



**2020**

**LA CROSSE COUNTY**

**Department of Land Conservation**

**Annual Report**

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## PLANNING, RESOURCES & DEVELOPMENT COMMITTEE



Peggy Isola, Chair



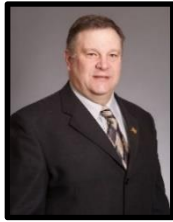
Dan Hesse



Rick Cornforth



Patrick Scheller



Kevin Hoyer



Karen Keil



David Hundt



Tim Goodenough,  
FSA Rep.

## DEPARTMENT STAFF

In 2020 the department saw some personnel changes. Matt Hanewall and Sue Sheehan moved into the Director and Conservation Specialist roles, respectively. And, Christina Mulder and Brock Tokach were hired to fill vacancies. Christina comes from Monroe County and is excited to share her conservation experience with La Crosse County. Brock is a recent retiree from the U.S. Army out of Ft McCoy and is happy to continue public service supporting conservation.



Matt Hanewall  
Director



Sue Sheehan  
Conservation Specialist  
(Ag/FPP)



Kurt Pederson  
Conservation Specialist  
(GIS/Ag/Urban)



Jacob Schweitzer  
Conservation Specialist  
(NNM/Urban/WQM)



Brock Tokach  
Administrative Assistant



Rob Hemling  
Conservation Specialist  
(Urban/Ag)



Christina Mulder  
Conservation Specialist  
(Ag/BMP)

## 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 experienced staff that provide a wide range of planning and technical assistance in both agricultural and urban settings. 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

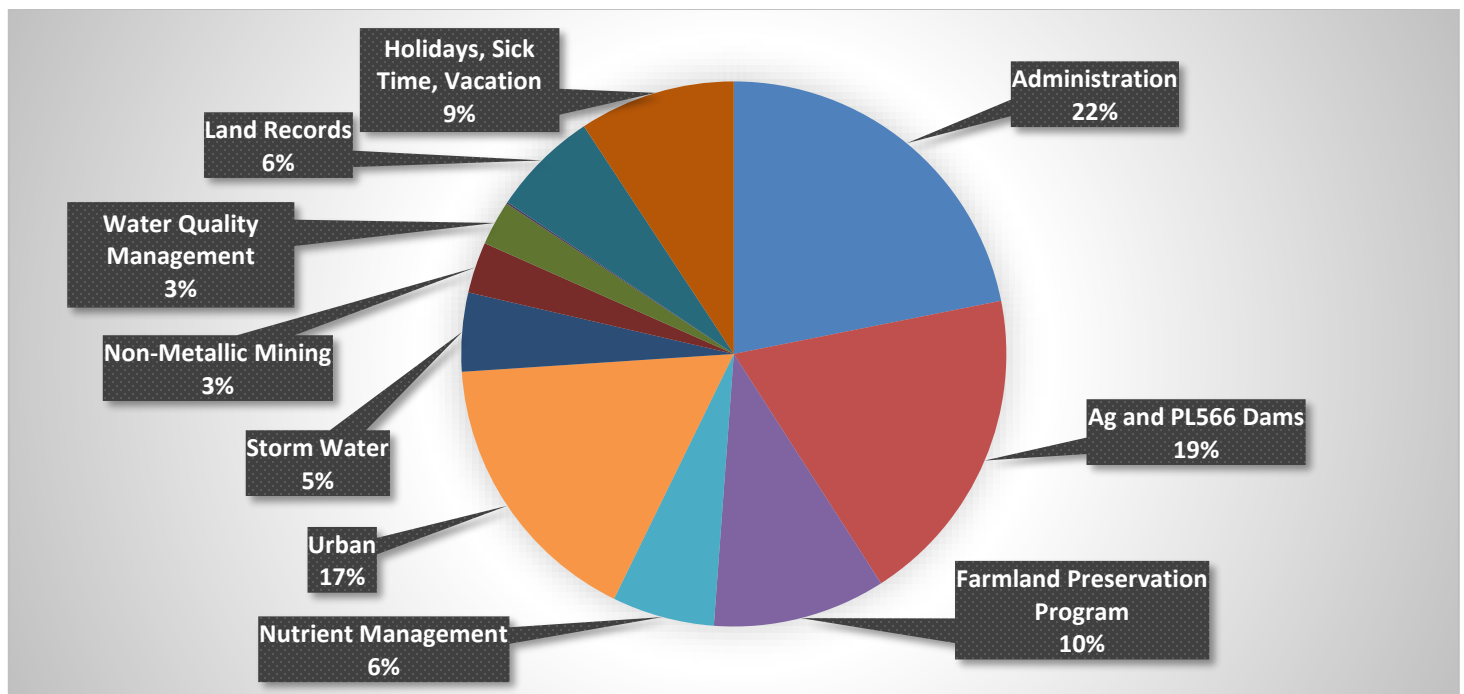
### Rural

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. Support Aquatic Invasive Species Control
14. Coordinate Soil Testing and Animal Waste Nutrient Analysis
15. Implement Non-metallic Mining Ordinance
16. Maintain PL-566 Flood Control Structures

### 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

### Allocation of Time to Programs:



## **GOALS AND OBJECTIVES 2020**

### **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:

**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 through the creation of erosion control and storm water runoff management plans. These plans fulfill permit requirements needed for State and County rules.

The largest accomplishment of 2020 was the way in which staff continued to provide services during the COVID-19 pandemic. Staff adapted in many ways to make all programs run effectively, while we adhered to social distancing and mask protocol.

## 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. These objectives aim to protect our surface and groundwater resources and provide strategies to help minimize soil erosion. This program quite often assists farmers who are trying to meet the State’s agricultural conservation performance standards. In 2020, \$69,052.50 of State funds were allocated to county farmers to help them install practices that meet the soil and water standards. Please refer to Table 1 for a list of these practices.



### Environmental Fund

The Department of Land Conservation also maintains an account in its annual budget called the environmental fund. This fund, like the Soil and Water Resources Management Program, is used primarily to provide cost sharing for conservation measures that help landowners meet State Soil and Water Conservation Standards. However, the environmental fund sometimes provides stopgap assistance to landowners or projects that may not be covered under other state or federal programs.

In 2020, the Department of Land Conservation used the environmental fund to provide \$76,835.35 in assistance for soil testing, manure testing, nutrient management workshops, the UW-Madison Coon Creek study and other conservation practices (Table1). Please refer to Table 1 for a list of these practices.

**TABLE 1**

Landowner	Type of Project	SWRM	Environmental Fund	Landowner Funds	Multi-Discharge Variance	Other Funding	Total Cost of Project
#01	Grade Stabilization Structure	\$ 3454.50	\$ 987.00	\$ 493.50			\$ 4,935.00
#02	Streambank	\$ 4,932.85		\$ 2,146.16		\$ 14,870.80	\$ 21,949.81
#03	Streambank	\$ 13,400.00	\$ 2,680.00	\$ 2,680.00		\$ 8,040.00	\$ 26,800.00
#04	Streambank	\$ 6,590.00	\$ 1,455.00	\$ 2,340.00		\$13,015.00	\$ 23,400.00
#05	Streambank	\$ 2,067.50		\$ 1,081.50		\$ 7,666.00	\$ 10,815.00
#06	Streambank	\$ 2,695.60	\$ 2,063.90	\$ 9,415.50		\$ 4,623.00	\$ 18,798.00
#07	Dam		\$22,500.00	\$2,500.00			\$ 25,000.00
#08	Waste Facility Closure		\$ 21,600.00	\$ 2,401.00			\$ 24,001.00
#09	Waterways				\$ 6,767.25		\$ 6,767.25
#10	Stream Crossing	\$2,500.00	\$16,630.67	\$2,125.63			\$21,256.30
#11	Grade Stabilization	\$7,000.00		\$5,400.00			\$12,400.00
#12	Crossing and Waterway	\$3,140.00	\$680.22	\$1,637.23			\$5,457.45
#13	Waterway	\$12,110.00	\$5,821.28	\$1,992.36			\$19,923.64
#14	Cover Crop	\$11,162.50			\$ 3,519.00		\$14,681.50
Misc	Miscellaneous		\$ 2,417.28				\$ 2,417.28
<b>Total</b>		<b>\$ 69,052.50</b>	<b>\$76,835.35</b>	<b>\$ 34,212.88</b>	<b>\$ 10,286.25</b>	<b>\$ 48,214.80</b>	<b>\$ 238,601.78</b>

## 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 promotes 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 2020, Staff assisted 137 operators in updating 31,975 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 - 2020)*

**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	3,285	34,762	47,452	101,168
2016	29	6,528	1,257	36,162	48,709	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
2020	0	0	0	31,975	49,508	106,594

## Animal Waste Management Ordinance

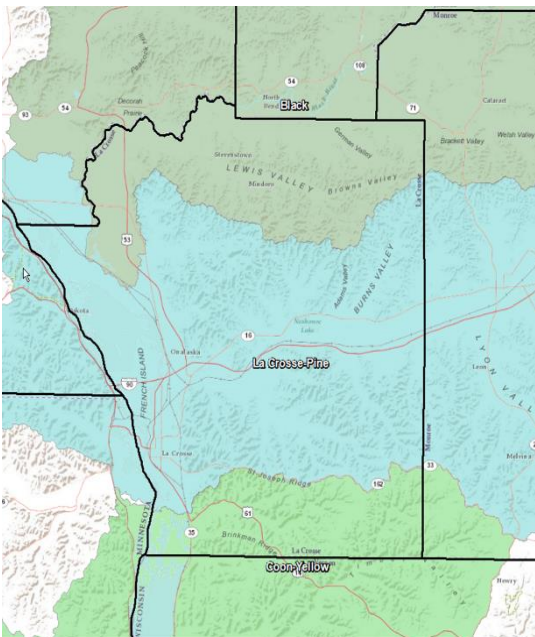
The Department of Land Conservation is responsible for implementing the County's Animal Waste Management Ordinance, Chapter 23, La Crosse County Code of Ordinances. The Animal Waste Management Ordinance requires that landowners apply for and receive a permit from the Department of Land Conservation for the construction of any new or substantially altered manure storage facility and/or animal feedlot. Land Conservation staff assist landowners through the permitting process by reviewing soils information, engineering designs, nutrient recommendations and land available for spreading manure. Staff also review plans to make sure practice standards and specifications are being followed.



In 2020 department staff issued 5 permits for animal lots or manure storage facilities.

## Nutrient Trading

The department is now actively involved in trading nutrients through the Multi-Discharger Variance (MDV) Program. The MDV program is administered by the DNR and provides an opportunity for counties 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 other water quality trading programs 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. In 2020, the department assisted in the design and installation of 5 waterways and approximately 50 acres of cover crops. MDV funds allocated for these practices amounted to \$10, 286.25 (Table 1) and were all installed in the Black River Watershed.

## 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.

In 2020, the department accounted for 259 certificates of compliance. The land base covered under those certificates totaled 54,554 acres. Compliance checks were completed on 106 of those operations. None of the inspected farms were found to be out of compliance.



## 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 away with runoff water, degrading 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. In addition, mismanaged lawns can contribute nutrients or herbicides to storm sewer inlets or groundwater aquifers. Even leaves and grass clippings can lead to nutrient loading that negatively impact surface waters.

The La Crosse County Land Conservation Department administers the Erosion Control and Land Disturbance Ordinance, and the Post-Construction Storm Water Management Ordinance. The department also works with other local municipalities and NewGround, Inc. to identify public outreach and education program priorities.

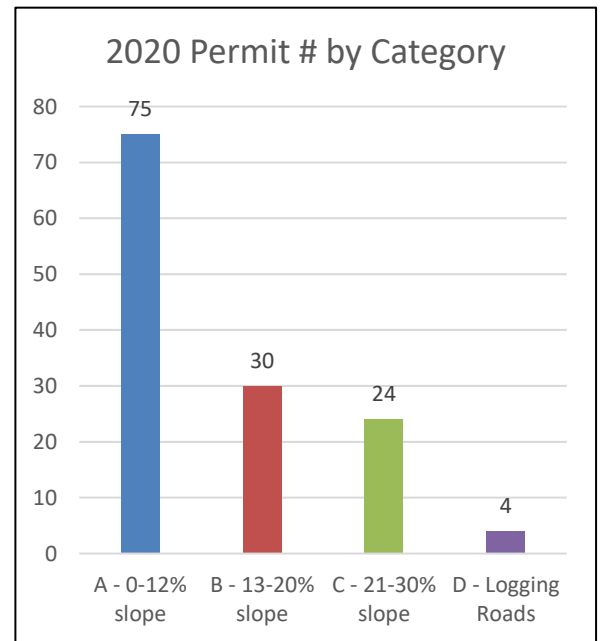
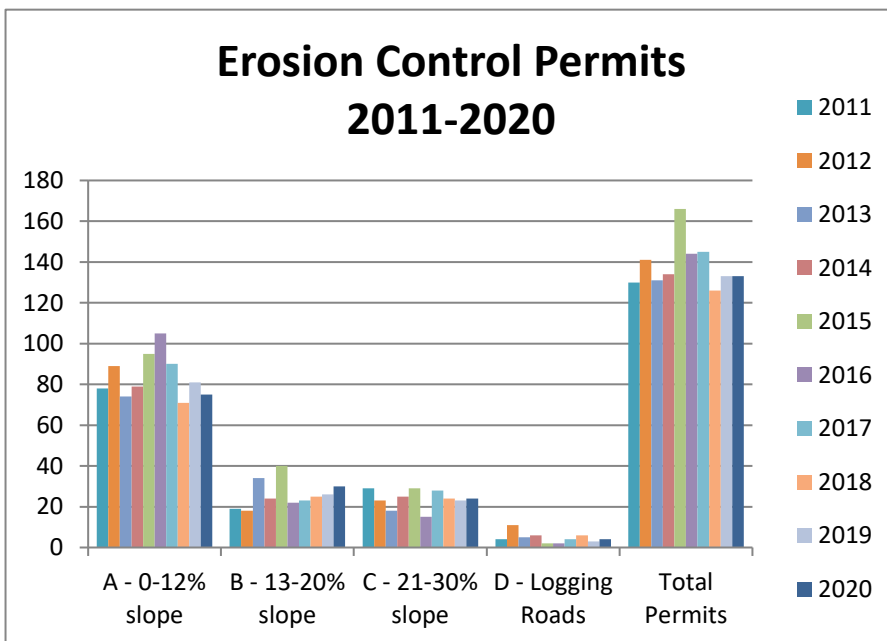
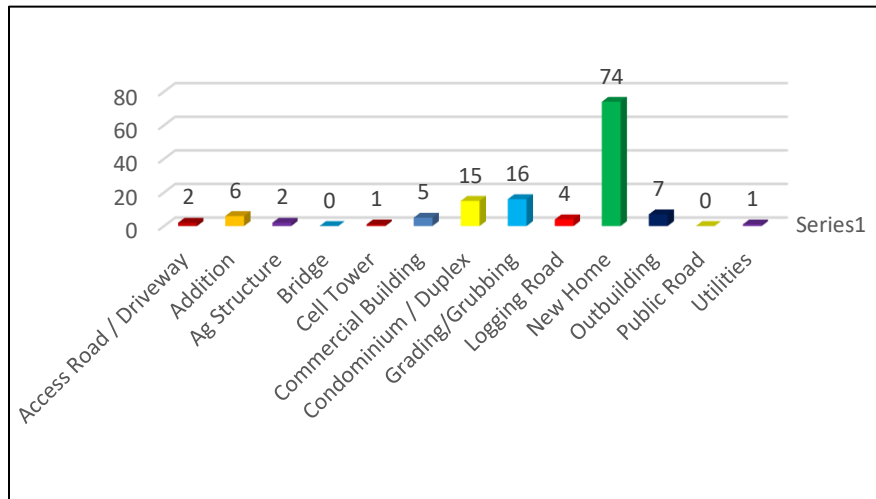
### Erosion Control and Land Disturbance Ordinance

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 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 2020, staff provided the following services:

**TABLE 3**

Permit Category	% Slope	# of Permits	\$ Amount
A	0 – 12%	75	\$ 15,000
B	13 – 20%	30	\$ 8,200
C	21 – 30%	24	\$ 12,640
D	Logging Roads	4	\$ 400
		<b>133</b>	<b>\$ 36,240</b>



## **Post Construction Storm Water Management Ordinance**

In 2008, The La Crosse County Board of Supervisors approved the Post Construction Storm Water Management Ordinance. The storm water ordinance addresses storm water runoff and pollution to public and private property, and the aquatic environment. More specifically, the ordinance addresses channel erosion, storm water runoff and thermal pollution by promoting infiltration and groundwater recharge. It also helps to protect public health and safety from uncontrolled storm water runoff.

In 2020, the department issued 8 Storm Water Permits.

- Suburban Propane – Gravel Pad
- Coulee Region Riders – Grading
- Hotline Freight – Commercial Building
- Property Logic – Commercial Building
- Hidden Prairie subdivision – Condominium Subdivision
- CreteStone LLC – Storage Building
- W & G Strupp Real Estate LLC – Commercial Building
- RWR Properties LLC – Condominium Subdivision

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 this group is to provide a unified outreach program for all participating municipalities that make up our local Municipal Separate Storm Sewer System (MS4). The objective is to increase awareness of storm water impacts on waters of the state and to combine financial resources to save costs and avoid duplication of effort. 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](http://www.lacrosseareawaters.org) for more information.

In 2020, the following education and public outreach activities were conducted:

- Erected 16 educational signs at 6 locations;
- Maintained 4 raingardens used for public awareness;
- Sent 25 newsletters to 720 subscribers;
- Completed the Soak It Up! Award Program;
- Participated in one local parade, Washburn Garden Expo and sponsored local River Clean Up Event;
- Conducted 7 media events;
- Provided social media updates: 44 posts reached over 15,800 viewers;
- Website activity; 3,594 users; 3,391 page views

## **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 so that it meets existing zoning requirements.

Annually, Land Conservation staff visit each permitted mining site to determine how much land is being mined vs. that which has been reclaimed. The perimeter of the mine and the reclaimed acreage is measured with a hand-held GPS. Annual permit fees are based only on actively mined areas.

In 2020, there were 14 permits, combining for 230.9 actively mined acres. A total of \$40,638 was collected – \$1,385 for DNR, \$19,626.50 for the Land Conservation Department, and \$19,626.50 for the Zoning, Planning and Land Information Department.

#### 4. Water Quality Monitoring Program

For the past 25 years, the Department of Land Conservation has implemented a county-wide surface water quality monitoring program. The water quality monitoring program is used to determine the relative health of our 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 reveals when a lake or stream is healthy or if it is being negatively impacted by pollutants. Department staff often concentrate efforts in watersheds where water quality problems are more prevalent. 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 intensities and rainfall amounts has resulted in excessive sediment and phosphorus delivery from 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 compelled us to move the station to a new location on Bostwick Creek sometime during 2021. We have begun assessing sites along Bostwick Creek for accessibility 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 Systems**

The Department of Land Conservation utilizes a computer-based data management software program known as Geographic Information Systems (GIS) to track and record land uses in La Crosse County. GIS is used by all department staff to develop air photos, assess elevations, create land cover maps, and to evaluate property records. GIS systems also help the department maintain a conservation compliance tracking system for landowners who participate in the State's Farmland Preservation Program. The evolution of GIS continues to help us manage data in a professional and efficient manner.

### **Coon Creek PL-566 Flood Protection Structures**

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 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 2020 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.

Multiple Coon Creek Watershed studies are underway to evaluate the PL-566 structures and alternative flood control strategies. UW-Madison Water Resources Management students were provided funding from La Crosse and Monroe Counties to specifically evaluate infiltration rates and land use trends. Early results show that conversion to more row crops, coupled with extreme weather events, is exacerbating PL-566 structure vulnerabilities.

The department has also deployed two remote monitoring cameras to monitor water levels and trash rack conditions at Coon Creek Dam #33 and #35. Float switches trigger cameras during high water events and data is automatically relayed to the Land Conservation staff via cellular technology. Flood conditions can be assessed in real time and warning messages can be sent to downstream landowners using a RAVE system set up by Emergency Management.

