2019 LA CROSSE COUNTY

Department of Land Conservation

Annual Report

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PLANNING, RESOURCES & DEVELOPMENT COMMITTEE


Patrick Scheller, Chair


Jerome Gundersen, Jr.


Dan Hesse


Rick Cornforth


Kevin Hoyer


Karen Keil


Robert Sandman, FSA Rep.

DEPARTMENT OF LAND CONSERVATION STAFF

With respect and sadness, 2019 marked the end of two very long and successful careers. Gregg Stangl and Bruce Olson have each decided to hang up their conservation hats to enjoy the land and water they have collectively spent over 70 years protecting. We wish them each a long and fun-filled retirement. Thank you Bruce and Gregg for all your service!


Gregg Stangl
Director

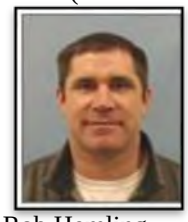

Sue Sheehan
Technician


Jacob Schweitzer
Conservation Specialist (Urban/ WQM)


Bruce Olson
Conservation Specialist
(Ag/Urban)


Matt Hanewall
Conservation Specialist
(Urban/Ag/WQM)


Kurt Pederson
Conservation Specialist
(Ag/Urban/GIS)


Rob Hemling
Conservation Specialist
(Ag/Urban)

DLC Responsibilities

The Department of Land Conservation is charged with protecting, conserving and enhancing the natural resources of the county. Through direction and supervision from the Planning, Resources and Development (PR&D) Committee, the DLC implements programs that promote wise land use decisions that conserve and protect our soil and water resources. The Department is the local delivery mechanism for many Federal and State sponsored conservation related initiatives.

The Department consists of trained and experienced staff that provides a wide range of planning and technical assistance in both agricultural and urban environmental protection strategies. The diverse landscape and varied land uses in La Crosse County presents complex challenges for natural resource managers. The Department of Land Conservation staff has the expertise to provide solutions to those problems.

Programs

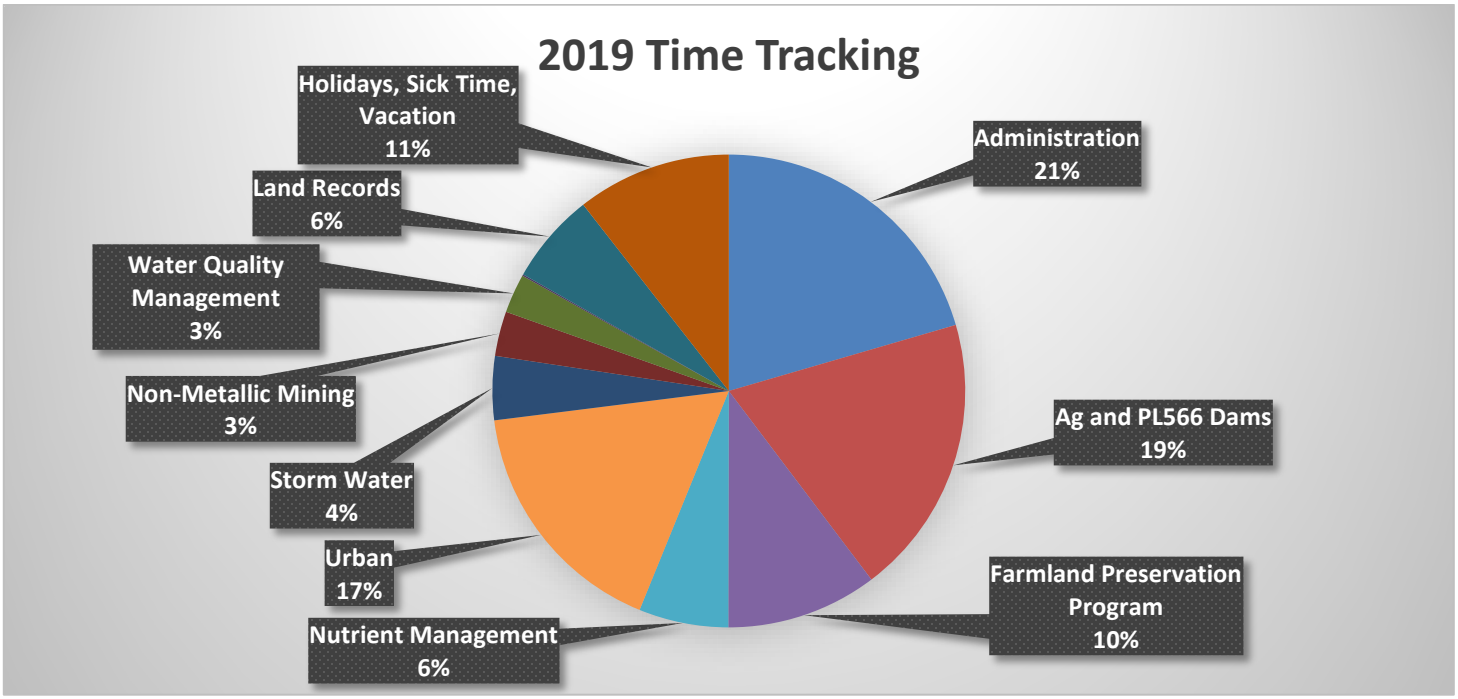
Rural

1. Administer the La Crosse County Animal Waste Management Ordinance
2. Administer the Conservation Requirements of the Farmland Preservation Program
3. Administer the State Agriculture Performance Standard Requirements
4. Provide Nutrient Management Planning Services
5. Administer a County Wide Water Quality Monitoring Program
6. Provide the Technical Assistance for the Installation of Best Management Practices
7. Administer the Timber Harvest Program in the County Forest System
8. Administer the State Livestock Facility Siting Rule
9. Provide conservation compliance requirements for the State's Working Lands Initiative.
10. Administer the Land and Water Resource Management Plan
11. Provide mapping, GIS, and LiDAR related services
12. Provide cost-share assistance for installation of Best Management Practices
13. Aquatic Invasive Species Cooperation
14. Soil Testing and Animal Waste Nutrient Analysis
15. Non-metallic Mining Ordinance
16. Maintain PL-566 Flood Control Structures
17. Conduct Water Quality Monitoring Program

Urban

1. Administer the Erosion Control Land Disturbance Ordinance
2. Administer the Erosion Control Provision of the Uniform Dwelling Code
3. Provide Site Evaluations for Urban and Rural Landowners
4. Provide Site Evaluations for PR&D Committee Review and Approval
5. Administer the Technical Requirements of the Non-Metallic Mining Ordinance
6. Administer the Storm Water Management Ordinance
7. Implement the Storm Water Management Public Outreach and Education Program
8. Review Subdivision, Condominium and Certified Survey Map plats

Staff Time 2019



GOALS AND OBJECTIVES 2019

Land and Water Resource Management Plan

The Land and Water Resource Management plan is a requirement of ATCP 50.12 and is revised every five to ten years. It provides goals and objectives that the Department of Land Conservation proposes to implement as a means of reducing both urban and agricultural nonpoint sources of pollution. These strategies aim to protect surface water, groundwater and our soil resources.

The Planning, Resources and Development Committee, through the LWRM plan, has set the following water quality goals for La Crosse County:

Total Phosphorus: 0.05 mg/L or less. To prevent excessively high phosphorus levels that may lead to eutrophic conditions and low dissolved oxygen levels in lakes and streams. Phosphorus in surface waters promotes excessive weed growth that interferes with water based recreational activities and can cause fish kills when conditions cause oxygen levels in the water to plummet.

Fecal Coliform Bacteria: Less than 1,000 colonies per 100ml. High bacteria counts in water resources can cause skin rashes and gastro-intestinal illnesses when people come in contact with such conditions and indicate that more harmful bacteria and viruses are likely present.

Dissolved Oxygen: No less than 5 mg/L at any time; no less than 6 mg/L for trout waters; and no less than 7 mg/L during spawning season. Dissolved oxygen levels in trout streams are critical for their survival. Levels below 5 mg/L for extended periods often kill native trout or force them to move to other segments of the stream where conditions are more suitable. The loss of local trout populations reduces the recreational value of the water resource and diminishes fishing opportunities for sportsmen.

That surface waters attain their fishery potential as indicated in the DNR Black River Basin Water Quality Management Plan, and Bad Axe-La Crosse Rivers Water Quality Management Plan.

Through the Land and Water Resource Management planning process, the Department of Land Conservation has established the following objectives to achieve the County's water quality goals:

1. Implement the State's Agricultural Conservation Performance Standards
2. Implement the State's Urban Conservation Performance Standards.
3. Conduct public information and education activities
4. Maintain the Department's water quality monitoring and data collection program.

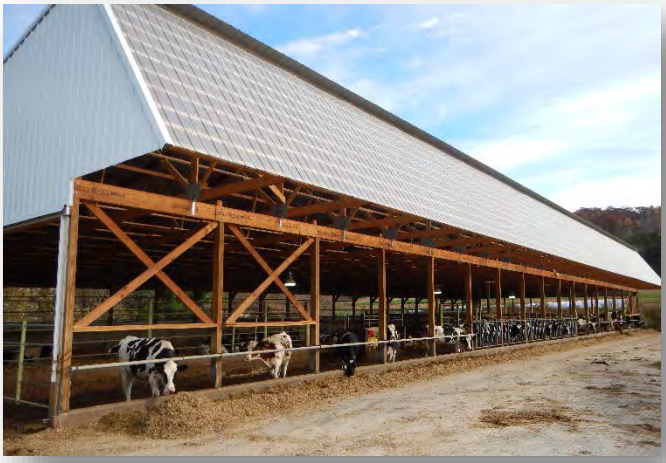
Accomplishments

The Department of Land Conservation is primarily responsible for providing planning, technical and financial assistance to county farmers to assist them in meeting the State's agricultural conservation performance standards. The Department accomplishes this through implementation of the State's Farmland Preservation Program, the Soil and Water Resource Management Program, the Livestock Facility Siting Rule and the County's Animal Waste Management Ordinance.

The Department is also responsible for preventing surface water contamination from construction site erosion and storm water runoff. Department staff assist building contractors, developers and homeowners by developing erosion control plans and reviewing storm water runoff management plans for compliance with State and County rules.

1. Implement the State's Agricultural Conservation Performance Standards

Soil and Water Resource Management Program



The Soil and Water Resource Management Program provides financial assistance, usually in the form of cost-share dollars, to landowners who install conservation measures that meet the requirements of the County's Land and Water Resource Management Plan. The Land and Water Resource Management Plan lists goals and objectives that the Department of Land Conservation proposes to implement as a means of reducing both urban and agricultural nonpoint sources of pollution from degrading our surface and groundwater resources and protecting our soils from erosion. The program is also intended to help farmers achieve the State's agricultural conservation performance standards. In 2019, $59,569.11 of State funds were allocated to county farmers to help them install conservation measures that meet the State's Soil and Water Conservation Standards. Please refer to Table 1.

Environmental Fund

The Department of Land Conservation maintains an account in its annual budget called the Environmental Fund. The Fund is used to provide financial assistance for soil sampling crop fields for County landowners who develop nutrient management plans on their farming operations. The soil samples provide information regarding the macro nutrient level (nitrogen, phosphorus and potassium) of the sampled fields so that nutrient management planners can recommend the appropriate applications of animal manures and commercial fertilizers.

The Environmental Fund also provides cost-share assistance to landowners for conservation practice installation that may not be covered under other State and Federal conservation programs. In 2019, the Department of Land Conservation provided $8,578.04 for soil testing, manure testing, nutrient management workshops, and conservation practice installation. In 2019, department staff provided services for the installation of the following conservation practices:

TABLE 1

Landowner	Type of Project	SWRM	Environmental Fund	Landowner Funds	Other Funding	Total Cost of Project	
#01	Stream Crossing	$ 3,040.00	$ 1,216.00	$ 1,824.00			**$ 6,080.00**
#02	Streambank	$4,327.50	$ 1,731.00	$ 2,596.50			**$ 8,655.00**
#03	Waterway repair	$ 13,264.09	$ 3,789.74	$ 1,894.87			**$ 18,948.70**
#04	Critical Area	$ 4,681.73			$ 2,468.27		**$ 7,150.00**
#05	Critical Area	$ 2,607.50		$117.50			**$ 3,725.00**
#06	Grade Stabilization Structure	$ 6,048.29	$ 1,728.09	$ 864.05			**$ 8,640.43**
#07	Nutrient Management	$ 25,600.00					**$ 25,600.00**
Misc	Nutrient Mgt Workshops		$ 88.15			$ 88.15	**$ 113.21**
	Public Notice for LWRM update		$ 25.06			$ 25.06	
Total		**$ 59,569.11**	**$ 8,578.04**	**$ 8,296.92**	**$ 2,468.27**		**$ 78,912.34**

Nutrient Management Planning

As of January 1, 2008 all landowners in Wisconsin who apply manure or commercial fertilizer must develop a nutrient management plan (N.R. 151). These plans identify optimal crop fertilizer rates and determine if landowners have sufficient acres for spreading animal wastes from their livestock operations. Landowners can develop their plan through the Department of Land Conservation or through a private consultant.

The Department is actively promoting nutrient management by providing cost-sharing and annual planning workshops. The workshops, held in conjunction with NRCS, are offered to all landowners who apply animal manure or commercial fertilizer. Priority is given to those landowners who need a manure storage or feedlot permit, who receive cost share monies through the Federal Environmental Quality Incentive Program (EQIP) or Organic Incentive, or who are enrolled in the State's Farmland Preservation Program.

Landowners with existing nutrient management plans are encouraged to complete an annual update to remain in compliance with state rules. Landowners can attend an update workshop, update on their own and provide us a copy, or may update digitally.

In 2019, one operator developed a new nutrient management plan on 39 acres of cropland. Staff also assisted 142 operators in updating 33,174 cropland acres. Total cropland acres enrolled in the program are now 49,508 (or 66% of an estimated 74,500).

Nutrient Management Summary, La Crosse County (1999 – 2019)

TABLE 2

Crop Year	New Farms Planned	Soil Sample $$$$$	New Cropland Acres Planned	Cropland Acres Updated	Total Cropland Acres in NPM	Total Farm Acres in NPM
1999	9	$ 1,584	1,139		1,139	2,569
2000	31	$ 3,279	2,339	312	3,478	7,565
2001	23	$ 2,807	4,326	673	7,804	13,513
2002	36	$ 3,860	3,293	2,331	11,097	20,563
2003	17	$ 2,825	2,061	6,588	13,158	24,735
2004	33	$ 2,807	2,585	6,774	15,743	29,127
2005	26	$ 2,778	2,097	8,146	17,840	33,264
2006	18	$ 2,211	1,477	10,023	19,317	36,516
2007	19	$ 3,472	1,270	9,463	20,587	39,788
2008	29	$ 9,106	2,647	11,373	23,234	45,443
2009	22	$ 5,456	2,270	12,425	25,504	50,711
2010	41	$ 12,000	3,164	13,460	28,668	58,483
2011	41	$ 9,033	3,067	19,785	31,735	65,281
2012	61	$ 14,816	5,357	21,623	37,092	77,967
2013	63	$ 17,296	4,798	26,437	41,890	89,337
2014	34	$ 8,907	2,277	29,295	44,167	94,167
2015	29	$ 6,028	3,366	34,762	47,533	101,168
2016	29	$ 6,528	1,257	36,162	48,790	104,391
2017	7	$ 1,700	361	36,201	49,070	104,927
2018	4	$ 680	399	35,249	49,469	106,012
2019	1	$ 160	39	33,174	49,508	106,594

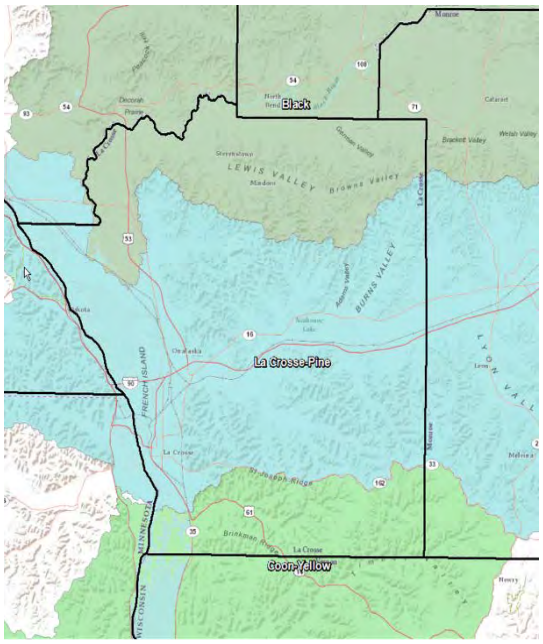
Animal Waste Management Ordinance

The Department of Land Conservation is responsible for implementing the County's Animal Waste Management Ordinance, Chapter 23, La Crosse County Code of Ordinances. The Animal Waste Management Ordinance requires that landowners apply for and receive a permit from the Department of Land Conservation for the construction of any new or substantially altered manure storage facility and/or animal feedlot. The Department of Land Conservation staff assists landowners by reviewing the soils foundation investigation report, engineering designs and monitoring construction compliance to ensure that established practice standards and specifications are followed.

In 2019 department staff issued 4 permits for animal lots or manure storage facilities.

Environmental Planning

In 2019, the Department of Land Conservation applied for funding through the Multi-Discharger Variance (MDV) Program. The MDV program is administered by the DNR and provides an opportunity for the Department of Land Conservation to acquire money for agricultural best management practices. Money is paid directly from WPDES permit holders who meet certain eligibility criteria and qualify for the MDV Program.



The general concept is that phosphorus (P) discharged by WPDES permit holders in excess of new water quality standards can be "offset" within the same watershed by installing agricultural best management practices. Qualifying WPDES permit holders pay $50/lb. of P/year for each pound of P discharged in excess of the new standards. This program is slightly different than Water Quality Trading or Adaptive Management in that multiple WPDES permittees contribute to a collective pot of watershed money. Money from the MDV Program is prorated to counties based on the percentage of area the county has within a given HUC 8 watershed (as illustrated on the left). Over time, P "offsets" from each participating county will be accounted for and assessed at the watershed scale.

P reductions for each installed practice must be documented through an approved model. In addition, each project location must be verified. Annual reports include general project overview, mapping of the practices and a breakdown of how the money was used. MDV funds will continue to be available through 2027, upon which time the DNR will assess the program effectiveness and decide if they want to renew the MDV permit for another 10 years.

Farmland Preservation Program

The Wisconsin Farmland Preservation Program was created to prevent the conversion of prime farmland to non-agricultural uses, primarily caused by urban sprawl. Landowners who meet minimum eligibility criteria receive a state tax credit by agreeing to keep their land in agricultural production and comply with the program's soil and water conservation requirements. The Department of Land Conservation provides planning, technical and financial assistance to County farmers to meet those conservation requirements.

2. Implement the State's Urban Conservation Performance Standards

Urbanized areas have shown to contribute greatly to polluted runoff water in La Crosse County. Because many urban areas include impervious surfaces (roads, roofs, sidewalks and parking lots), rainfall and snow melt have limited areas in which to infiltrate into the soil. Due to the decreased infiltration areas, more storm water runoff is forced to enter drainage ways,

storm drains, streams, rivers, lakes and wetlands. Any pollutants (tire rubber, gas, oil and radiator fluids) that are on these impervious surfaces are often carried with the runoff water as well, polluting our surface water resources.

Construction sites for new homes and commercial buildings, if not protected with conservation measures, can contribute significant amounts of sediment and nutrients into local water ways. Over fertilization of lawns carries excessive nutrients and potentially herbicides to storm sewer inlets that dump into the La Crosse, Black and Mississippi Rivers. Even leaves and grass clippings can lead to degraded surface waters.

The La Crosse County Land Conservation Department implements local programs such as the Erosion Control and Land Disturbance Ordinance, the Post-Construction Storm Water Management Ordinance and the Public Outreach and Education Program to reduce the impacts from urban related pollution to the surface waters of La Crosse County.

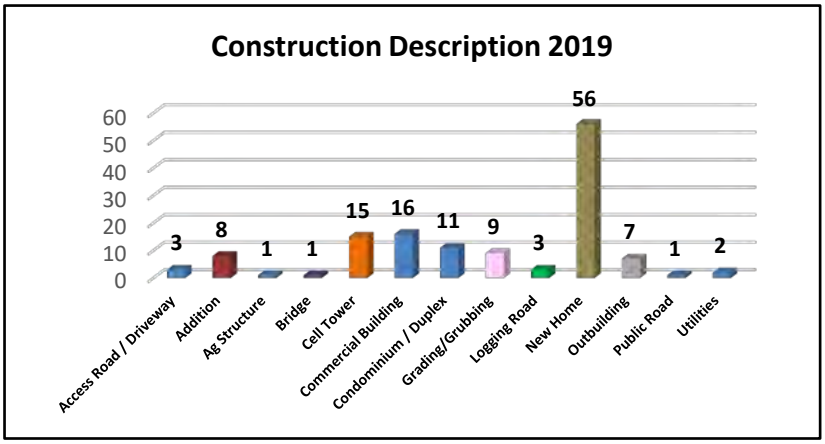
Erosion Control and Land Disturbance Ordinance

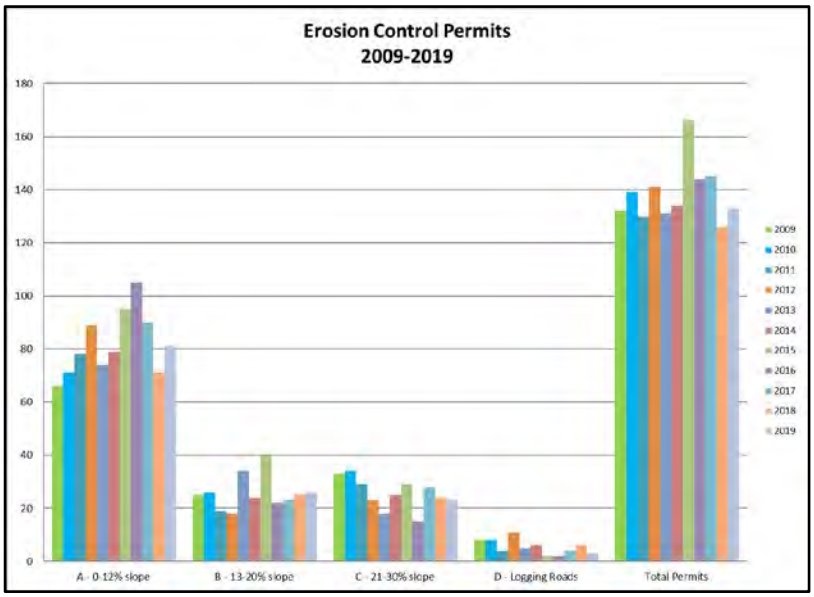
In 1992, The La Crosse County Board of Supervisors approved the Erosion Control and Land Disturbance Ordinance for the purpose of minimizing the amount of sediment carried by runoff or discharged from land disturbance activities to perennial waters, wetlands, private properties and public right-of-ways. Department staff assist landowners, developers, contractors and loggers to develop and implement erosion control plans to reduce on-site erosion of soils and prevent sediment delivery to nearby surface water resources.

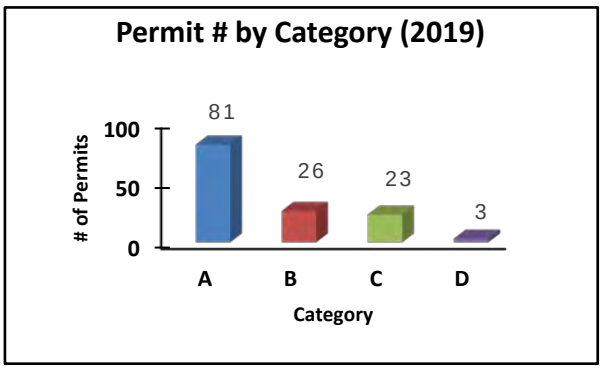
In 2019, staff provided the following services:

TABLE 3

Permit Category	% Slope	# of Permits	$ Amount
A	0 – 12%	81	$ 16,400
B	13 – 20%	26	$ 7,600
C	21 – 30%	23	$ 11,280
D	Logging Roads	3	$ 200
		133	**$ 35,480**







Post Construction Storm Water Management Ordinance

In 2008, The La Crosse County Board of Supervisors approved the Post Construction Storm Water Management Ordinance for the purpose of setting minimum requirements for storm water management that will diminish the threats to public health, safety, public and private property and the aquatic environment. More specifically, the ordinance prevents excessive channel erosion, minimize water pollution from storm water runoff, protect cold water stream habitats from thermal pollution, protect natural water courses and wetlands by promoting runoff infiltration and groundwater recharge and protect public and private property from damage resulting from uncontrolled storm water runoff.

In 2019, the department issued 10 Storm Water Permits.

- McDonalds – Commercial Building
- Breidenbach – Commercial Building
- La Crosse County Hwy – Commercial Building (no fee)
- JFCM Properties – Grading
- Old NA Condos – Condominium Subdivision
- La Crosse Interstate Fair Grounds - Grading
- Broham Investments – Grading
- Ready Bus – Commercial Building
- Winealot – Commercial Building
- Wright Business Park – Storage Units

The La Crosse County Urban Storm Water Group is composed of the County of La Crosse, City of La Crosse, City of Onalaska, Village of Holmen, Village of West Salem, Town of Onalaska, Town of Shelby, and Town of Holland. The purpose of the Group is to provide a single-source information and outreach program for all participating municipalities meeting the requirements of the State's Storm Water Management Rule and to increase awareness of storm water impacts on waters of the state. It is the intent of the Group to combine financial resources to save costs and avoid duplication of efforts. The Group has contracted with NewGround, an environmental education company, to implement the information and public outreach program. Visit the La Crosse Area website at www.lacrosseareawaters.org for more information.

In 2019, the following education and public outreach activities were conducted:

- Erected 12 educational signs at 4 locations;
- Maintained 3 raingardens used for public awareness;
- Sent 15 newsletters to 538 subscribers;
- Completed the Soak It Up! Award Program;
- Participated in 2 local parades and sponsored local River Clean Up Event;
- Conducted 7 media events;
- Provided social media updates: 33 posts reached over 13,300 viewers;
- Website activity; over 5,700 visits of which over 2,500 were new visits

3. Non Metallic Mining Ordinance

In June of 2001, the county began administering the state mandated Non-Metallic Mining Program (NMM). A non-metallic mine is an area of one acre or larger where non-metallic minerals are extracted.

The NMM Program is intended to regulate the responsible use and management of mining operations and their properties. In the past, non-metallic mining operations often removed marketable material and left behind a barren landscape of spoil piles and waste products. The ordinance requires the land to be reclaimed to a use consistent with zoning requirements.

Annually, Land Conservation staff visit each permitted mining site to determine how much land is being mined or reclaimed. The perimeter of the mine and the reclaimed acreage is measured with a hand-held GPS to calculate the amount of actively mined land. These two figures determine the annual fee amount.

In 2019, there were 14 permits for a total of 224.6 active acres. A total of $39,532 was collected – $1,350 for DNR, $19,091 for the Land Conservation Department, and $19,091 for the Zoning, Planning and Land Information Department.

4. Water Quality Monitoring Program

For the past 24 years, the Department of Land Conservation has implemented a county-wide surface water quality monitoring program. The water quality monitoring program intent was to determine the relative health of the streams and to establish base-line data to support long-term monitoring efforts. The data provides natural resources managers with a better understanding of how human activities, primarily land use, affect surface water quality. The data can reveal when a lake or stream is healthy or it can alert us if it is being negatively impacted by pollutants. Department staff can concentrate their efforts in those watersheds where the water quality problems are extensive. The data is also important in determining where the Department spends its limited financial resources.

The Department's surface water quality monitoring program consists of several sampling methods:

- Weekly collection of water samples on streams where major projects have been completed.
- Dutch Creek Watershed monitoring station monitors water quality on a 24 hour, 7 days-a-week basis.
- Portable optical monitoring sensors capture continuous, long-term data that is not available with the weekly county-wide sampling scheme. The four portable sensors allow the Department the mobility to closely monitor streams that are being impacted by pollution and likely aid in locating the source.
- The Department also conducts a county-wide sample run at 36 locations two times a year.

Dutch Creek Monitoring Station

A water quality monitoring station has been operational on Dutch Creek since 1995. The station monitors rainfall and snow melt events on a 24/7 basis. Water quality parameters such as dissolved oxygen, water temperature, total phosphorus and sediment loads have been measured and recorded most years. This data gives us information regarding the health of Dutch Creek and the impacts that storm intensity and frequency has on water quality.

This historic annual comparison of stream elevation, storm frequency and intensity also allow the Department to monitor runoff patterns and plan for other conservation work.

The combination of increased storm intensity and rainfall amounts has resulted in excessive sediment and phosphorus delivery by Dutch Creek over the last 3-4 years. Water levels have risen so high from several intense storm events that our monitoring station floor has become inundated on multiple occasions.

This, along with outdated monitoring equipment has us contemplating whether we should move our monitoring station to a new location. We have begun assessing other sites for accessibility, runoff vs. stage relationships and the ability to transmit data remotely.

Moving the monitoring station to another watershed is no small undertaking. Costs and benefits need to be evaluated prior to making this commitment.

OTHER COUNTY ACTIVITIES

Geographic Information System

The Department of Land Conservation utilizes a computer based land information data base known as a Geographic Information System (GIS) to track and record land use in La Crosse County. GIS is used by all department staff to develop air photos, elevation and land cover maps as well as determining land ownership and property boundaries. GIS systems also help the Department maintain a conservation compliance tracking system for landowners who participate in the State's Farmland Preservation Program. The Farmland Preservation Program tracking system is a requirement by the Wisconsin Department of Agriculture, Trade and Consumer Protection.

Coon Creek PL-566 Flood Protection Structure

La Crosse County owns and operates two flood control dams that were built over 50 years ago to reduce frequent flooding in the Coon Creek Watershed. The structures are located off of Korn Coulee Road and County Hwy G in the Town of Washington. The flood control structures are inspected annually. Both Structures were inspected and mowed in 2019 to control weedy vegetation.

Extreme rainstorms over the past several years have caused ongoing maintenance issues with both dams. Gasket band replacement, trash rack cleaning, plunge pool clean-out, access road repair and erosion along one of the spillways are some of maintenance issues staff have been addressing.

The Department is also looking into deploying several remote monitoring cameras. If successful, remote cellular camera technology will be used at each structure to assess real-time water elevations and trash rack conditions.