well Decommissioning	192
Wetland Development Restoration	28.70 Acres





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