

2018 GRANT COUNTY


LAND AND WATER RESOURCE MANAGEMENT PLAN



EXECUTIVE SUMMARY

Wisconsin Act 27 (1997-1999 Biennial Budget Bill), Chapter 92.10 of the Wisconsin Statutes, includes provisions for county Land and Water Conservation Committees (LWCC) to develop county Land and Water Resource Management (LWRM) plans. County LWRM plans are envisioned to be a local action or implementation plan with emphasis on program integration. The planning process will provide a more efficient and effective means to address resource issues, meet state performance standards, and more effectively allocate county, state, and federal resources. The Grant County LWRM Plan addresses local concerns by integrating county, state and federal programs.

Grant County has developed 10-year plan (2018-2028). The Grant County LWRM Plan was written with the assistance of a local workgroup and many partner agencies. The workgroup was comprised of agricultural producers, instructors, businessmen and concerned citizens. The agencies involved were Department of Agriculture, Trade and Consumer Protection, Department of Natural Resources, Natural Resources Conservation Service, Farm Service Agency, and the University of Wisconsin Cooperative Extension. Two meetings were held in January & March of 2018 to develop the resource concerns and performance standards implementation policy of the plan. A public hearing was held on June 7, 2018, which began the 30-day public comment period per statutory requirements. On June 19, 2018, this plan was submitted to the County Board for approval and acceptance.

The major objectives of the plan are:

- To assess groundwater quality
- To reduce soil erosion on crop ground
- To prevent contaminants from entering the surface waters of Grant County
- To inform the public and keep them up to date on conservation issues

Before looking forward to the next 10 years of our plan, we first wanted to look back at the accomplishments from the last 5 years of our previous plan (2013-2017).

- In order to achieve our first priority to control soil erosion we obtained $100,000 in county cost sharing, over $364,391 from DATCP, and $3,381,105.16 from NRCS through the Environmental Quality Incentives Program and DALCI.
- We continued to enforce our Animal Waste Storage and Nutrient Utilization Ordinance, issuing 29 permits to construct facilities and 34 permits to close facilities
- Through our county well decommissioning program, we have provided cost sharing to abandon 94 wells.
- Our annual county tree sale has provided over 63,230 trees to Grant County landowners
- We have enrolled over 1,631.42 acres in the Conservation Reserve Enhancement Program

By utilizing the various county, state and federal programs available, Grant County will encourage the voluntary approach regarding compliance with the statewide agricultural performance standards. This, combined with the Grant County Animal Waste Storage and Nutrient Utilization Ordinance and the county policy for Required Minimum Standards to Control Erosion, will give us many options to improve the area resources. A ten-year work plan can be seen on pages 19-22.

Agricultural land, specifically crop ground, and riparian area use are the top priority areas according to our Grant County LWRM Survey. The survey was posted throughout the month of February 2018 to give residents and landowners an opportunity to voice their opinions on what they would like to see for

conservation efforts in the county. Cost sharing programs will focus on controlling soil erosion from these areas. The local workgroup has directed us to develop an MOU with DNR to establish roles in dealing with NR 151 complaint issues.

Our focus on the statewide agricultural performance standards (SAPS) will be, preventing direct runoff to waters of the state, helping landowners meet "T", and helping producers develop and follow a nutrient management plan (NMP). With over 450 farmland preservation participants in Grant County, we wanted to be careful not to eliminate participation due to the increased requirements to the program. Over the next ten years we will be meeting with each participant to help them develop a conservation plan that will keep them eligible for the program.

An annual review will ensure that the objectives of this plan are not lost. Through the combined efforts of many working together as a team, the resources of Grant County will become protected for future generations to see and enjoy.

2018 LWRM PLAN SUBMITTED BY

LYNDA SCHWEIKERT, GRANT COUNTY CSZD ADMINISTRATOR

ERIK HEAGLE, SOIL & WATER CONSERVATION TECHNICIAN

ACKNOWLEDGEMENTS

The development of the Grant County Land and Water Resource Management Plan involved the expertise and knowledge of many people. Time was sacrificed to attend meetings, ears were bent to hear opinions and brains were racked to solve problems. Many thanks go out to all who helped on the plan. No matter how great or small the contribution, it would not have been possible to complete this plan without your help. Thank you for your assistance in making this plan a success.

Grant County Conservation, Sanitation and Zoning Committee
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Lester Jantzen Gabe Loeffelholz

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GRANT COUNTY LAND AND WATER RESOURCE MANAGEMENT PLAN

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ACRONYMS

BMP's	Best Management Practices
CREP	Conservation Reserve Enhancement Program
CRP	Conservation Reserve Program
CSZD	Conservation, Sanitation, and Zoning Department
DATCP	Department of Agriculture, Trade and Consumer Protection
DNR	Department of Natural Resources (Wisconsin)
EPA	Environmental Protection Agency
EQIP	Environmental Quality Incentives Program
FPP	Farmland Preservation Program
FSA	Farm Service Agency
FWS	Fish and Wildlife Service
GIS	Geographic Information System
GRP	Grassland Reserve Program
LWCC	Land & Water Conservation Committee
LWCD	Land & Water Conservation Department
LWRM	Land and Water Resource Management Plan
NPM	Nutrient and Pest Management
NPS	Non-Point Source Pollution
NRCS	Natural Resources Conservation Service
RC&D	Resource Conservation and Development
SAPS	State Agricultural Performance Standards
SWRM	Soil and Water Resource Management Program
T	Tolerable Soil Loss
TMDL	Total Maximum Daily Load
TRM	Targeted Runoff Management
USDA	United States Department of Agriculture
USGS	United States Geological Survey
UWEX	University of Wisconsin-Extension
WHIP	Wildlife Habitat Incentives Program

INTRODUCTION

LAND AND WATER RESOURCE MANAGEMENT PLAN BACKGROUND

The need for local leadership in natural resources management is an important concept. This concept is endorsed by both federal and state government, including the United States Department of Agriculture's (USDA) 2008 Farm Bill, USDA Natural Resources Conservation Service's (NRCS) Conservation Programs Manual, the Environmental Protection Agency's (EPA) Water Action Plan, Wisconsin Act 27 (the 1997-1999 Biennial Budget Bill), and Comprehensive Planning. Elected officials and policy makers have reaffirmed that local leadership and grassroots decision-making that involves a diverse team of interested groups and individuals are the keys to successfully managing and protecting our natural resources. Following this principle, Wisconsin's 72 County Land & Water Conservation Committees (LWCC) continue to lead their communities in determining local conservation needs and priorities.

Locally led conservation is based on the principle that local leaders are best suited to identify and resolve local natural resource problems. It challenges local, state and federal agency representatives and urban and rural neighbors to work together and take responsibility for addressing resource needs. Locally led conservation creates new opportunities, but also poses significant challenges to LWCC to take a more active role as conservation leaders in their communities.

Wisconsin Act 27 includes provisions for LWCC to develop county Land and Water Resource Management (LWRM) plans. County LWRM plans are envisioned to be a local action or implementation plan with emphasis on program integration. The planning process will provide a more efficient and effective means to address resource issues, meet state standards, and more effectively leverage local, state, and federal resources.

Every citizen benefits from the protection and sustainable use of our natural resources. As standing committees to county boards, LWCC are the primary local delivery system of natural resource programs. County committees and departments are the public's vital link with local landowners to promote the implementation of conservation practices and achieve greater environmental stewardship of the land.

The Department of Natural Resources (DNR), in its administrative code, NR 151, established agricultural and non-agricultural performance standards and prohibitions to reduce runoff and protect water quality. In ATCP 50, the Department of Agriculture, Trade and Consumer Protection (DATCP) identified conservation practices that farmers shall follow to meet the DNR standards. These rule changes went into effect on October 1, 2002. ATCP 50 codified specific standards for the development, content and approval requirements of the Land and Water Resource Management (LWRM) plans.

LAND & WATER RESOURCE MANAGEMENT PLAN CONCEPT

The county LWRM plan concept was proposed in the fall of 1996 by conservation professionals, in response to draft state agency recommendations for redesigning Wisconsin's nonpoint pollution abatement programs. The concept was promoted by the Wisconsin Land and Water Conservation Association during state legislative deliberations in the spring and summer of 1997. With the added support of DATCP, the DNR, and the USDA/NRCS, the county LWRM plan concept became a central theme to landmark state legislation signed into law in October, 1997, as part of Wisconsin Act 27.

The county LWRM plans are not intended to be another "program." Rather, it is a "process" or strategic plan by which counties can assess their resource conditions and needs and decide how to best meet their goals. In other words, the county LWRM plans are an "umbrella" to integrate all available programs. Through the process of developing a LWRM plan, counties will be better poised to:

- Develop program integration
- Address the conditions of local land and water resources, referencing available monitoring data and applicable state and federal standards
- Review and incorporate existing plans, such as integrated basin plans and forestry management plans
- Identify local soil erosion and nonpoint pollution problems and priorities
- Develop a 10 year plan of activities for addressing those problems, updating every 5 years
- Partner with other agencies, municipalities, organizations, landowners, and other interested parties to achieve mutual conservation objectives
- Coordinate with local land use planning and zoning efforts
- Develop a comprehensive information and education strategy to help implement the plan
- Annually track progress toward meeting the plan's goals, including compliance with state standards
- Leverage local, state, federal and private resources

CHAPTER 1

OVERVIEW OF GRANT COUNTY

Grant County was formed in 1836, the same year Wisconsin became a territory. Lead strikes attracted the first settlers as early as 1825. When mining began to decline, the settlers turned to farming. The county remains largely agriculturally based today.

Fig. 1-1

LOCATION AND EXTENT

Grant County is in the southwestern corner of Wisconsin (Fig. 1-1). It is bounded on the north by the Wisconsin River, beyond which is Crawford and Richland Counties. On the east, it is bounded by Iowa and Lafayette Counties, and on the south, by Jo Davies County, IL. The Mississippi River, which separates the county from the state of Iowa, forms the western boundary.

The land area of Grant County is 1,168 square miles, or 747,520 acres. An additional 16 square miles, or 10,240 acres, consists of backwater lakes, swamps, and other areas covered by water. This makes it the 10th largest county in the state. Lancaster, the county seat, is located near the center of the county. The county has approximately 2,436 farms with 587,587 total acres operated (2012 NASS Census). Nearly ¼ of the land on farms is woodland.

Fig. 1-2

Grant County is located in Major Land Resource Area 105 of the Driftless Area. (Fig 1-2) The Driftless Area is a unique region encompassing parts of Minnesota, Wisconsin, Iowa and Illinois. Pleistocene glaciers bypassed the Driftless Area, giving rivers time to cut down into ancient bedrock and create distinctive landforms. Soils covering the steep slopes are fragile, ecosystems are diverse, and many cold-water streams are recognized for their economic, environmental and recreational importance. (www.driftlessareainitiative.org)

The county has two state parks within its borders; Wyalusing and Nelson Dewey State Park plus the Historic Stonefield Site in Cassville, all of which attract thousands of visitors annually.

Fig. 1-3 Commodity rankings in the State (2016 Ag Statistics)

Commodity	Ranking
*Milk Cow Herds (2017)	3
*Cattle/Calves	1
*Alfalfa/Hay	1
*Oats	1
*Corn for Grain	3
*Milk Cow Numbers	2
*Soybeans	4

EXISTING LAND USE PROGRAMS

COUNTY ADMINISTERED PROGRAMS

Grant County has several land use programs to assist landowners in managing their conservation issues. These programs assist in cost sharing and technical advice in the following areas:

FARMLAND PRESERVATION
The Farmland Preservation Program (FPP) is designed to help preserve farmland through local planning and zoning, promote soil and water conservation and provide tax relief to participating landowners. Landowners qualify if their land is in an exclusively agricultural zoning district or if they sign an Ag Enterprise Agreement to use their land exclusively for agricultural purposes.

Currently there are 32 agreements of which 11 of those are located in zoned townships and 480 participants under FP zoning totaling 501 participants. Grant County has 33 townships, 17 of which are zoned FP. These townships are Millville, Watterstown, Hickory Grove, Mount Hope, Mount Ida, Jamestown, Platteville, Fennimore, Wingville, Clifton, Liberty, South Lancaster, Potosi, Paris, Lima, Harrison and Ellenboro. (See Fig. 1-4)

For 2015, the average tax incentive generated was $1602 per participant. With 466 participants claiming credits, a total of $746,544 on 106,644 acres was brought back into Grant County as property tax relief.

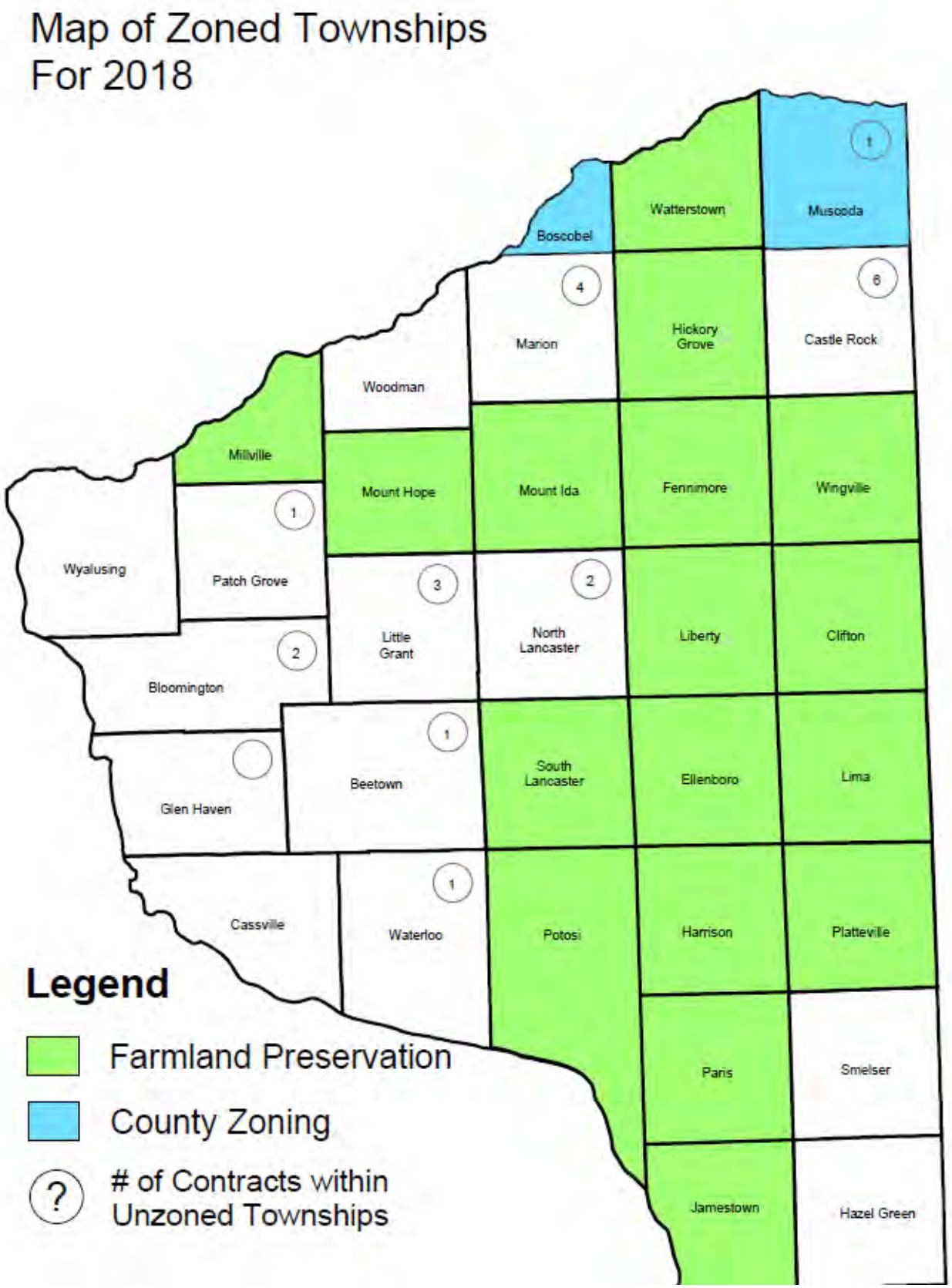
In 2004 the Farmland Preservation Program (FPP) was updated to incorporate the Statewide Performance Standards into its compliance requirements and again in 2015. The Statewide Agricultural Performance Standards (SAPS) are a group of rules passed by the State Legislature in 2002 to protect and preserve the water quality of Wisconsin. According to these rules anyone who grows agricultural crops or raises livestock must meet the following:

- Meet tolerable "T" soil loss
- Prevent direct runoff into streams & rivers
- Prevent overtopping of waste storage
- Build storage according to standards
- Stack manure away from sensitive areas
- Maintain 5' tillage setback from Waters of the State
- PI index not over 6 in rotation or 12 in one yr
- Develop and follow a Nutrient Mgt Plan
- Maintain grass along streams and rivers
- Repair leaking storage facilities
- Close storage according to standards
- Divert clean water around contaminants
- Prevent feed storage leachate/milk house waste from reaching WQMA

We will work with them to maintain compliance over the next 10 years. Our staff will do an assessment of the property to see which areas need to be addressed, and then set up a plan to maintain compliance. After the plan is developed, landowners will be given the opportunity to apply for cost sharing and technical services provided by our office to meet that goal.

Required spot checks every 4 years will continue as usual. Each staff member will be goaled ¼ of the assessments a year (as set by CSZD Administrator); this will be approximately 125 assessments for the office per year. The department utilizes a spreadsheet database for landowner compliance tracking created in house.

Figure 1-4


Map of Zoned Townships
For 2018
Boscobel
Watterstown
Muscoda
1
4
Marion
Hickory Grove
6
Castle Rock
Woodman
Millville
Mount Hope
Mount Ida
Fennimore
Wingville
Wyalusing
1
Patch Grove
3
Little Grant
2
North Lancaster
Liberty
Clifton
2
Bloomington
1
Beetown
South Lancaster
Ellenboro
Lima
Glen Haven
Cassville
1
Waterloo
Potosi
Harrison
Platteville
Paris
Smelser
Jamestown
Hazel Green
Legend
Farmland Preservation
County Zoning
?
# of Contracts within Unzoned Townships

COUNTY COST SHARE PROGRAM

The County Board approves $20,000 each year for county cost sharing. The amount is available to cost share on all conservation practices included in the NRCS Technical Guide. Due to the small amount of cost share available, the CSZD has set a 75% up to $5,000 limit on practices. One way to offset the high cost of installation is to piggyback the money with other cost sharing programs. The other method is to cost share on low cost, stand-alone practices, such as well abandonment, crop management practices, cover crops, grassed waterways and special practices (see Fig. 1-5). The Conservation, Sanitation, and Zoning Department (CSZD) has set high, medium and low priority on each practice and reevaluates this list periodically. The priorities are then used to assist NRCS on setting priorities in the Environmental Quality Incentives Program. (EQIP).

SOIL AND WATER RESOURCE MANAGEMENT COST SHARE PROGRAM

Each year DATCP allocates a certain amount of funds to provide cost sharing in Grant County. Since the dollar amount of the grant is relatively small in comparison to the amount of cost share requests, the CSZD has set a limit of 70% cost sharing up to $10,000 for manure storage and all other practices. If the estimated cost is over $10,000, the individual may request additional funds from the previously mentioned County Cost Share Program. Cost sharing is available for a variety of the traditional conservation practices used in Grant County (see Fig. 1-5).

TARGETED RUNOFF MANAGEMENT GRANTS

Targeted Runoff Management (TRM) grants are provided to control polluted runoff from both urban and rural sites. The grants are targeted at high-priority resource problems. Projects funded by TRM grants are site-specific and serve areas generally smaller in size than a sub watershed. The grant period is 2 years, with a possible 1-year extension. The maximum cost-share rate available to TRM grant recipients is 70 percent of eligible costs, with the total of state funding not to exceed $150,000. Large scale grants are available ($500,000-$1,000,000 in funding) depending on the scope of the project as well.

CONSERVATION RESERVE ENHANCEMENT PROGRAM

The Conservation Reserve Enhancement Program (CREP) is an enhancement of the USDA/FSA/NRCS Conservation Reserve Program (CRP). This is a continuous sign up for high priority conservation practices. The participant receives annual rental payments based on the agricultural rental value of the land and receives cost share assistance in an amount equal to not more than 50% of the cost in establishing the approved practice. The contract duration is either 10 or 15 years or the landowner could opt for a perpetual easement. The establishment of buffers along the watercourse reduces the phosphorus, nitrogen and sediment entering our streams and rivers.

Since 2013, we have signed 137 contracts equaling $471,132.95 in payments. This will amount to 1,631.42 acres of cropland and pasture set aside in CREP.

FEDERALLY ADMINISTERED PROGRAMS

By working closely with USDA-NRCS-FSA, Grant County CSZD is able to assist landowners with a wider range of land use programs. Our office integrates the federally funded programs into our workload to help the landowner get the greater benefit out of the cost sharing available.

ENVIRONMENTAL QUALITY INCENTIVES PROGRAM

The Environmental Quality Incentives Program (EQIP) provides a voluntary conservation program for farmers and ranchers that promote agricultural production and environmental quality as compatible national goals. EQIP offers financial and technical help to assist eligible participant's to install or implement structural and management practices on eligible agricultural land (see Fig. 1-5). Since 2013, numerous landowners were approved for cost sharing of $3,381,105.16. The EQIP Local Workgroup works closely with the LWCC by synchronizing priorities in all programs.

CONSERVATION RESERVE PROGRAM

The Conservation Reserve Program (CRP) is a voluntary program for agricultural landowners. Through CRP, you can receive annual rental payments and cost-share assistance to establish long-term, resource conserving covers on eligible farmland. The Commodity Credit Corporation makes annual rental payments based on the agriculture rental value of the land, and it provides cost-share assistance for up to 50 percent of the participant's costs in establishing approved conservation practices. Participants enroll in CRP contracts for 10 or 15 years.

WI DNR FORESTRY BASED PROGRAMS

In the past, we have worked closely with the WI DNR forester in Grant County. In 2017, WI DNR moved the forester to Dodgeville, despite protest from Grant County CSZD and landowners. We will continue to refer landowners to contact WI DNR forester in regards to forest management issues.

FOREST TAX LAWS

355 woodland owners in the county have agreements on 22,862 acres of forest with the State of Wisconsin under the Managed Forest Law or the Forest Crop Law. Landowners agree to follow a forest management plan, which addresses watershed and soil erosion issues wherever applicable. The Managed Forest Law's Forest Stewardship Plans can include mandatory installation of soil erosion control practices. Agreements under at least one of these tax laws are found in all townships of Grant County.

WISCONSIN FOREST LANDOWNER GRANT PROGRAM

The Wisconsin Forest Landowner Grant Program is a program designed to assist private landowners in protecting and enhancing their forested lands, prairies and waters. The program allows qualified landowners to be reimbursed up to 50 % of the cost of eligible practices. Qualifying landowners must have less than 500 acres of forestland in Wisconsin and a Forest Stewardship Plan covering the acres where they plan to install the practices.

Practices include preparation of a Forest Stewardship Plan, tree planting, forest improvement, soil and water protection, wetland protection, restoration and enhancement, stream bank protection, wildlife habitat creation or improvement and protection of rare natural communities and species. Sign-up for the program is on a continual basis.

Fig 1-5

COUNTY COST SHARING PRIORITIES 2018

Practices will be prioritized according to the following rankings

	Practice	LWCC Ranking	Cost Share Rate
High	Well decommissioning	1	50%, max $1000
	Manure Storage	2	
	Grassed Waterway	3	
	Manure storage closure	4	
	Grade Stabilization Structure	5	
	Streambank protection	6	
	Barnyard Runoff Control	7	
	Repair of previously installed practice	8	
Medium	Cover Crops	1	50% of seed bill, max $1000
	Diversions	2	
	Nutrient management	3	
	Milking center waste control systems	4	
	Heavy use area protection	5	
	Roof runoff systems	6	
	Repair of previously installed practice	7	
Low	Stream Crossing	1	
	Underground outlet	2	
	Livestock Watering Facilities	3	
	Roofs	4	
	Sinkhole treatment	5	
	Access roads	6	
	Animal trails and walkways	7	
	Repair of previously installed practice	8	
	Livestock fencing	9	
	Other/Special Request	10	

ASSESMENT OF SOIL EROSION AND WATER QUALITY IN GRANT COUNTY

GROUND WATER QUALITY

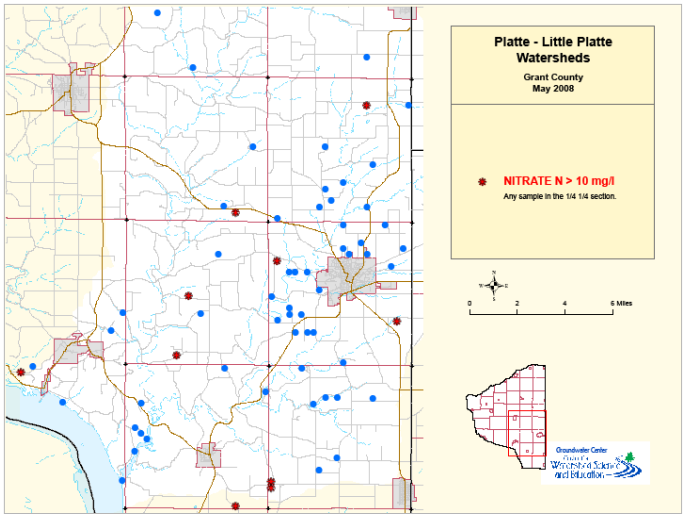
Water quality is the highest resource concern for the residents of Grant County. The sandstone aquifer that lies under Grant County is susceptible to ground water contamination. The water is generally quite hard, although the dissolved solids, chlorides and sulfate levels were below the state's drinking water standards. Iron concentrations can be an aesthetic problem in this aquifer.

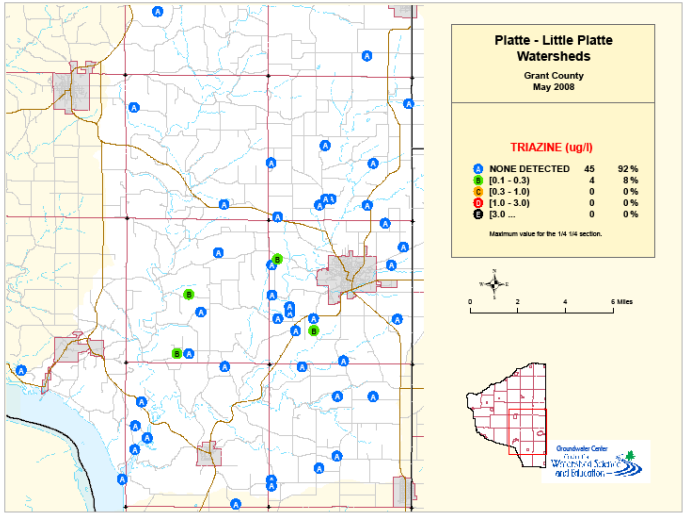
In 2008, the Friends of the Platte River along with the Southwest Badger RC & D sponsored a voluntary well testing program for residents in the Platte River Watershed. The data shown in Fig. 1-6 indicates that nitrates were found in the ground water, however, levels above 10 mg made up only 14% of the samples and Triazine (Atrazine) was only found in 8%. For more information on the well testing program, go to http://www.swbadger.com/PlatteRiver.html.

Since 2013, Grant County has provided cost sharing to properly abandon 94 private wells. Wells however, are not the only link to ground water. Mineral test holes, mine shafts and karst related sinkholes are also a contributor to groundwater contamination.

Currently a plan is being developed with the assistance of UW Stevens Point to start a well water testing program within different townships in the County.

Fig . 1-6: Platte River Well Monitoring Results (2008)





CROPLAND SOIL EROSION

Soil erosion has ranked as the second highest resource concern for the residents of Grant County. Much of the land in Grant County has already experienced significant erosion. Some of the soils are shallow to bedrock and cannot be farmed sustainably without attention to soil management. Based on estimates provided by the Grant County Erosion Control Plan (1986), cropland erosion was proceeding at a rate of twice the tolerable amount. With historical evidence such as this, it is easy to see why soil erosion has continually ranked high as a resource concern over the years.

In the spring of 1999, Grant County started conducting an annual countywide Transect Survey. The route was designed to transverse each township twice while collecting data at .5 mile intervals (see Fig.1-7). The procedure is said to yield a 90% accuracy level (± 5%) on all data obtained from the survey. This data includes present and previous crop, tillage system and crop residue levels. (Hill, 1992) By conducting this survey we are able to benchmark cropping practices and see their effect on the environment.

The survey was conducted for 9 years and we started to see trends occurring around the county. The types of crops grown in Grant County have stayed about the same over the 9 years; however there does seem to be a pattern of decreasing forage crops. We are losing about 2000 acres of forage crops a year. Even though forage acres are decreasing, erosion is not necessarily increasing. The percentage of fields at or below tolerable "T" soil loss has increased 3% from 1999 from 76% to 79%. This trend can probably be attributed to the increase in the use of No-till. The use of this practice has increased 21% to 35% countywide, while conventional tillage has decreased by 28%. This trend can also be seen by the increase in residue found on the fields. In 1999 14% of the fields had more that 50% residue left after planting, compared to an increase of 32% in 2007.

Challenges that lay ahead that were not present in 1999 are an increase in sod busting for the intent of growing corn or soybeans, and the removal of the residue left after corn silage as well. An increase in row crops and a decrease of residue left behind is not a trend we wish to get started. Grant County offers a cover crop cost share program, to ensure vegetative ground cover is present during critical runoff events.

At times, separating soil erosion and water quality practices can be challenging. With numerous amounts of streams and rivers, combining with large acres of cropland and steep slopes, soil erosion and water quality practices can work hand in hand. The majority of erosion practices performed in the county (streambank stabilization, grade stabilization structures, grassed waterways, cover crops, etc.) all work together to help reduce or eliminate both soil erosion and improve water quality at the same time. Going forward, we plan on working with Andrew Craig with the WI DNR, to utilize computer modeling programs such as SnapPlus and STEPL to help set pollution reduction targets within different watershed projects and help curb soil erosion and sediment loads from entering Grant County watercourses.

Fig 1-7

2003 MAP OF COUNTY TRANSECT SURVEY ROUTE

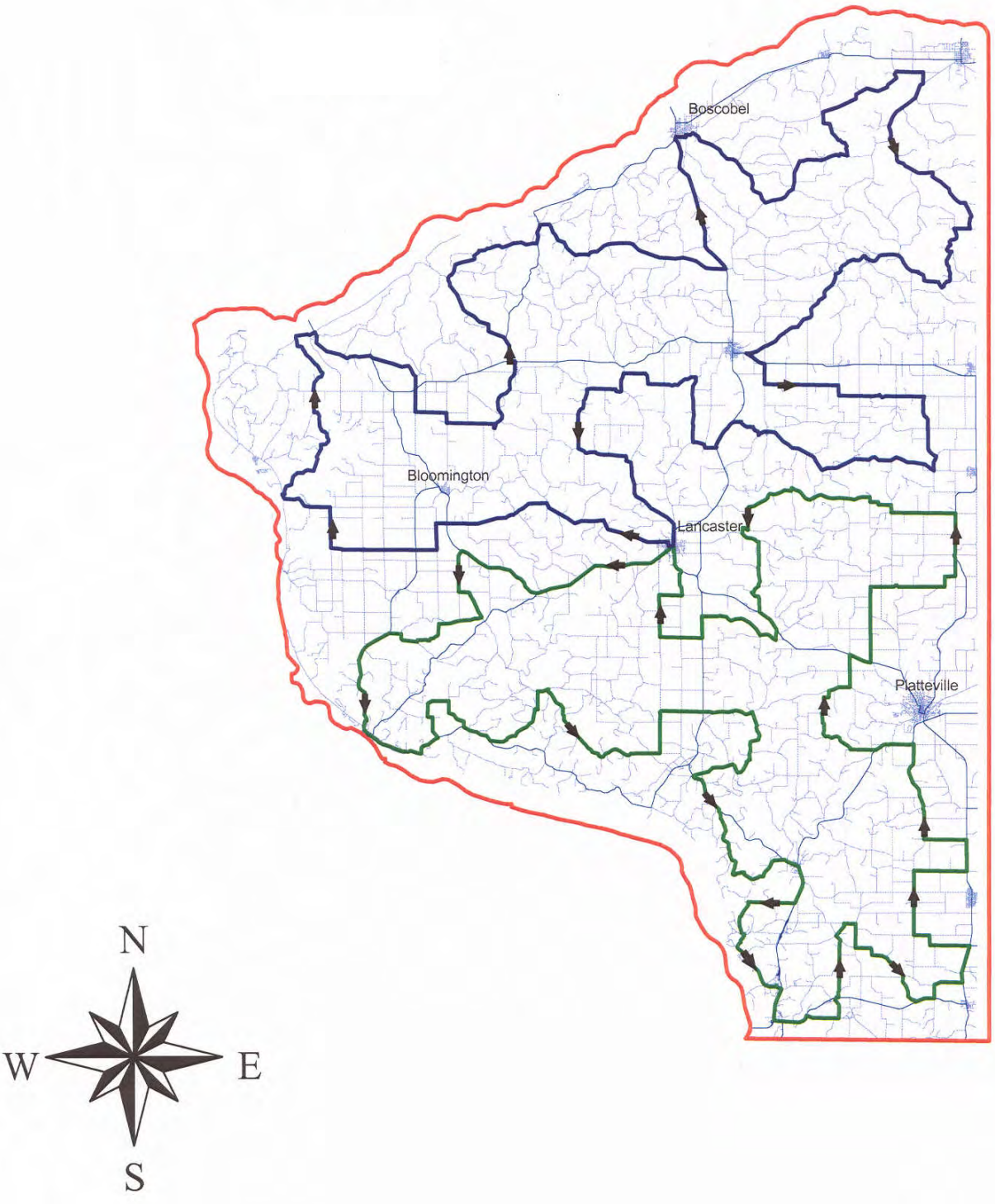


Fig 1-8

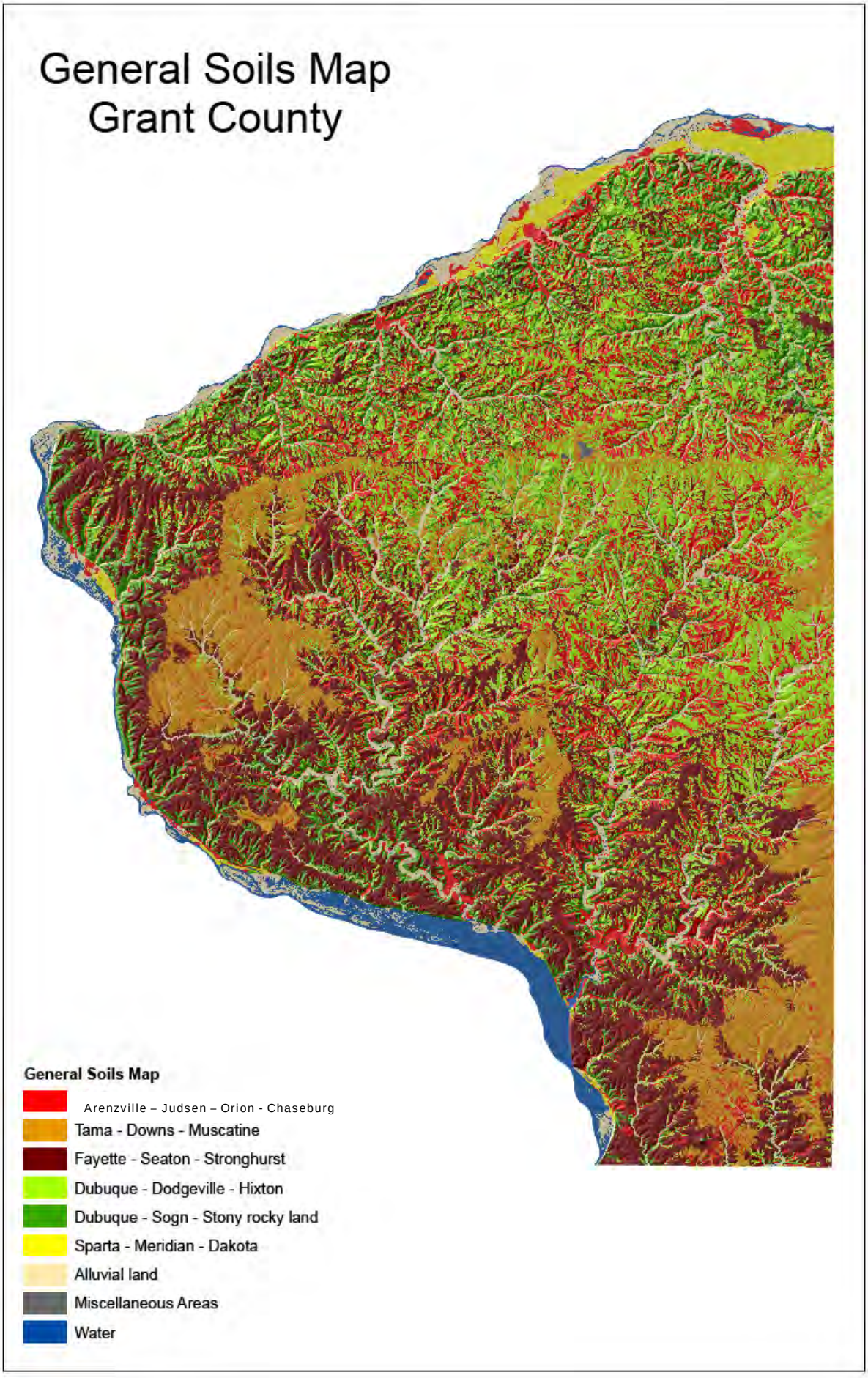

General Soils Map
Grant County
General Soils Map
Arenzville – Judsen – Orion - Chaseburg
Tama - Downs - Muscatine
Fayette - Seaton - Stronghurst
Dubuque - Dodgeville - Hixton
Dubuque - Sogn - Stony rocky land
Sparta - Meridian - Dakota
Alluvial land
Miscellaneous Areas
Water

Fig 1-9 Grant County Watersheds

SURFACE WATER QUALITY

Non point pollution sources are responsible for the degraded conditions of the streams in Grant County. Excessive amounts of sediments, nutrients and bacteria degrade the water quality, causing an unbalanced fish community with depressed populations and limited diversity. Furthermore, sediment from the watersheds settling out in the Wisconsin and Mississippi River backwaters are causing the pools to fill in. The two most serious pollutants are sediment and phosphorous. For watershed specifics and recommendations we referenced "The State of the Lower Wisconsin River Basin" and the "The State of the Grant, Platte, & Galena River Basins". These reports can be found at the Grant County Conservation, Sanitation, and Zoning Department, 150 W Alona Ln, Lancaster, WI 53813 or on the DNR website at http://dnr.wi.gov/topic/watersheds/basins/.

Several streams located within the county have been listed on the WDNR's 303(d) list. This is a list of waters not currently meeting state water quality standards (See Fig. 1-9). The WDNR also has a list of streams that they would like to prevent from becoming contaminated. These streams are considered Outstanding and Exceptional Resource Waters (see Fig. 1-10).

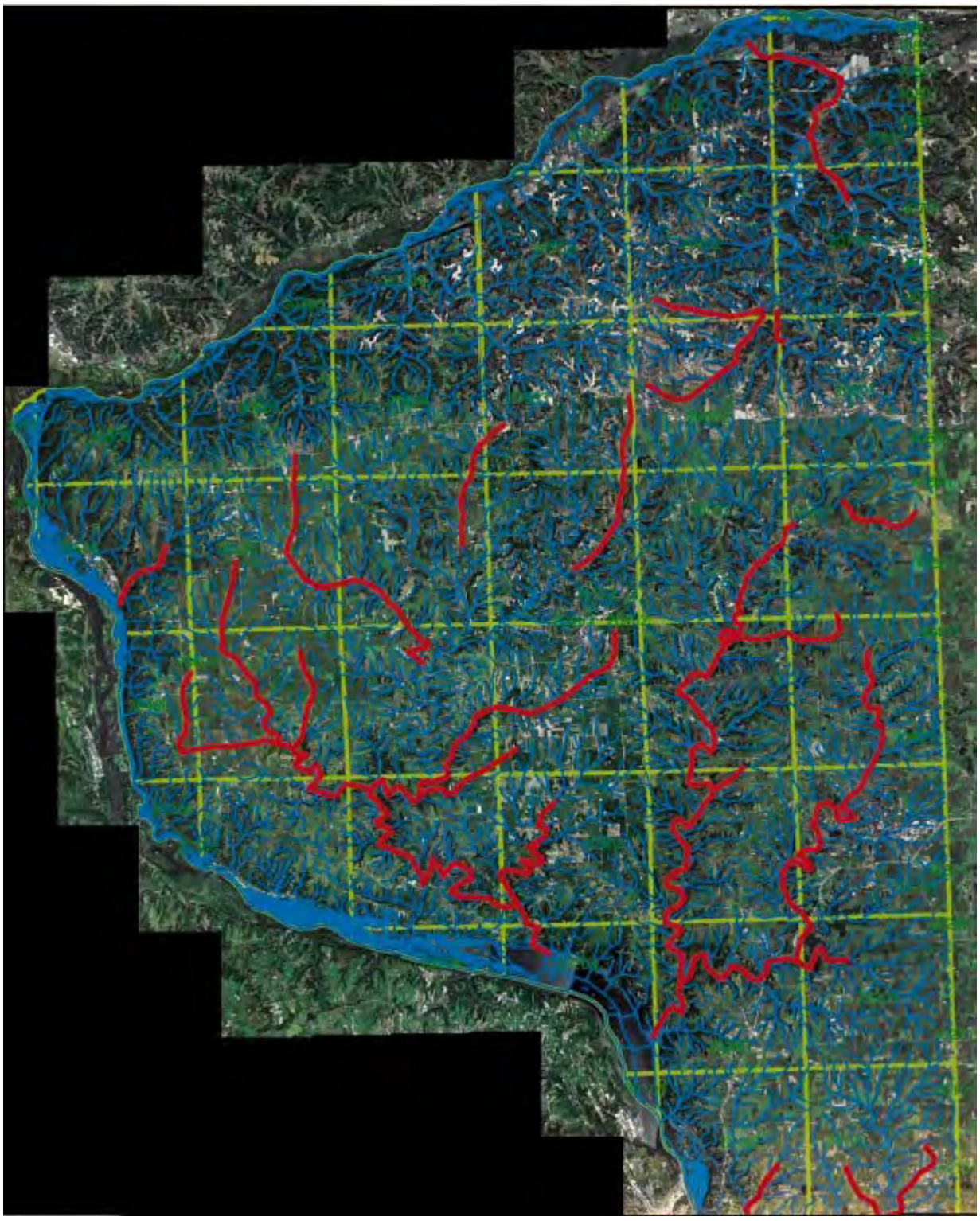
303d Listed Waters Descriptions (As of 3/18)

ASSESSME	WBIC	OFFICIAL_NAME	LOCAL_WATERBODY_NAME	START (Mi	END (Mile)	POLLUTANT	IMPAIRMENT	STATUS	TMDL_PRIORITY
13850	940200	Sinsinawa River	Sinsinawa River	10.31	21.13	Total Phosphorus	Degraded Biological Community	303d Listed	Medium
13851	941100	Unnamed	Un Trib To Sinsinawa River	0	5.93	Unknown Pollutant	Degraded Biological Community	303d Listed	Low
13853	941700	Menominee River	Menonminee R -Wi-Il Bd	5.55	10.4	Total Phosphorus	Impairment Unknown	Proposed for List	Medium
13856	943000	Louisburg Creek	Louisburg Cr	0	5.26	Sediment/Total Suspen	Degraded Habitat	303d Listed	Medium
13865	943600	Platte River	Platte River	0	37.8	Total Phosphorus	Impairment Unknown	303d Listed	Low
1527892	943800	Little Platte River	Little Platte River	0	33.98	Total Phosphorus	Degraded Biological Community	303d Listed	Medium
13894	944600	Snowden Br	Big Patch Creek	0	4.99	Sediment/Total Suspen	Degraded Habitat	TMDL Approved	Not Applicable
13896	945800	Whig Br	Whig Branch	0.33	4.44	Sediment/Total Suspen	Degraded Habitat	Water Delisted	Delisted 2002
13898	946400	Young Br	Young Branch	0	3	Total Phosphorus	Impairment Unknown	303d Listed	Medium
13899	947100	Mounds Br	Mounds Branch	0	4.45	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low
13875	950900	Culver Br	Culver Br	0	2.34	Sediment/Total Suspen	Degraded Habitat	303d Listed	Low
13876	950900	Culver Br	Culver Br	2.3	4.24	Sediment/Total Suspen	Degraded Habitat	Water Delisted	Delisted 2002
13877	951100	McPherson Branch	Mcpherson Branch	1.5	3.83	Sediment/Total Suspen	Degraded Habitat	Water Delisted	Delisted 2002
13880	953100	Bull Br	Bull Br	0	1.63	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low
18554	953200	Bacon Branch	Bacon Branch	0	5.96	Sediment/Total Suspen	Degraded Habitat	303d Listed	Low
13883	953900	Leggett Creek	Leggett Creek	0	8.07	Sediment/Total Suspen	Degraded Habitat	Water Delisted	Delisted 2002
13887	955100	Martinville Creek	Martinville Cr	0	2.6	Unknown Pollutant	Elevated Water Temperature	303d Listed	Low
13887	955100	Martinville Creek	Martinville Cr	0	2.6	Total Phosphorus	Degraded Biological Community	303d Listed	Low
13887	955100	Martinville Creek	Martinville Cr	0	2.6	Sediment/Total Suspen	Degraded Habitat	TMDL Approved	Not Applicable
13888	955100	Martinville Creek	Martinville Cr	2.59	5.05	Unknown Pollutant	Elevated Water Temperature	303d Listed	Low
13888	955100	Martinville Creek	Martinville Cr	2.59	5.05	Total Phosphorus	Degraded Biological Community	303d Listed	Low
13888	955100	Martinville Creek	Martinville Cr	2.59	5.05	Sediment/Total Suspen	Degraded Habitat	TMDL Approved	Not Applicable
13901	956000	Grant River	Grant River	0	18.87	Total Phosphorus	Impairment Unknown	303d Listed	Low
6901615	956000	Grant River	Grant River	18.87	25.94	Total Phosphorus	Impairment Unknown	303d Listed	Low
13902	956200	Boice Creek	Boice Creek	0	15.86	Unknown Pollutant	Degraded Biological Community	303d Listed	Low
13905	957300	Rattlesnake Creek	Rattlesnake Creek	0	21.11	Unknown Pollutant	Degraded Biological Community	303d Listed	Low
13908	957600	Muskellunge Creek	Muskellunge Creek	0	1	Unknown Pollutant	Degraded Biological Community	303d Listed	Low
13908	957600	Muskellunge Creek	Muskellunge Creek	0	1	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Medium

13909	957600	Muskellunge Creek	Muskellunge Creek	1	4.91	Unknown Pollutant	Degraded Biological Community	303d Listed	Low
13910	957900	Kuenster Creek	Kuenster Creek	0	1	Unknown Pollutant	Degraded Biological Community	303d Listed	Low
18564	957900	Kuenster Creek	Kuenster Creek	1	9.86	Unknown Pollutant	Degraded Biological Community	303d Listed	Low
18565	959400	Marlowe Br	Marlowe Branch	0	5.83	Unknown Pollutant	Degraded Biological Community	303d Listed	Low
13916	959600	Pigeon Creek	Pigeon Creek	0	14	Unknown Pollutant	Degraded Biological Community	303d Listed	Low
13916	959600	Pigeon Creek	Pigeon Creek	0	14	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low
13917	962000	Blake Fk	Blake Fork	0	17.23	Unknown Pollutant	Degraded Biological Community	303d Listed	Low
13917	962000	Blake Fk	Blake Fork	0	17.23	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Medium
18569	963400	Martin Br	Martin Branch	0	4	Sediment/Total Suspen	Degraded Habitat	TMDL Approved	Not Applicable
13926	963400	Martin Br	Martin Branch	4	5.32	Sediment/Total Suspen	Degraded Habitat	TMDL Approved	Not Applicable
13927	963400	Martin Br	Martin Branch	5.32	9.94	Sediment/Total Suspen	Degraded Habitat	TMDL Approved	Not Applicable
13930	964300	Rogers Br	Rogers Branch	0	8	Unknown Pollutant	Elevated Water Temperature	303d Listed	Low
13930	964300	Rogers Br	Rogers Branch	0	8	Total Phosphorus	Low DO, Degraded Biological Community	TMDL Approved	Not Applicable
13930	964300	Rogers Br	Rogers Branch	0	8	Sediment/Total Suspen	Degraded Habitat	TMDL Approved	Not Applicable
13931	964300	Rogers Br	Rogers Branch	8	11.83	Total Phosphorus	Low DO	TMDL Approved	Not Applicable
13931	964300	Rogers Br	Rogers Branch	8	11.83	Sediment/Total Suspen	Low DO, Degraded Habitat	TMDL Approved	Not Applicable
18575	965800	Chase Creek	Chase Creek	0	1.15	Sediment/Total Suspen	Degraded Habitat	303d Listed	Low
18576	966100	Sandy Creek	Sandy Creek	0.37	6.01	Sediment/Total Suspen	Degraded Habitat	303d Listed	Low
13269	1211000	Blue River	Blue River	0.01	17.87	Total Phosphorus	Impairment Unknown	303d Listed	Low
13275	1211300	Castle Rock Creek	Fennimore Fork (Castle Rock)	17.14	21.39	Total Phosphorus	Water Quality Use Restrictions	TMDL Approved	Not Applicable
13275	1211300	Castle Rock Creek	Fennimore Fork (Castle Rock)	17.14	21.39	Sediment/Total Suspen	Degraded Habitat	TMDL Approved	Not Applicable
13276	1211300	Castle Rock Creek	Fennimore Fork (Castle Rock)	21.39	26.25	Sediment/Total Suspen	Degraded Habitat	TMDL Approved	Not Applicable
13281	1212000	Cass Valley Creek	Doc Smith Branch (Cass Valley)	0	3.39	Total Phosphorus	Impairment Unknown	303d Listed	Low
887418	1212600	Gunderson Valley Cre	Gunderson Valley Creek	0	5.4	Total Phosphorus	Low DO	TMDL Approved	Not Applicable
887418	1212600	Gunderson Valley Cre	Gunderson Valley Creek	0	5.4	Sediment/Total Suspen	Degraded Habitat	TMDL Approved	Not Applicable
16323	721000	Mississippi River	Mississippi (Reach 5) Grant-Maquoketa	583	630.7	Mercury	Water Quality Use Restrictions	303d Listed	Low
18638	721000	Mississippi River	Mississippi (Reach 6) Apple-Plum LD 11	580.8	583	Mercury	Water Quality Use Restrictions	303d Listed	Low
891939	721000	Mississippi River	Mississippi (Reach 4) Coon-Yellow - Pool	630.7	648	Mercury	Water Quality Use Restrictions	303d Listed	Low
18638	721000	Mississippi River	Mississippi (Reach 6) Apple-Plum LD 11	580.8	583	PCBs	Contaminated Fish Tissue, Water Quality Use R	303d Listed	Low
16323	721000	Mississippi River	Mississippi (Reach 5) Grant-Maquoketa	583	630.7	PCBs	Contaminated Fish Tissue, Water Quality Use R	303d Listed	Low
891939	721000	Mississippi River	Mississippi (Reach 4) Coon-Yellow - Pool	630.7	648	PCBs	Contaminated Fish Tissue, Water Quality Use R	303d Listed	Low
16323	721000	Mississippi River	Mississippi (Reach 5) Grant-Maquoketa	583	630.7	Total Phosphorus	Impairment Unknown	303d Listed	Low
18638	721000	Mississippi River	Mississippi (Reach 6) Apple-Plum LD 11	580.8	583	Total Phosphorus	Impairment Unknown	303d Listed	Low
891939	721000	Mississippi River	Mississippi (Reach 4) Coon-Yellow - Pool	630.7	648	Total Phosphorus	Impairment Unknown	303d Listed	Low
12919	1179900	Wisconsin River	Wisconsin River	0	27.67	Mercury	Contaminated Fish Tissue	303d Listed	Low

885432	1179900	Wisconsin River	Wisconsin River	27.67	57.66	PCBs	Contaminated Fish Tissue	303d Listed	Low
12919	1179900	Wisconsin River	Wisconsin River	0	27.67	PCBs	Contaminated Fish Tissue	303d Listed	Low

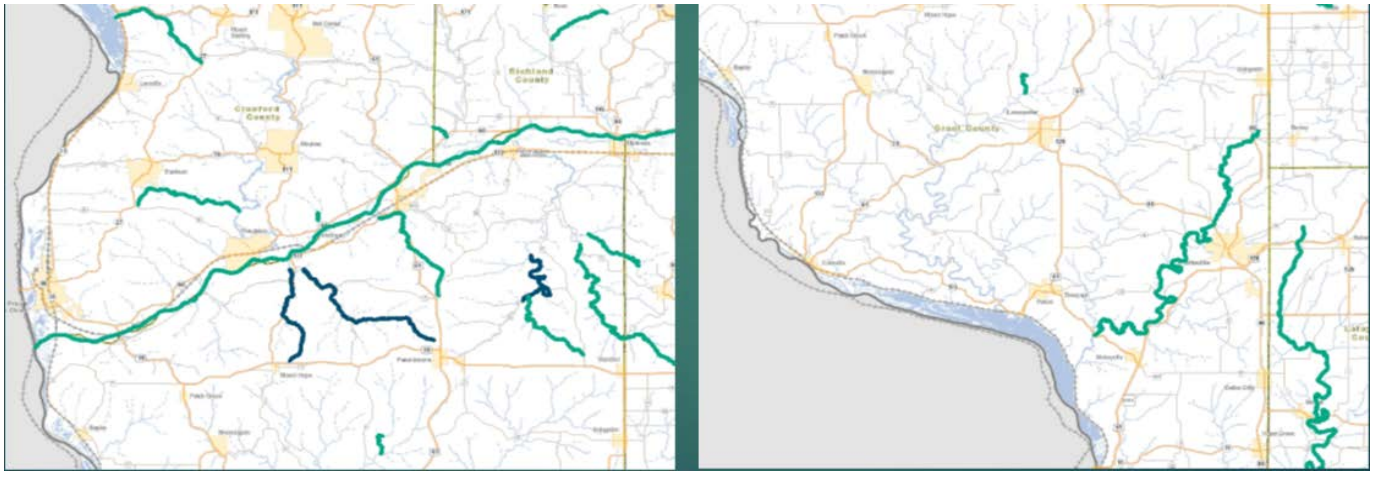
Impaired 303d Waters Map
Fig. 1-11 (As of 3/18)



Outstanding and Exceptional Waters Report: County: Grant

WADRS ID	Official Waterbody Name	Local Waterbody Name	WBIC	ORW/ERW	ORW/ERW ID	Start Mile	End Mile	Mileage	Code Reference	Counties	Watersheds
13214	Big Green River	Big Green River	1203900	ORW/	109	1.93	12.74	10.81	102.10(1)(e)4	Grant	LW07
13215	Big Green River	Big Green River	1203900	ORW/	null	12.68	15.14	2.46	102.10(1)(e)4	Grant	LW07
13285	Big Spring Br	Big Spring Branch	1212900	/ERW	117	0	5.17	5.17	102.11(1)(d)11	Grant,Iowa	LW09
13270	Blue River	Blue River	1211000	/ERW	114	17.87	29.6	11.73	102.11(1)(c)5	Grant,Iowa	LW09
18572	Borah Creek	Borah Creek	964500	/ERW	1673	0	1.96	1.96	102.11(1)(a)	Grant	GP06
13281	Cass Valley Creek	Doc Smith Branch (Cass Valley)	1212000	/ERW	116	0	3.39	3.39	102.11(1)(d)10	Grant	LW09
13282	Cass Valley Creek	Doc Smith Branch (Cass Valley)	1212000	/ERW	116	3.39	8.56	5.17	102.11(1)(d)10	Grant	LW09
13274	Castle Rock Creek	Fennimore Fork (Castle Rock)	1211300	ORW/	115	8.29	17.14	8.85	102.10(1)(e)4	Grant	LW09
13224	Crooked Creek	Crooked Creek	1205600	/ERW	112	0.81	10.32	9.51	102.11(1)(a)	Grant	LW07
13217	Little Green River	Little Green River	1204000	ORW/	110	4.11	8.9	4.79	102.10(1)(f)7	Grant	LW07
13216	Little Green River	Little Green River	1204000	ORW/	110	0	4.12	4.12	102.10(1)(f)7	Grant	LW07
13891	Little Platte River	Little Platte River	943800	/ERW	1672	33.98	38.33	4.35	102.11(1)(d)10	Grant	GP03
1527892	Little Platte River	Little Platte River	943800	/ERW	1672	0	33.98	33.98	102.11(1)(d)10	Grant	GP03
12919	Wisconsin River	Wisconsin River	1179900	/ERW	97	0	27.67	27.67	102.11(1)(d)4	Crawford, Grant	BL01,GP07,LW01,LW07,LW08
885432	Wisconsin River	Wisconsin River	1179900	/ERW	97	27.67	57.66	29.99	102.11(1)(d)4	Crawford, Grant,Richland,Iowa	LW07,LW08,LW09,LW10,LW11,LW12,LW14
								163.95			

Outstanding and Exceptional Waters Map (Figure 1-11) (As of 3/18)



CHAPTER 2

THE PLANNING PROCESS

On Wednesday, January 17th 2018, the Grant County Conservation, Sanitation, and Zoning Department (CSZD) invited county staff, partners, and landowners to develop a survey that will help us identify and prioritize the resource concerns for Grant County (see Appendix A). The agenda allowed for a discussion on what a Land and Water Resource Management Plan (LWRM) is, prioritizing resource concerns, and an in depth discussion on the statewide agricultural performance standards (SAPS)

The local advisory committee (LAC) was a compilation of various members from the Grant County community, 43 invited. Members of the agricultural community were first on the list; both small and permitted facilities were invited to participate. Members of various conservation partner agencies were asked to sit in, which included: Friends of the Platte River, Trout Unlimited, and Wings over Wisconsin. Agency personnel included LWCC/CSZD, NRCS, DATCP, DNR, UWEX, and FSA representatives. The actual LAC had a good distribution of farmers, businessmen, agency personnel and concerned citizens on board.

25 people attended the first meeting. At that meeting, the LAC was given an opportunity to set the details for the 2018 LWRM Survey. The survey assessed resource concerns, priority areas, land use, and prioritizing the SAPS. The survey was available to all Grant County resident and landowners to fill out and submit online through the County website or to pick up at the local office to fill out and turn back in. 5 newspapers in the county had an article published to inform the public of the survey as well. See Appendix A for the results of the survey.

Participants attending the 1st Local Advisory Committee meeting

At the March 7th, 2018 LAC meeting, the survey results were reviewed and discussed with the 14 attendees. The 2008 LWRM work plan was reevaluated according to the new results and objectives were arranged accordingly. The LAC went through each resource concern and added objectives and actions where needed.

Groundwater quality emerged as the number one resource concern replacing soil erosion (#2) for the top Surface water quality came in third. These results could also be seen clearly when looking at how the performance standards ranked. No direct runoff from feedlots or stored manure into waters of the state was number one, meeting tolerable "T" soil loss was number two, followed by developing and following a nutrient management plan. These three issues will receive the bulk of the attention in our LWRMP over the next 10 years.

Two new issues arose out of this survey that we haven't dealt with in the past. The interest in a Producer Led Watershed ranked high as well as the request that we participate in the Multi Discharge Variance program.

Education is a theme that persists throughout the plan, but the audience may have changed. There was a request to specialize with specific Ag Associations. For instance, developing a NMP presentation for the Beef Producers specific to issues related to production and feed. This is a concept we are interested in pursuing along with UW Extension assistance.

EVALUATION

To evaluate the success of the LWRM plan, we will use an assortment of tools. Since groundwater quality is the number one resource concern, the county is looking into the development of a comprehensive groundwater study to set a baseline of its condition. From there we will assess what the county can do to improve the quality in the future. We are also looking into working with UW Stevens Point to develop a voluntary private well testing program.

With soil erosion as the second resource concern, we plan to monitor closely the amount of practices cost shared addressing this concern. When developing ranking criteria for cost sharing, those addressing groundwater quality and soil erosion will be high priority. To be eligible for cost sharing, the contributing acres must meet "T". Compliance spot checks will be utilized to keep landowners on track.

To help address water quality issues, we plan to track the number wells decommissioned, number of animal waste permits issued, and number of nutrient management acres. We also hope to train student interns to monitor and evaluate our soil erosion projects effect on surface water quality. The most important evaluation tool we will be utilizing will be public comments and feedback. The citizens of Grant County are always willing to let us know what kind of job they think we are doing.

On the statewide agricultural performance standards (SAPS), we will also be tracking all those in compliance or progress towards compliance. This will mainly focus on the FPP, but will also catch those applying for cost sharing for waste storage, nutrient management, and NR 151 complaints.

The following pages outline the resource concerns, objectives and actions the CSZC plans to address within the next ten years. The resource concerns are presented in order of priority, set by the workgroup, with the first concern being the highest. Beneath each concern, the objectives are again ranked according to priority.

2018 Grant County LWRM WORK PLAN

CATEGORY
PLANNED ACTIVITIES

	PERFORMANCE MEASUREMENTS (Yearly #'s)
CROPLAND	
*NUTRIENT MANAGEMENT PLANS *PROMOTE NMPS-	PLAN NUMBERS, FARMER WRITTEN NMP TRAININGS
*SIMPLIFY THE PROCESS-	FORM WORK GROUP WITH PARTNERS, WORK WITH STATE ON COST SHARE PROCESS
*EDUCATION-	EXPLAINING NMP'S TO LANDOWNERS, SHOW COST/BENEFIT OF PLANS, WORK WITH RETAILERS AND INDIVIDUAL AG GROUPS FOR A MORE CUSTOM APPROACH, ELIMINATE 3RD PARTY DISCONNECT
*PROMOTE FPP TAX CREDIT-	NEWS ARTICLES, MAILINGS, NUMBER OF ACRES COMPLIANT, TAX PREPARER & AGRONOMIST MEETINGS
*PRACTICE INSTALLATIONS-	GRASSED WATERWAYS (5), COVER CROPS (100 AC), CRP (AC), GRADE STABILIZATION STRUCTURES (4),CONTOUR FARMING (200 AC), COST SHARE $ SPENT, PHOSPHOROUS & "T" NUMBERS (compliance with NR 151)
LIVESTOCK	
*PRACTICE INSTALLATIONS-	ROOF RUNOFF SYSTEMS (1), CLEAN WATER DIVERSIONS (50 FT), WASTE STORAGE FACILITIES (3), WASTE FACILITY CLOSURES (3), FEED PADS/LECHATE COLLECTION (1), HEAVY USE AREA PROTECTION (500 SQ FT), WATERING FACILITIES/PIPELINE (1), ANIMAL TRAILS & WALKWAYS (150 FT)
*ENFORCEMENT OF ANIMAL WASTE ORDINANCE-	PERMITS (#)

CATEGORY	PLANNED ACTIVITIES	PERFORMANCE MEASUREMENTS (Yearly #'s)
WATER QUALITY		
	*GROUND WATER	
	*ASSESMENT OF GROUNDWATER CONDITIONS-	GROUND WATER STUDY, WORK WITH UW STEVENS POINT VOLUNTEER WELL MONITORING PROGRAM
	*CONTAMINATION PREVENTION-	WELL DECOMMISSIONINGS (20), SINKHOLES (1), WORK WITH COUNTY SANITATION DEPARTMENT, ON 3YR SEPTIC MAINTENANCE PROGRAM (# IN COMPLIANCE), WORK WITH UW EXTENSION ON NITROGEN MANAGEMENT
	*SURFACE WATER-	
	*PRACTICE INSTALLATIONS-	CREP (400 AC re-enroll, 40 AC new), CRP (AC), MAINTAIN TILLAGE SETBACK TO WATER, STREAM CROSSING (1), RIPRAP (200), SPRING DEVELOPMENT (1), NO DIRECT RUNOFF TO WATERS OF THE STATE (as complaints arise)
	*PERMITS-	SHORELAND ZONING PERMITS (#)
FORESTRY		
	*SUPPORT LANDOWNER INTREST IN FORESTRY PROGRAMS-	WORK WITH DNR FORESTER IN DODGEVILLE
	*ANNUAL TREE SALE-	# OF TREES SOLD (11,000)
INVASIVE SPECIES		
	*PROMOTE EDUCATION-	WORK WITH SOUTHWEST BADGER RC&D INVASIVE SPECIES COORDINATOR
WILDLIFE		
	*ADMINISTER WILDLIFE DAMAGE ABATEMENT CLAIMS PROGRAM-	# OF PARTICIPANTS MEETING REQUIREMENT
	*PRACTICE INSTALLATIONS-	STREAM HABITAT IMPROVEMENTS (#), CONTINUED WORK WITH TROUT UNLIMITED

CATEGORY	PLANNED ACTIVITIES	PERFORMANCE MEASUREMENTS (Yearly #'s)
WATERSHED		
	*TMDL AREAS-	WORK WITH CURRENT IMPLEMENTATION AREAS; CASTLE ROCK & GUNDERSON CREEK, MARTIN BRANCH, MARTINVILLE CREEK, ROGERS BRANCH, SNOWDEN/BIG PATCH BRANCH. USE MATRIN BRANCH EVAAL ANALYSIS FOR PRIORITIZATION. USE EVAAL ANALYSIS ONCE PER YEAR ON REMANING TMDL AREAS.
	*PRODUCER-LED WATERSHED GROUPS-	ASSIST LANDOWNER GROUPS WITH PRIORITIES SET BY PRODUCERS
	*EVAAL/STEPL-	UPGRADE OFFICE COMPUTER INFRASTRUCTURE TO HANDLE PROGRAM REQUIREMENTS FOR WATERSHED MODELING TOOLS
NR 151		
	*IMPLEMENTATION-	DRAFT MOU (MEMORANDUM OF UNDERSTANDING) WITH DNR (MIKE GILBERTSON)
	*COMPLAINT ISSUES-	# RESOLVED, WISCONSIN STATE LEGISLATURE NR 151.08 COMPLIANCE FOR MANURE MANAGEMENT PROHIBITIONS
OTHER		
	*EDUCATION/OUTREACH-	ARBOR DAY, COUNTRYSIDE CLINIC ARTICLES, ANNUAL REPORT, FAIR DISPLAY, LITTANIES, AREA SOIL JUDGING CONTEST, SOUTHERN AREA ASSOCIATION MEETINGS/TOUR, WLWCA POSTER CONTEST, CONTINUING EDUCATION FOR STAFF
	*NON METALLIC MINING-	# OF QUARRIES IN COMPLIANCE WITH NR135
	*PRIORITY AREAS-	303D LISTED WATERS, PRESERVE OUTSTANDING/EXEPTIONAL WATERS

Staff/Support	Hours	Costs
County CSZD Administrator	1622	$64,896
Soil Con/Technicians	6240	$187,200
Program Specialist	1768	$45,968
Zoning/Sanitation Technicians	1560	$46,800
Cost Sharing		
Bonding	*N/A*	$51,000

ALL FIGURES ON A PER YEAR BASIS

CHAPTER 3

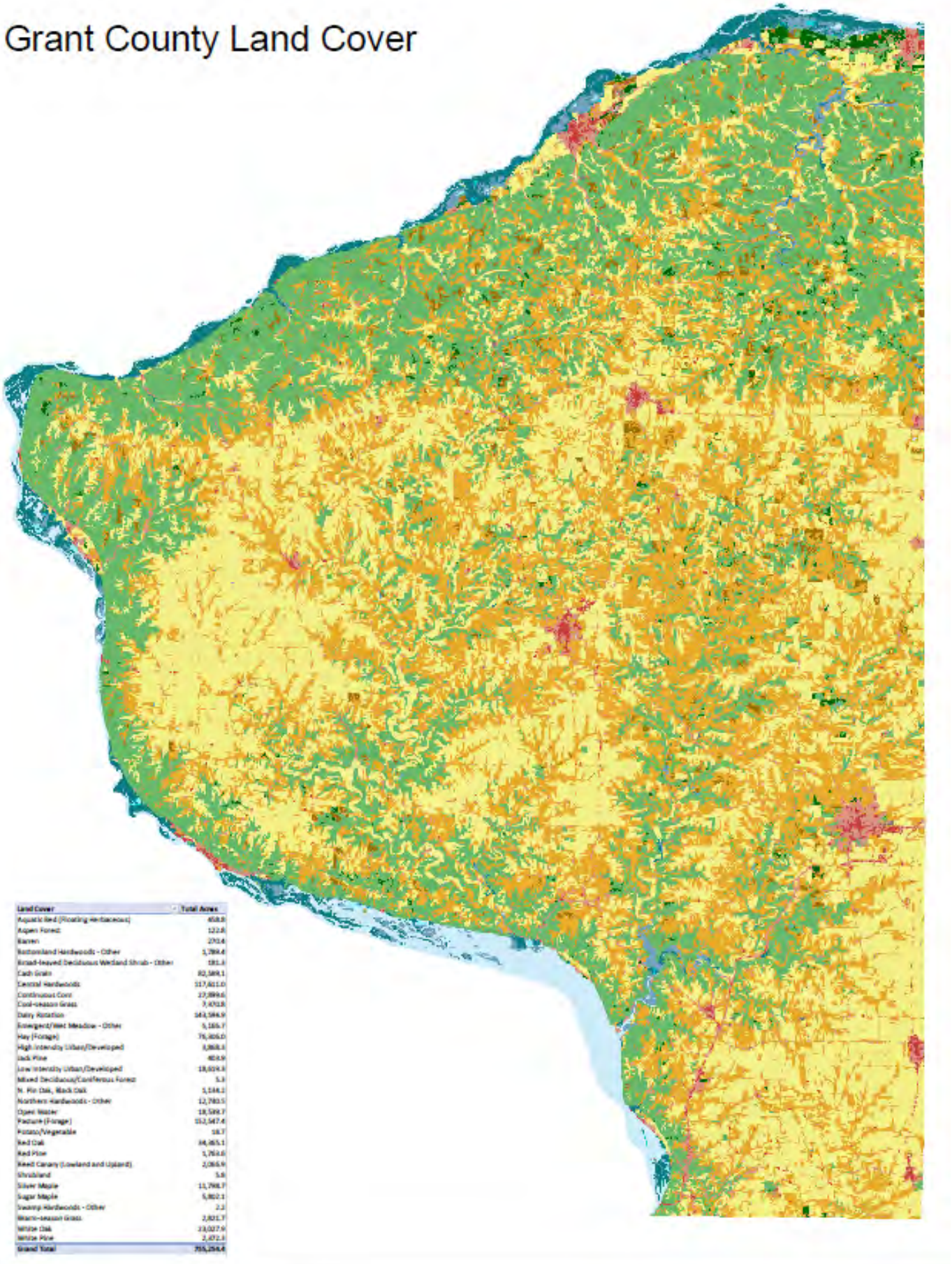
GRANT COUNTY CONSERVATION REGULATIONS

Historically, Grant County's conservation policies have been based on voluntary compliance. Cost sharing and technical assistance have been available for those who wish to improve their water quality and control their soil erosion. Recently, to comply with state and federal programs, a more regulatory approach has been developed. The following items are the result of this change.

CHAPTER 90: ANIMAL WASTE STORAGE AND NUTRIENT UTILIZATION

Animal waste storage and nutrient utilization is regulated through Chapter 90 of the Grant County Code of Ordinances. The purpose of this ordinance is to regulate the location, design, construction, installation, alteration, closure and the utilization of animal waste from these facilities in order to prevent water pollution and protect the water resources of Grant County. A permit is required for structures greater than 7,000 cu. ft. or total on farm manure storage is over 7,000 cu. ft. and before any construction activity takes place. Each application for a permit under the Ordinance shall include a complete set of detailed construction plans, meeting current NRCS technical specifications/standards, and a current Nutrient Management Plan. Applications are reviewed by the Grant County CSZD and area DATCP engineers to ensure compliance with NRCS standards and specifications.

Fig 3-1



Land Cover	Total Acres
Aquatic Bed (Floating-Herbaceous)	458.8
Aspen Forest	122.8
Barren	270.4
Bottomland Hardwoods - Other	1,789.4
Broad-leaved Deciduous Wetland Shrub - Other	181.3
Cash Grain	82,389.1
Central Hardwoods	117,611.0
Continuous Corn	17,899.6
Cool-season Grass	7,470.8
Dairy Rotation	143,584.9
Emergent/Wet Meadow - Other	5,165.7
Hay (Forage)	76,406.0
High Intensity Urban/Developed	3,868.3
Jack Pine	40.9
Low Intensity Urban/Developed	18,619.3
Mixed Deciduous/Coniferous Forest	5.3
N. Pin Oak, Black Oak	1,144.2
Northern Hardwoods - Other	12,780.5
Open Water	13,589.7
Pasture (Forage)	112,547.4
Potato/Vegetable	18.7
Red Oak	44,865.1
Red Pine	1,753.6
Reed Canary (Lowland and Upland)	2,065.9
Shrubland	5.8
Silver Maple	11,798.7
Sugar Maple	5,802.1
Swamp Hardwoods - Other	2.2
Warm-season Grass	2,821.7
White Oak	13,027.9
White Pine	2,472.1
Grand Total	715,254.4

NR 151 PERFORMANCE STANDARDS IMPLEMENTATION STRATEGY

Effective October 1, 2002, NR 151 set forth, minimum state performance standards and prohibitions for farms and urban areas and was updated in 2011. These performance standards and prohibitions were designed to achieve water quality standards by limiting nonpoint source water pollution. Figure 3-2 shows the performance standards needing to be implemented and conservation practices used for complying with the requirements. The implementation of this strategy is based on staff and funding availability.

Fig. 3-2 Overview of Standards and Conservation Practices

Statewide Agriculture Performance Standards

Who:

1. Farmers who grow agricultural crops
2. Farmers who raise, feed or house livestock
3. Farmers who have, or plan to build waste storage
4. Farmers in a Water Quality Management Area (WQMA)
    - 300' to a stream, or 2' to groundwater or bedrock
    - 250' to private well, or 1000' to municipal well
    - 100-300' to karst features

What:

1. Meet tolerable "T" soil loss (NR 151.02)
2. ***Maintain minimum 5' tillage setback from top of stream channel (NR 151.03)***
3. Prevent direct runoff from feedlots or stored manure into waters of the State (NR 151.08(4))
4. Divert clean water around feedlots, waste storage and barnyards within WQMA (NR 151.06)
5. ***Prevent feed storage leachate or milk house waste from entering waters of the state (NR 151.055)***
6. Build waste storage facilities according to standards (NR 151.05(2))
7. Stack manure outside a WQMA (NR 151.08(3))
8. Repair leaking waste storage facilities (NR 151.05(4))
9. Develop and follow a nutrient management plan on crop ground, ***and pastures (NR 151.07)***
10. ***Phosphorous Index cannot exceed 6 over the rotation nor 12 in any one year (NR 151.04)***
11. Maintain adequate sod along waters of the State (NR 151.08(5))
12. Prevent overtopping of waste storage (NR 151.08(2))
13. Close waste storage facilities according to standards (NR 151.05(3))

Identification of Priority Farms

Impaired waters have been identified as our number one priority area. Farms in these watersheds will be the main focus of our LWRM plan over the next 10 years. We will work with DNR to prioritize impaired watersheds and develop a plan to work to remove them from the impaired waters list. The LAC suggested the following actions to work towards this goal: Promote reduced tillage options; Develop guidelines for landowner water sampling; Promote WAV program; Promote success stories; Apply for TRM Grants as needed.

The second priority area in Grant County is NR 151 complaints. We will work with DNR to develop an MOU laying out the process to deal with these situations. We will also concentrate education efforts on Direct Runoff to Waters of the State, since this SAP was rated the #1 SAP of concern. Providing information on buffers and management in these areas will be a priority.

Information and Education Activities

Every effort will be made to inform Grant County landowners about the required statewide agricultural performance standards and prohibitions. Approximately 2300 landowners are assisted each year through

our office. Both county and federal staff will provide landowners with an overview of the regulatory requirements pertaining to them. This effort will utilize existing fact sheets in addition to any materials provided by DNR and DATCP. The primary goal will focus on establishing a voluntary approach by landowners to come into compliance with the required standards.

When implementing conservation practices, staff will work with landowners to assure that the practices being constructed meet the regulatory framework. They will also inform the landowner why compliance is necessary and the expectations for long-term maintenance of the practice being implemented. Information on available county, state or federal funding will also be given at this time.

Additional information will be given through our monthly newspaper column, The Countryside Clinic. This column is distributed to over 25,000 households across Grant County. An annual report is published yearly showcasing the accomplishments of the office for the past year. We participate in the Grant County Fair, hoping to reach people we do not ordinarily come in contact we on a day to day basis.

Education and Nutrient Management Plans go hand and hand. Grant County has developed a Farmer Written Nutrient Management Certification and Update Class. Through a collaborative effort among UW-Extension, Grant County Conservation, Sanitation and Zoning Dept., University of Wisconsin – Platteville, and, USDA-NRCS Lancaster, a comprehensive educational program is implemented and evaluated for Grant County landowners. Landowners attend four sessions educating them on the necessary elements of nutrient management planning. At the end of the four sessions (2 - classroom, 2 - computer lab) the landowner will have a completed nutrient management plan as well as the knowledge to update his plan in the future. To date 75 landowners have been certified through our class.

Grant County administers a yearly poster contest through WI Land+Water. Our employees are always willing to visit local schools to introduce conservation issues and explore new ways to involve conservation into their curriculum.

Status Report

Each site being inventoried will receive a status report. The status report will contain the following:

- The current status of compliance of individual parcels with each of the performance standards and prohibitions.
- Identify corrective measure options and rough cost estimates to comply with each of the performance standards and prohibitions for which a site is not in compliance.
- Status of eligibility and availability for cost sharing.
- An explanation of conditions that apply if cost share funds are used.
- Signature lines indicating landowner agreement or disagreement with report findings.
- Process and procedures to contest evaluation results to county and or state

Funding, Administration and Technical Assistance

The CSZD uses various sources for funding conservation practices including local, state and federal cost share programs. Annual allocations from DATCP are earmarked for practices shown in Figure 1-5.

A voluntary approach will be utilized to address the state performance standards concerns. Through our previously mentioned Information and Education efforts, one on one contacts and countywide newsletters we will inform the landowners of the standards and the cost sharing available for implementation of them.

If cost sharing is involved, the appropriate agreements will be signed and implemented. Technical assistance in the form of the following will be provided throughout project implementation:

- Conservation planning assistance
- The review of conservation plans by other parties (Technical Service Provider)
- Engineering design
- The review of engineering designs by other parties
- Construction oversight
- Certification of construction projects to standards

Coordination

Coordination and cooperation is the key to success for our plan. NRCS is the main agency that we work with on a daily basis coordinating farm planning and technical responsibilities. FSA helps out on specific programs as needed, i.e.: CREP & CRP.

When it comes to outreach and education, UW-Extension is who we turn to. Currently the position is vacant, but when filled the Agricultural Extension Agent has been instrumental in coordinating our nutrient management planning training and outreach.

DNR has been helpful in identifying water resources in need of attention. We will be working toward developing a Memorandum of Understanding (MOU) to assign roles in NR 151 compliance, especially in regards to enforcement and regulation. Currently, when an individual is found in violation, DNR is notified. As site visit is coordinated with DNR, CSZD and the landowner. Solutions are determined at that time.

References for approved TMDL reports can be found at https://dnr.wi.gov/topic/tmdls/tmdlreports.html.

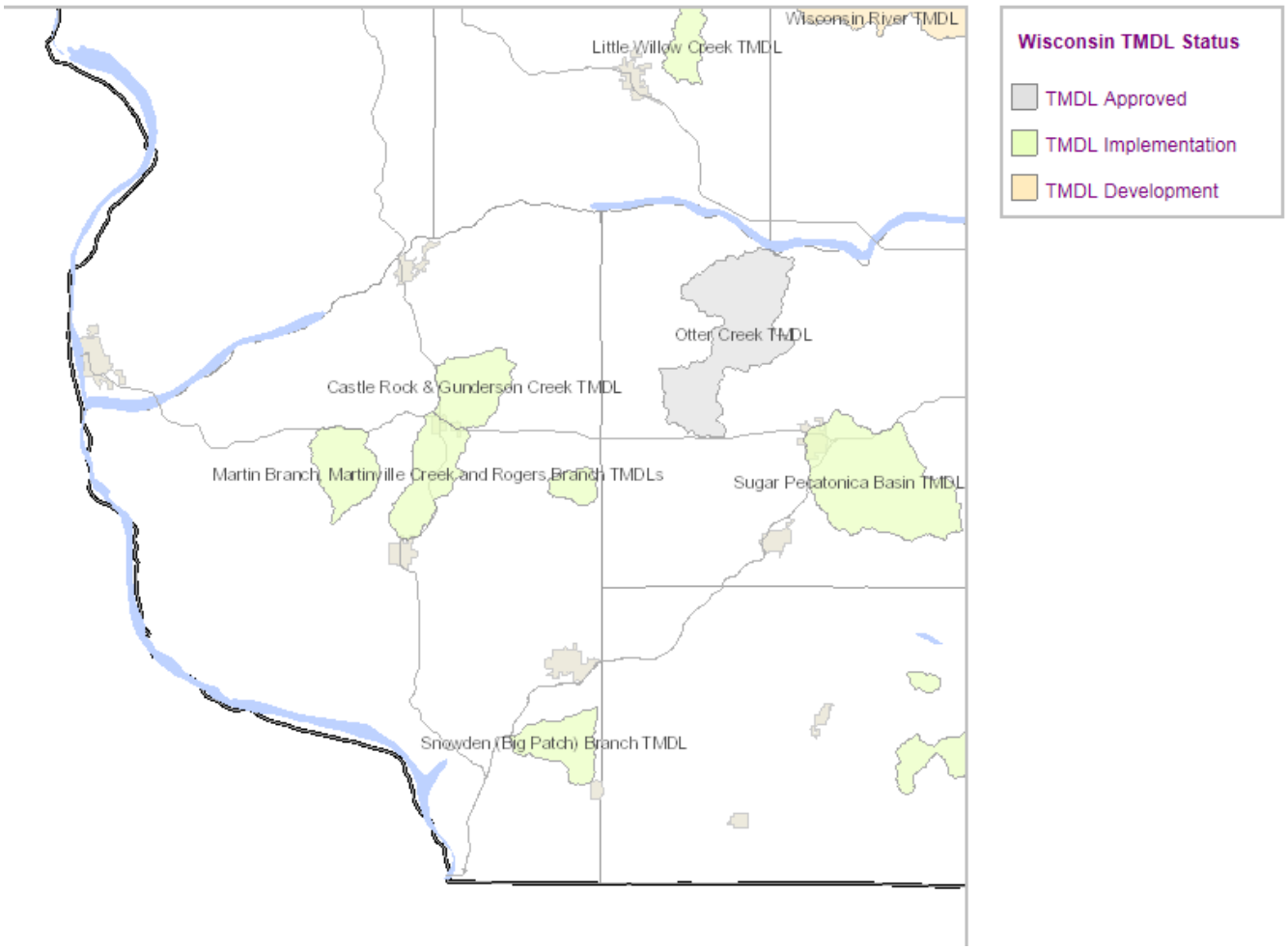


Figure 3.3- TMDL Status Map

APPENDIX A

"The Planning Process"

Table of Contents

GRANT COUNTY
CONSERVATION, SANITATION, & ZONING

150 West Alona Lane, Suite #1, Lancaster, WI 53813 608/723-6377 X4

December 18th, 2017

To: Interested Individuals and Agency Staff

From: Lynda Schweikert, Administrator of CSZD

In order for the Conservation, Sanitation, and Zoning Department (CSZD) to obtain funds from the Department of Agriculture, Trade, and Consumer Protection, and Department of Natural Resources, we have to develop a ten year Land and Water Resource Management (LWRM) plan. This plan shows how we intend to implement conservation in our county over the next ten years. Our current plan expires at the end of 2018.

A vital part of the process is assembling a local advisory committee to assist in the development of the plan. Behind this idea is the thought that a diverse mix of interested groups and individuals such as landowners, local government officials and staff, educators, basin partner teams, interest groups and citizens will have the best idea of the needs and concerns of the county in which they live. The main purpose of the local advisory committee is to:

- Help identify problem areas and conservation issues and concerns;
- Provide information and technical data for the plan;
- Assist with preparing the plan;
- Review and comment on the plan as it develops.

This is where you come in; we are offering you an invitation to participate in our planning process to help develop our goals for the next ten years. Our first local advisory committee will meet:

Wednesday, January 17th, 2018 9:00 A.M.
South Room; Youth & Ag Building; Lancaster

If you are interested in working with us on our LWRM plan or have questions regarding the planning process, please contact us at 608-723-6377 ext #4.

We look forward to hearing from you.

Sincerely,

Lynda Schweikert
Grant County Administrator of CSZD

List of People Invited to Local Advisory Committee

Name	Affiliation/Occupation
Steve Adrian	Agricultural Producer
Jim Amrhein	DNR
Kyle Andreska	Farm Bill Biologist
Chris Baxter	UWP Professor
Josh Bushee	NRCS
Andy Buttles	Agricultural Producer
Randy Chambers	CSZD
Andrew Craig	DNR
Arin Crooks	Lancaster ARS
Darrell Crapp	Agricultural Producer
Tammy Enz	Friends of the Platte River
Dale Gasser	DNR
Steve Gehrke	Wings Over Wisconsin
Roger Guthrie	CSZD Committee
Jeff Hastings	Trout Unlimited
Erik Heagle	CSZD
Dale Hood	CSZD Committee
Lester Jantzen	CSZD Committee
Robert Keeney	Grant County Board Chair
Louis & Ann Kieler	Agricultural Producer
Kevin Lange	CSZD
Gabe Loeffelholz	CSZD Committee
Annette Lolwing	CSZD
Grant Loy	CSZD Committee
Dave Mours	NRCS
Dwight Nelson	CSZD Committee Chair
Josh Noble	Agronomist
Don Pluemer	Trout Unlimited
Jason Sable	DNR
Nathalie Schattner	FSA Executive Director
Joe Schmelz	NRCS District Conservationist
Joe Schwantes	Agricultural Producer
Lynda Schweikert	CSZD Administrator
Sam Schwer	Agricultural Producer
Chrissy Shaw	DNR
Bradd Sims	DNR
Dan Smith	UW Extension
Mark Stead	CSZD Committee
Marty Stone	DNR
Lisa Trumble	DATCP
Jean Unmuth	DNR
Peter Winch	Agricultural Producer

GRANT COUNTY
CONSERVATION, SANITATION, & ZONING
DEPARTMENT

150 West Alona Lane, Suite #1, Lancaster, WI 53813 608/723-6377 X4

January 17, 2018

Re: Land & Water Resource Management Plan Planning Meeting
Who: Local Advisory Work Group

AGENDA

9:00 AM	Introductions
9:15 AM	What is a Land and Water Resource Management Plan?
9:30 AM	Understanding the Statewide Agricultural Performance Standards
10:00 AM	Discussion on Resource Concerns
10:30 AM	Identifying Priority Areas

List of Participants Attending January 17, 2018 Meeting

Name	Affiliation/Occupation
Steve Adrian	Agricultural Producer
Jim Amrhein	DNR
Josh Bushee	NRCS
Randy Chambers	CSZD
Andrew Craig	DNR
Arin Crooks	Lancaster ARS
Dale Gasser	DNR
Roger Guthrie	CSZD Committee
Erik Heagle	CSZD
Dale Hood	CSZD Committee
Louis & Ann Kieler	Agricultural Producer
Kevin Lange	CSZD
Gabe Loeffelholz	CSZD Committee
Annette Lolwing	CSZD
Dave Mours	NRCS
Dwight Nelson	CSZD Committee Chair
Josh Noble	Agronomist
Nathalie Schattner	FSA Executive Director
Joe Schmelz	NRCS District Conservationist
Lynda Schweikert	CSZD Administrator
Chrissy Shaw	DNR
Dan Smith	UW Extension
Lisa Trumble	DATCP
Jean Unmuth	DNR

Newspaper Article

2018 GRANT COUNTY LAND & WATER RESOURCE MANAGEMENT PLAN SURVEY

By: Erik Heagle, Soil & Water Conservation Technician

2018 is the year for Grant County's Land & Water Resource Management Plan to be re-written so we are offering the public an opportunity to assist by taking the Land & Water Resource Management Survey. The results of this survey will be used to prioritize the funding we receive through federal, state and local grants. While all the items on this survey are important and are serviced though our office, there are times when we need to prioritize what we work on, and that is when we will reference the results of this survey. With the public input from this survey, we can help determine where cost sharing funds should be allocated to and where any primary areas of concern are located.

The major objectives of the previous plan were:

- To control soil erosion in Grant County
- To preserve farmland
- To prevent contaminants from entering the groundwater of Grant County
- To prevent contaminants from entering the surface waters of Grant County
- To inform the public and keep them up to date on conservation issues

The survey will be available to all Grant County residents and landowners only. It will be available to fill out online from the county's website www.co.grant.wi.gov (Departments, Cons, San, Zoning Dept.) or picked up at the Grant County CSZD office, 150 W Alona Ln., Lancaster, 53813.

Deadline for the survey is Wednesday, February 28th by 4:00 pm.

GRANT COUNTY LAND & WATER RESOURCE MANAGEMENT PLANNING SURVEY

*Survey open to Grant County residents and landowners only. One survey per person maximum. All areas must be filled out to count. Must be received by February 28th, 2018.

Township of residence: (required)

RESOURCE CONCERNS

PLEASE RANK THE FOLLOWING RESOURCE CONCERNS WITH (1) BEING THE HIGHEST PRIORITY AND (12) BEING THELOWEST.

_ Air Quality

_ Forestry

_ Loss of Farmland to Land Development

_ Threatened or Endangered Species

_ Farm Management

_ Groundwater Quantity

_ Soil Erosion

_ Groundwater Quality

_ Fish/Wildlife Habitat

_ Invasive Species

_ Surface Water Quality

_ Soil Quality/Health

Other _____

Comments:

STATEWIDE AGRICULTURAL PERFORMANCE STANDARDS (ATCP 50.04)

PLEASE RANK THE FOLLOWING STANDARDS WITH (1) BEING THE HIGHEST PRIORITY AND (13) BEING THE

LOWEST.

_ Meet Tolerable "T'' Soil Loss

_ Develop AND Follow a Nutrient Management Plan

_ Prevent Direct Runoff From Feedlots or Stored Manure Into Waters of the State

_ Maintain Adequate Sod Along Waters of the State

_ Prevent Overtopping of Waste Storage

_ Repair Leaking Waste Storage Facilities

_ Build Waste Storage Facilities According to Standards

_ Close Waste Storage Facilities According to Standards

_ Do Not Stack Manure Within A WQMA (Water Quality Management Area)

_ Divert Clean Water Around Feedlots, Waste Storage, and Barnyards Within A WQMA

_ Stocking Rates of Less Than 1 Animal Unit Per Acre During the Grazing Season

_ Maintain A Minimum 5' Tillage Setback From Water (unless otherwise noted)

_ Prevent Feed Storage and/or Milkhouse Waste From Entering A WQMA

Comments:

PRIORITY AREAS

PLEASE RANK THE FOLLOWING PRIORITY AREAS WITH (1) BEING THE HIGHEST PRIORITY AND (7) BEING THE LOWEST.

_ Farmland Preservation Program Participants

_ NR 151 Complaint Issues

_ Land Use

_ Producer Led Watershed Projects

_ Impaired Waters

_ Exceptional Waters

Other _____

Comments:

LAND USE

PLEASE RANK THE FOLLOWING LAND USES WITH (1) BEING THE HIGHEST PRIORITY AND (10) BEING THE LOWEST.

_ Urban/Development

_ Agriculture

_ Grassland

_ Open Water

_ Wetland

_ Forest

_ Barren

_ Crop Ground

_ Riparian Areas (streambank)

_ Pasture

Comments:

GRANT COUNTY LWRM PLAN SURVEY RESULTS	
Resource Concerns	
1	Groundwater Quality
2	Soil Erosion
3	Surface Water Quality
4	Soil Quality/Health
5	Fish/Wildlife Habitat
6	Farm Management
7	Loss of Farmland
8	Groundwater Quantity
9	Invasive Species
10	Air Quality
11	Forestry
12	Threatened & Endangered Species
Statewide Agricultural Performance Standards (ATCP 50.04)	
1	Prevent Direct Runoff From Feedlots or Stored Manure Into Waters of the State
2	Meet Tolerable "T" Soil Loss
3	Develop AND Follow a Nutrient Management Plan
4	Prevent Overtopping of Waste Storage
5	Repair Leaking Waste Storage Facilities
6	Divert Clean Water Around Feedlots, Waste Storage, and Barnyards Within A WQMA
7	Build Waste Storage Facilities According to Standards
8	Do Not Stack Manure Within A WQMA (Water Quality Management Area)
9	Maintain Adequate Sod Along Waters of the State
10	Prevent Feed Storage and/or Milkhouse Waste From Entering A WQMA
11	Close Waste Storage Facilities According to Standards
12	Maintain A Minimum 5' Tillage Setback From Water (unless otherwise noted)
13	Stocking Rates of Less Than 1 Animal Unit Per Acre During the Grazing Season
Priority Areas	
1	Impaired Waters
2	NR 151 Complaint Issues
3 Tie	Farmland Preservation Program Participants
3 Tie	Land Use
5	Producer Led Watershed Projects
6	Exceptional Waters
Land Use	
1	Crop Ground
2	Agriculture
3	Riparian Areas (streambank)
4	Pasture
5	Wetland
6	Open Water
7	Grassland
8	Forest
9	Urban/Development
10	Barren

GRANT COUNTY

CONSERVATION, SANITATION, & ZONING

150 West Alona Lane Suite #1, Lancaster, WI53813 608/723-6377 X4

February 21, 2018

To: Local LWRM Work Group

From: Lynda Schweikert, Administrator of CSZD

This letter is a notice for the second meeting of the Land & Water Resource Management Plan. During this meeting, we will discuss the results of the countywide survey, start to determine a plan of action, and development of goals going forward for the 2018 LWRM plan.

Our second local advisory committee will meet:

Wednesday, March 7th, 2018 9:00 A.M.
South Room; Youth & Ag Building; Lancaster
Grant County Fairgrounds, 916 E. Elm Street

If you have questions regarding the planning process, please contact us at 608-723-6377 ext 4.
We look forward to hearing from you.
Sincerely,
Lynda Schweikert
Grant County Administrator of CSZD

List of Participants attending March 7th, 2018 meeting

Name	Affiliation/Occupation
Josh Bushee	NRCS
Andy Buttles	Agricultural Producer
Randy Chambers	CSZD
Arin Crooks	Lancaster ARS
Erik Heagle	CSZD
Kevin Lange	CSZD
Gabe Loeffelholz	CSZD Committee
Annette Lolwing	CSZD
Josh Noble	Agronomist
Nathalie Schattner	FSA Executive Director
Lynda Schweikert	CSZD
Sam Schwer	Agricultural Producer
Dan Smith	UW Extension
Mark Stead	CSZD Committee

Please publish the weeks of May 24 & May 31, 2018

For more information contact Lynda Schweikert
Grant County CSZD
(608) 723-6377 ext. #4

NOTICE OF PUBLIC HEARING

Notice is hereby given that a public hearing will be held in the Grant County Board Room, Rm., 264, in the Administration Building, 111 S Jefferson St., Lancaster, Wisconsin, on Thursday June 7th, 2018 at 9:00 am for the purpose of soliciting comments on the Land and Water Resource Management Plan being developed by the Grant County Conservation, Sanitation and Zoning Committee. A copy of the plan can be obtained from the Conservation, Sanitation and Zoning Department at 150 W. Alona Lane, Lancaster, WI 53813 or found on the Grant County website at www.co.grant.wi.gov/.

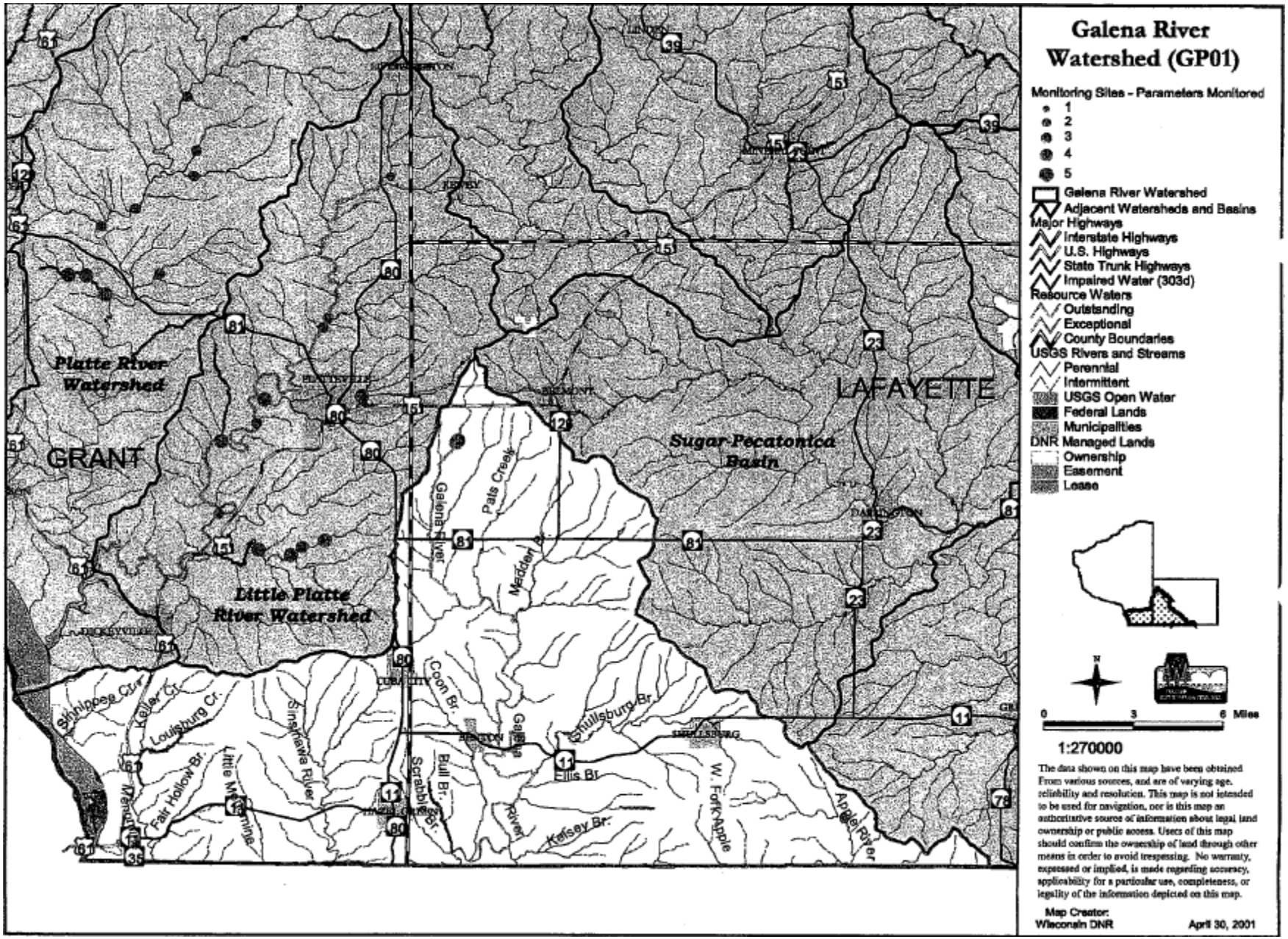
APPENDIX B

WATER QUALITY ASSESSMENT OF MAJOR WATERSHEDS BY BASINS

Grant County Portions of the:

Grant-Platte River Water Quality Management Plan, 2001 *
Lower Wisconsin River Water Quality Management Plan, 2002 *

*All references cited in this appendix can be found in the above basin management plans


Galena River Watershed (GP01)
Monitoring Sites - Parameters Monitored
1
2
3
4
5
Galena River Watershed
Adjacent Watersheds and Basins
Major Highways
Interstate Highways
U.S. Highways
State Trunk Highways
Impaired Water (303d)
Resource Waters
Outstanding
Exceptional
County Boundaries
USGS Rivers and Streams
Perennial
Intermittent
USGS Open Water
Federal Lands
Municipalities
DNR Managed Lands
Ownership
Easement
Lease
Platte River Watershed
GRANT
Little Platte River Watershed
Sugar Pecatonica Basin
LAFAYETTE
Galena River
Platz Creek
Meddler
Coon Br.
Phillsburg Br.
Ellis Br.
Kelsey Br.
W. Fork Apple
Apple River
Scrabble Cr.
Bull Br.
Sinsinawa River
Little Menomonie
Fair Hollow Br.
Louisburg Cr.
Keller Cr.
Shinipeg Cr.
0 3 6 Miles
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The data shown on this map have been obtained From various sources, and are of varying age, reliability and resolution. This map is not intended to be used for navigation, nor is this map an authoritative source of information about legal land ownership or public access. Users of this map should confirm the ownership of land through other means in order to avoid trespassing. No warranty, expressed or implied, is made regarding accuracy, applicability for a particular use, completeness, or legality of the information depicted on this map.
Map Creator:
Wisconsin DNR
April 30, 2001

GALENA RIVER WATERSHED (GP01)

The Galena River Watershed lies in southern Grant County and southwestern Lafayette County. It is a large watershed of about 242 square miles. Of the 260 miles of streams in the watershed, 115 streams are classified as warm weather sport fishery. Thirty-five miles of the Galena River are considered Exceptional Resource. Waters (ERW) under state administrative rules. The existing biological uses of about 120 miles of smaller streams in the watershed have not been formally determined.

Four streams in the watershed are on Wisconsin's impaired waters list as required by section 303(d) of the federal Clean Water Act. Those four are Bull Branch, Diggings Creek, Louisburg Creek, and an unnamed tributary to Shullsburg Branch. Diggings Creek and the tributary to Shullsburg Branch are listed due to the continued effects from the mining waste piles in the area. The others are listed due to loss of habitat resulting from non-point sources of pollution.

Overall the watershed is ranked as a high priority for NPS abatement needs. In addition, groundwater is considered to have a high potential for contamination.

RECOMMENDATIONS FOR THE GALENA RIVER WATERSHED

NON-POINT SOURCE POLLUTION

- Grant County and Lafayette County LWCD Staff, and the DNR, should conduct land and water surveys to identify potential and existing NPS problems in the Galena River watershed. This could be used to make a recommendation on all or parts of the watershed for possible inclusion into NPS Abatement programs such as the Targeted Runoff Management (TRM) or EQIP programs.

GROUNDWATER CONTAMINATION

- The DNR and other units of government should inventory and locate for inclusions in a Geographic Information System (GIS) data base all abandoned mines, mining waste piles and airshafts associated with historic mining in the Galena River watershed.

PROTECTING AND IMPROVING WATER QUALITY AND IN-STREAM HABITAT

- The DNR, including the assistance of Integrated Science Services staff, should conduct baseline monitoring on the Galena River, Sinsinawa River, Madden Branch, Pats Creek, Scrabble Creek, Shullsburg Branch and the Apple River to assess current status of in-stream habitat, macroinvertebrate communities, and fish communities.

- The DNR should monitor Coon Branch and Diggings Creek to determine if elevated levels of heavy metals are still present in the water column. Sediment sampling and fish toxicity sampling should also be done.

- The DNR should conduct additional monitoring and follow-up investigations on Shullsburg Branch to determine if zinc or mine waste is causing water quality problems in the stream. If the stream is found to have a water quality problem due to past mining practices, it should be considered for addition to Wisconsin's 303(d) list of impaired streams.

- The DNR should monitor the following streams to track the status of state endangered and threatened species and state species of concern: Apple River, Coon Branch, Galena River, Bull Branch, Pats Creek, and the Menominee River.

- The DNR, in partnership with local governmental agencies and local conservation groups, should identify opportunities to better protect riparian habitat on reaches of the Galena River, Sinsinawa River, Menominee River, Shullsburg Branch and Madden Branch and any other streams in the watershed.

  The following streams should be due to habitat impairment from sediment: Apple River, Coon Branch, Fair Play Creek, Madden Branch, Pats Creek, Shullsburg Branch and Sinsinawa River. An assessment should be made to determine what action could help improve these streams.

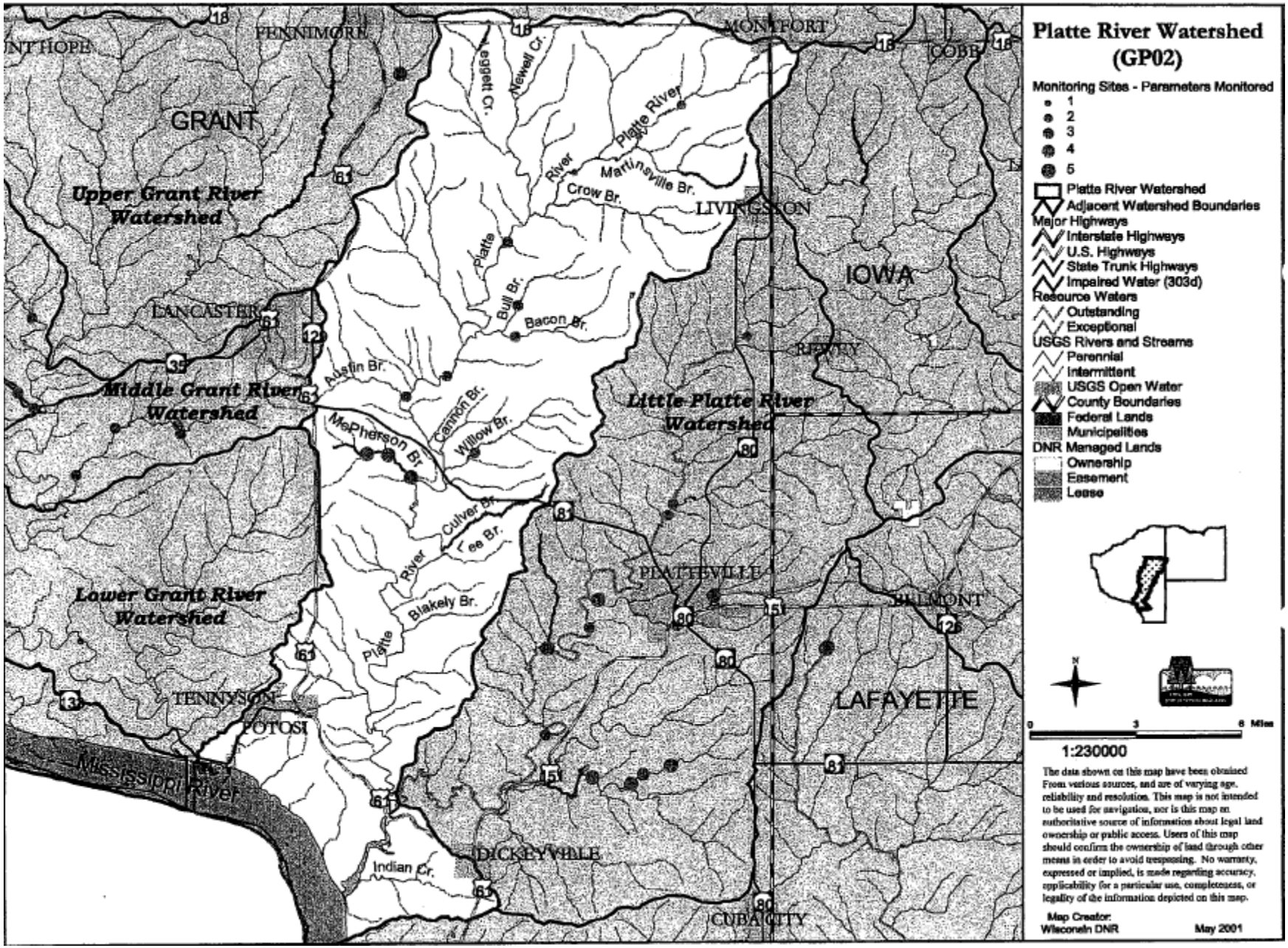
OUTDOOR RECREATION, WILDLIFE HABITAT AND PROTECTING OPEN SPACE AND FARMLAND

The DNR, in partnership with local governmental agencies and local conservation groups, should identify opportunities to better provide public access on reaches of the Galena River, Sinsinawa River, Menominee River, Shullsburg Branch and Madden Branch and any other streams in the watershed.

- The villages of Benton and Hazel Green, and the cities of Cuba City and Shullsburg should take advantage of opportunities to provide public open space, recreation and access in the riparian areas along the Galena River in their communities.

- The DNR should develop and implement a management plan for a small-mouth bass fishery on the Galena River, Sinsinawa River, Menominee River, Shullsburg Branch and Madden Branch.

NOTE- In 2016, an assessment of water quality in the Sinsinawa River Watershed was completed by James Amrhein, Water Quality Biologist WI DNR. Specific report details can be found online through the Wisconsin DNR website or at the Grant County CSZD office.


Platte River Watershed
(GP02)
Monitoring Sites - Parameters Monitored
1
2
3
4
5
Platte River Watershed
Adjacent Watershed Boundaries
Major Highways
Interstate Highways
U.S. Highways
State Trunk Highways
Impaired Water (303d)
Resource Waters
Outstanding
Exceptional
USGS Rivers and Streams
Perennial
Intermittent
USGS Open Water
County Boundaries
Federal Lands
Municipalities
DNR Managed Lands
Ownership
Easement
Lease
Upper Grant River Watershed
Middle Grant River Watershed
Lower Grant River Watershed
Little Platte River Watershed
GRANT
LANCASTER
PLATTEVILLE
BLMONT
LAFAYETTE
IOWA
LIVINGSTON
MONTFORT
COBB
TENNYSON
POTOSI
DICKEYVILLE
CUBA CITY
Mississippi River
Platte River
Bull Br.
Bacon Br.
Martinsville Br.
Crow Br.
Newell Cr.
Leggett Cr.
Austin Br.
Cannon Br.
Willow Br.
McPherson Br.
Culver Br.
Lee Br.
Blakely Br.
Indian Cr.
0 3 6 Miles
1:230000
The data shown on this map have been obtained From various sources, and are of varying age, reliability and resolution. This map is not intended to be used for navigation, nor is this map an authoritative source of information about legal land ownership or public access. Users of this map should confirm the ownership of land through other means in order to avoid trespassing. No warranty, expressed or implied, is made regarding accuracy, applicability for a particular use, completeness, or legality of the information depicted on this map.
Map Creator:
Wisconsin DNR
May 2001

PLATTE RIVER WATERSHED (GP02)

The second largest watershed in the basin, the Platte River watershed, covers 198 square miles in central and east-central Grant County, with a small portion in extreme western Iowa County. The Platte River is the primary waterbody in the watershed. The river's historical records record it to be deep enough to allow steamboats to ply its lower reaches. The upper reaches of the watershed are on Military Ridge, where the land is rolling and well suited to cultivation. The rest of the watershed's topography consists of narrow ridgetops and steep slopes down to a narrow valley floor. The ridgetops are usually cultivated, while the steep valley slopes have been left in woods, similar to the pre-settlement condition.

There are about 215 stream miles in the watershed. There are 30.8 miles of cold-water (trout) streams, approximately 60 miles of warm-water sport fishery streams, 48.2 miles of warm-water forage fishery streams, and 3.2 miles of limited aquatic life streams. The existing biological uses of the remaining stream miles have not been determined, but are assumed to be full fish and aquatic life waters. Portions of four streams in the watershed, totaling 10.5 miles, are currently on Wisconsin's list of impaired waters, the 303(d) list. Those streams are Culver Branch, a short reach of Leggert Creek, a portion of Martinville Creek, and McPherson Branch. Each are on the list due to instream habitat impairment caused by nonpoint sources of pollution.

Due to the watershed's steep slopes, streams in the watershed suffer from vary rapid runoff during storm events. Soil loss from farm fields and pastures leads to sedimentation in streams in the watershed and in Pool 11 of the Mississippi River. The Platte River Watershed is estimated to have a sediment yield of 182 tons per square mile annually (Grant County LWCD, 1997). The streams in the watershed and the watershed overall has been ranked as a medium priority with respect to nonpoint source pollution. The groundwater in the watershed has been determined to have a high potential for contamination.

RECOMMENDATIONS FOR THE PLATTE RIVER WATERSHED

NON-POINT SOURCE POLLUTION

- The following streams and their subwatersheds should be considered for selection as Targeted Runoff Management (TRM) projects: Crow Branch, Lee Branch, Leggett Creek, Martinville Creek, McPherson Branch, and the reach of the Platte River above Annaton Road.

- The DNR should work closely with the Wisconsin Department of Transportation, Southwestern Wisconsin Regional Planning Commission, and with Grant County LWCD on reviewing erosion control measures associated with the reconstruction of US Highway 151 to assure maximum protection of nearby streams.

PROTECTING AND IMPROVING WATER QUALITY AND IN-STREAM HABITAT

The DNR, in cooperation with the Grant County LWCD, should conduct baseline monitoring on 10 streams (Platte River - 2 sites, Leggett Branch, Newell Creek, Martinsville Creek, Culver Branch, McPherson Branch, Austin Branch, Bull Branch, Crow Branch and Bacon Branch).

The Wisconsin DNR should monitor Willow Creek, Crow Creek, Leggett Creek, Culver Creek and the Platte River to tract the status of endangered and threatened species and state species of concern.

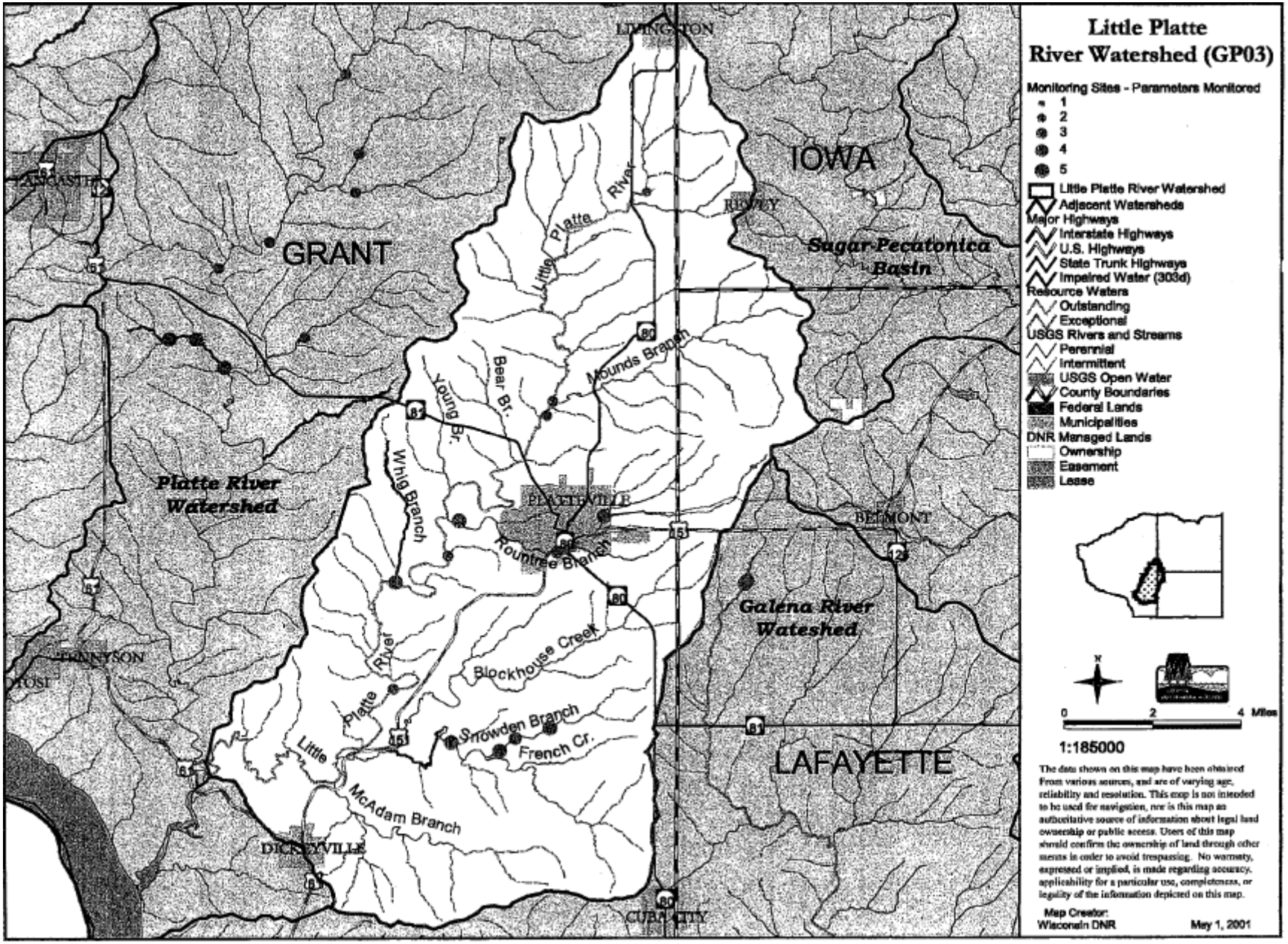
The following streams should be monitored as a result of habitat impairments due to nonpoint sources of pollution: Austin Branch, Bull Branch, Crow Branch, Newell Creek, the remainder of Leggett Creek not on the list, and the Platte River.

The DNR should consider adding Willow Creek to the state's list of Exceptional Resource Waters due to a large population of a state-threatened species.

The DNR Waters program, in partnership with local governmental agencies and local conservation groups, should identify opportunities to better protect riparian habitat and provide public access on reaches of the Platte River. Other streams in the watershed where opportunities to better protect riparian habitat and provide public access should be considered are Leggett Creek, McPherson Branch, Newell Creek and Martinville Creek.

OUTDOOR RECREATION, WILDLIFE HABITAT AND PROTECTING OPEN SPACE AND FARMLAND

Grant County, with the assistance of the Grant County UW-Extension office, Southwest Wisconsin Regional Planning Commission, and the Southwest Badger Resource Conservation and Development should investigate the feasibility and desirability of developing and promoting a county canoe trail on the Platte River.


Little Platte River Watershed (GP03)
Monitoring Sites - Parameters Monitored
1
2
3
4
5
Little Platte River Watershed
Adjacent Watersheds
Major Highways
Interstate Highways
U.S. Highways
State Trunk Highways
Impaired Water (303d)
Resource Waters
Outstanding
Exceptional
USGS Rivers and Streams
Perennial
Intermittent
USGS Open Water
County Boundaries
Federal Lands
Municipalities
DNR Managed Lands
Ownership
Easement
Lease
LIVINGSTON
IOWA
GRANT
Sugar-Pecatonica Basin
Little Platte River
Mounds Branch
Young Br.
Bear Br.
Platte River Watershed
White Branch
PLATTEVILLE
BELMONT
Rountree Branch
Galena River Wateshed
Blockhouse Creek
Platte River
Snowden Branch
French Cr.
Little McAdam Branch
LAFAYETTE
DICKEYVILLE
CUBA CITY
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Map Creator:
Wisconsin DNR
May 1, 2001

LITTLE PLATTE RIVER WATERSHED (GP03)

The Little Platte River watershed is a 155 square mile watershed in eastern Grant County and the southwest comer of Iowa County and northwest comer of Lafayette County. It is tributary to the Platte River in southern Grant County. The topography is rolling with streams incised in smaller, often steep-sided valleys. This lends to rapid runoff during storm events and major snowmelts. Soil loss is a problem in the watershed, as it is in most watersheds in the unglaciated southwest part of the state. Average annual soil loss in the watershed has been estimated at 7.5 tons per acre per year (Fix, 1991). The streams in the watershed and the watershed in general have been ranked as a high priority with respect to NPS. The groundwater is at risk for potential contamination.

The watershed is predominantly agricultural with a mixture of dairying, cash cropping and feeder operations. Cultivation occurs on the ridge tops and on valley floors. Grazing usually occurs adjacent to streams. The steeper valley slopes are left in woodlots. As with the other watersheds in the basin, the number of farms has been decreasing while the size of farms has been increasing. Agricultural non-point pollution in the watershed has affected most streams in the watershed.

There are 184 stream miles in the Little Platte River watershed, with 105 miles of named streams. Streams in the watershed are very flashy and water levels rise and drop quickly due to runoff events. Streams in the watershed have in-stream habitat impairments due to non-point sources of pollution, primarily from runoff of cultivated fields and barnyards, and from excessive grazing of streambanks. There are 67.5 miles of warm-water sport fishery in the watershed, and only one stream with a cold-water fishery segment, the Little Platte River. The Little Platte is also on the state's Exceptional Resource Waters (ERW) list. The Little Platte River has excellent sport fishing for small-mouth bass (Lyons, 2000). Whig Branch and Snowden Branch were added to the state's impaired waters list in 1998. Other streams in the watershed are likely to be added when the impaired waters list is updated. The Little Platte River watershed is being considered by the Nature Conservancy as a high priority area for aquatic conservation work. This should increase the potential for local private-public partnerships to benefit some of the streams in the 'watershed (Lyons, 2000).

There are at least 17 abandoned mines and at least that many known mining waste piles in the watershed (Fix, 1991). Mine waste piles in other parts of southwest Wisconsin have been documented as sources of pollution and degradation to some streams. There are also an unknown number of mine airshafts in the watershed (Webber, 1998). It's not known what effect, if any, these mines and airshafts are having on groundwater or surface water quality.

Public recreation is limited in the watershed. Platteville does offer public parks and a walking/bike trail along Roundtree Branch. Public access to streams is limited to bridge crossings, although the DNR does have some fishing easements on sections of the Little Platte River. The Pecatonica State Trail, to run from Calamine in Lafayette County to Platteville, is not complete between Platteville and Belmont. Once the trail is finished, the back roads near Platteville will offer the better-conditioned bikers challenges and scenic rides.

There are many woodlots in the watershed, mostly on the steeper slopes, which provide good wildlife habitat. Hunting is allowed on private lands with the permission of the owner. Platteville is the site of the University of Wisconsin-Platteville, the only four-year university or college in the basin.

RECOMMENDATIONS FOR THE LITTLE PLATTE RIVER WATERSHED

NON-POINT SOURCE POLLUTION

The City of Platteville, with the assistance of the DNR, Southwestern Wisconsin Regional Planning Agency, and Southwest Badger RC&D, should develop a sewer service area plan to help manage cost effective provisions of sewer services and to protect environmental resources within their planning area.

The City of Platteville, with the assistance of the DNR, Southwestern Wisconsin Regional Planning Agency, and Southwest Badger RC&D, should address stormwater management issues and problems in the city.

The Little Platte River watershed should be considered by the DNR, Wisconsin DATCP and Grant County as a high priority candidate for a NPS abatement project, specifically, Targeted Runoff Management (TRM). An EQIP project should be considered by the DNR and Grant County for all or portions of the Little Platte River, Blockhouse Creek, Mounds Branch, Roundtree Branch and/or Snowden Branch.

PROTECTING AND IMPROVING WATER QUALITY AND IN-STREAM HABITAT

- The DNR, with the assistance of Integrated Sciences Services staff, should conduct basin assessment monitoring to assess existing in-stream fisheries habitat conditions should be done for the Little Platte River watershed focusing on Blockhouse creek, and Mounds Branch.

- The DNR, with the Wisconsin State Laboratory of Hygiene should conduct additional monitoring and investigating on Roundtree Branch to determine if metals constitute a water quality problem, the extent and source(s) of any heavy metal pollution.

- The DNR should monitor Blockhouse Creek, Little Platte River and Mounds, Roundtree and Young Branches to track the status of state endangered and threatened species and species of concern.

- The DNR, in partnership with the Friends of the Roundtree Branch, Trout Unlimited, University of Wisconsin - Platteville, the Grant County Conservation, Sanitation, & Zoning Department, and the USDA NRCS should work on improving the cold-water fishery on a reach of Roundtree Branch at Platteville.

- The DNR in partnership with Trout Unlimited, the Grant County Land & Water Conservation Department and the USDA NRCS should evaluate the feasibility of establishing a cold-water fishery on a reach of Snowden Branch near Platteville.

- The DNR, with assistance from the Grant County CSZD and local conservation and watershed groups, should identify opportunities for restoration or better protection of riparian habitat and in-stream habitat on reaches of the Little Platte River, Blockhouse Creek and Snowden Branch.

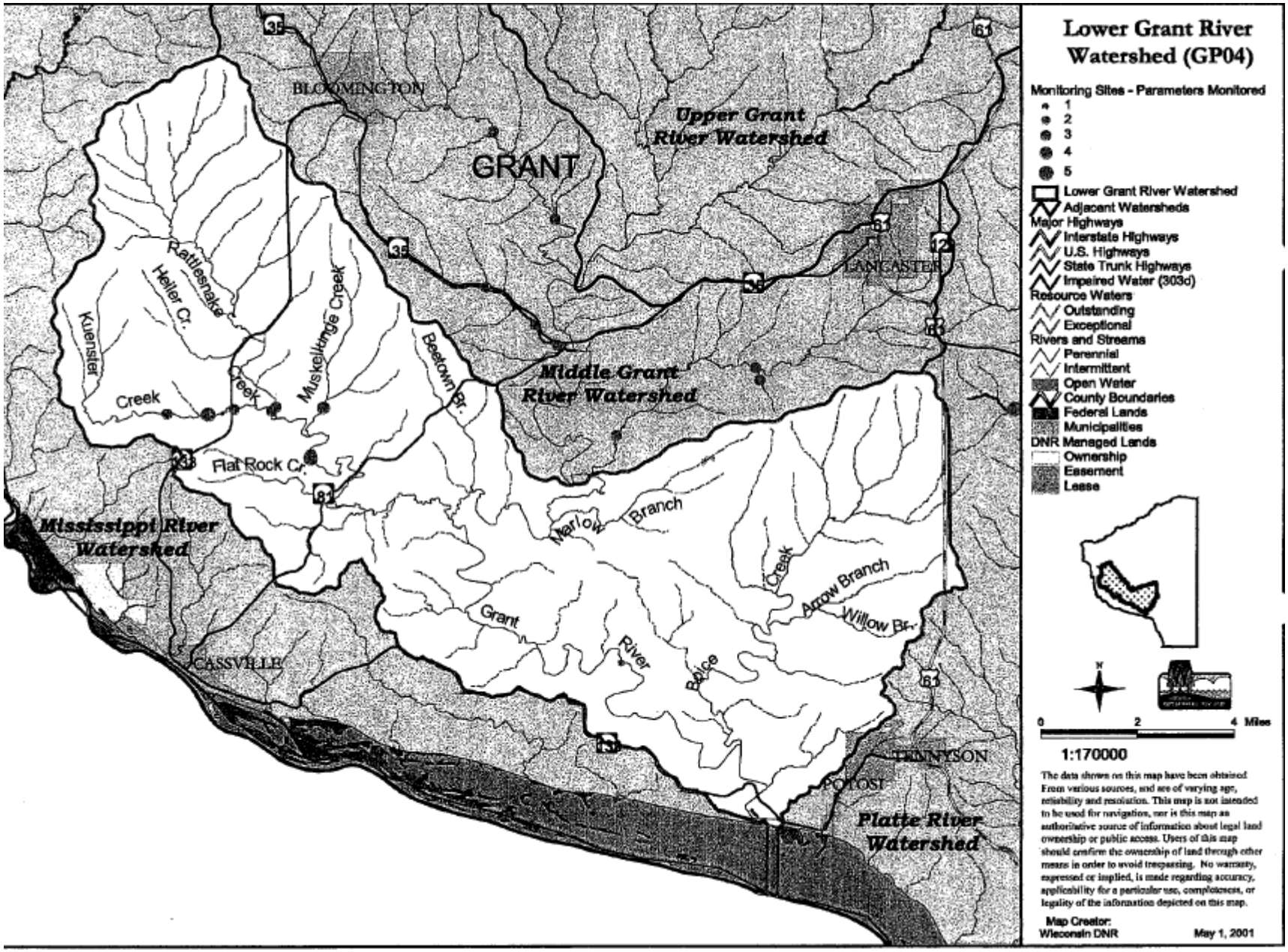
- Roundtree Branch should be monitored and considered for addition to Wisconsin's list of impaired steams due to degradation from non-point sources of pollution and problems with failure of WET toxicity tests.

- The following streams should be monitored to determine if the streams should be considered for addition to the state's list of impaired waters due to adverse in-stream habitat impacts from non-point pollution sources as required by section 303(d) of the Federal Clean Water Act: Blockhouse Creek and Mounds Branch.

OUTDOOR RECREATION, WILDLIFE HABITAT AND PROTECTING OPEN SPACE AND FARMLAND

- The DNR should encourage the establishment of open space buffers around Ipswich Prairie Natural Area through educational and financial incentives.

- The City of Platteville, with the assistance of other governmental agencies and local conservation or watershed groups, should identify opportunities to protect riparian habitat, add public open space, recreation lands and/or public access along Roundtree Branch, Little Platte River, Blockhouse Creek and Snowden Branch.


Lower Grant River Watershed (GP04)
Monitoring Sites - Parameters Monitored
1
2
3
4
5
Lower Grant River Watershed
Adjacent Watersheds
Major Highways
Interstate Highways
U.S. Highways
State Trunk Highways
Impaired Water (303d)
Resource Waters
Outstanding
Exceptional
Rivers and Streams
Perennial
Intermittent
Open Water
County Boundaries
Federal Lands
Municipalities
DNR Managed Lands
Ownership
Easement
Lease
Upper Grant River Watershed
Middle Grant River Watershed
Mississippi River Watershed
Platte River Watershed
BLOOMINGTON
GRANT
LANCASTER
CASSVILLE
TENNYSON
POTOSI
Rattlesnake
Heller Cr.
Kuenster
Creek
Muskellunge Creek
Beetown Br.
Flat Rock Cr.
Marlow
Branch
Creek
Arrow Branch
Willow Br.
Grant
River
Bolce
0
2
4 Miles
1:170000
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May 1, 2001

LOWER GRANT RIVER WATERSHED (GP04)

The Lower Grant River watershed is a 145 square mile watershed in southwest Grant County. It includes the main stem of the Grant River from its mouth at Pool 11 on the Mississippi River upstream to Pigeon Creek. Other principal streams in the watershed include Rattlesnake Creek, Boice Creek and Muskellunge Creek. The watershed contains approximately 66 miles of warm water sport fishery.

The terrain in the upper parts of the watershed has long, gentle slopes of between one to five percent. In the remainder of the watershed, the slopes are steeper, often in excess of 20 percent. The steeper slopes lead to the more rapid runoff of storm water and snowmelt. Consequently, the streams of the watershed tend to be subject to very rapid increases in stream levels during and immediately after runoff events. Soil erosion, a concern everywhere in the watershed, is particularly a problem in the areas with steeper slopes. The Grant River carries one of the highest sediment loads in the state, which can be evidenced by the delta of eroded sediments that has developed at the river's mouth. 'This· high sediment load is a concern on more than just a state or regional level since the Grant River is a major contributor of sediment and nutrients (phosphorous and nitrogen) to the Mississippi River. Overall, the increased runoff due to agriculture, over the last 150 years has affected in-stream water quality, habitat and fisheries of streams in the watershed. In fact, the primary cause of water resource problems in the watershed is poor water quality, specifically low dissolved oxygen following runoff events (Wang et. al., 1996). Department studies indicate that the cause of the low dissolved oxygen levels appears to be manure in the runoff from barnyards and feedlots (Wang et. al., 1996). Overall, the watershed and the streams in the watershed are ranked by the Department as a high priority with respect to NPS.

Land uses in the watershed are mostly rural and agricultural land accounts for roughly 86 percent of the 130 square mile drainage area. About 62 percent of the watershed is cropland. Woodlots occupy another 12 percent of the watershed. The most extensive grouping of wetland complexes in the watershed are in the lower reaches of the Grant River where it empties into Pool 11 of the Mississippi River. There are other smaller wetlands adjacent to streams in the watershed. These wetlands are usually grazed. Many acres of wetlands adjacent to streams are farmed. Farms in the watershed are relatively large, with an average farm size of 310 acres (Bachhuber et. al., 1991). Corn is the dominant crop grown and livestock operations include a mix of dairy, beef and swine.

The watershed has an abundant supply of groundwater. Groundwater in shallow aquifers is the source of virtually all drinking water in the watershed. Two studies done in the watershed indicate that nitrate concentrations in groundwater are a concern. A study done in the Rattlesnake Creek part of the watershed showed that 23.5 percent of the wells tested exceeded state standards for nitrates (University of Wisconsin, 1989). Studies done in Iowa found a direct correlation between increasing use of nitrogen-based fertilizers and an increasing level of nitrates in groundwater. Overall, the groundwater in the watershed has been ranked as a high potential for contamination.

The Lower Grant River watershed was selected as a Wisconsin non-point source abatement priority watershed project in 1989. It ended December, 2002. The priority watershed project is a partnership of the Grant County LWCD, the DNR, DATCP and the NRCS. These agencies work together with willing landowners in the watershed to install non-point source Best Management Practices (BMP) to protect water resources and improve farm conservation practices. Goals of the priority watershed project are to:

- Improve sport and forage fish populations;
- Reduce organic pollution from livestock wastes by 75 percent;
- Improve riparian habitat (Bachhuber et.al., 1991)

The watershed project had signed 98 contracts in the watershed to improve water quality. The project has provided over $1,300,000 in total cost sharing to protect and improve water resources (Grant County, 2003). Participation by landowners in the watershed project has been less than desired. This is reflected in the reductions of barnyard phosphorous and streambank erosion that are significantly below expectations. As of 1997, only 10 percent of the total barnyard phosphorous loading reduction desired had been accomplished. Sediment loading reductions from streambank erosion were at less than 10% of desired goals. By contrast, it was projected that the goal for upland sediment reduction or soil loss would exceed its goal (DATCP, 1998).

There are no incorporated areas in the Lower Grant River watershed. The unincorporated community of Beetown is in the watershed. It is estimated that about 2,600 people live in the watershed (Bachhuber et. al., 1991). Public access to streams is limited to road crossings. Hunting is allowed on private lands with the permission of the property owner. Increased participation in the CRP and CREP programs would increase wildlife habitat in the watershed.

RECOMMENDATIONS FOR LOWER GRANT RIVER WATERSHED

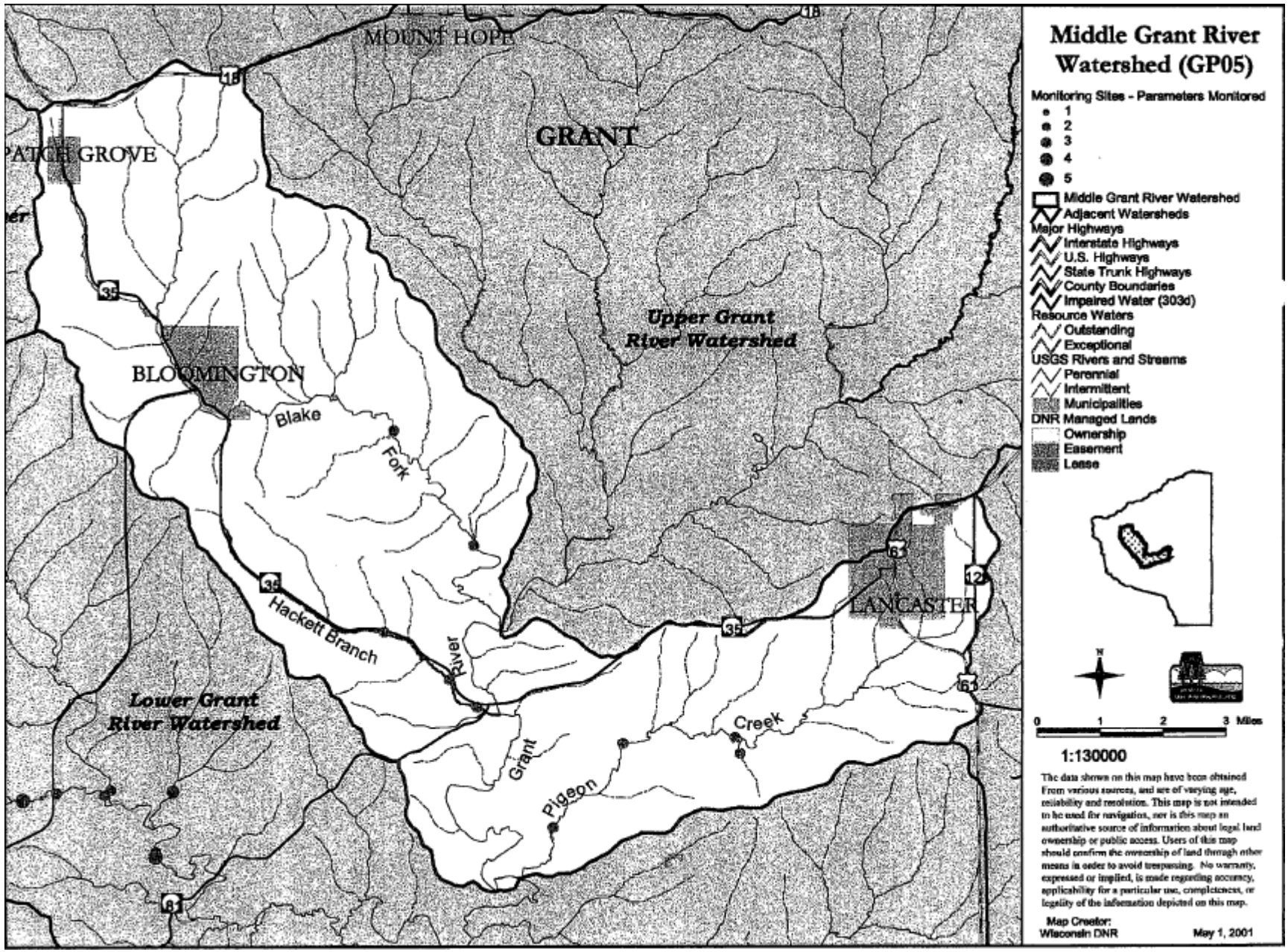
PROTECTING AND IMPROVING WATER QUALITY AND IN-STREAM HABITAT

- The DNR, in partnership with local governmental agencies and local conservation groups, should identify opportunities to better protect riparian habitat on reaches of Rattlesnake Creek.
- The following streams should be monitored, evaluated and considered for additjon to the state's list of impaired waters as required by section 303(d) of the Federal Clem\ Water Act: .Boice Creek, Grant River, Kuenster Creek, Muskellunge Creek and Rattlesnake Creek.
- The DNR, with assistance from the Grant County LWCD, should conduct baseline monitoring on Boice Creek, Grant River, Kuenster Creek, and Rattlesnake Creek by 2006.
- The DNR should monitor the Grant River to track the status of state endangered and threatened species and species of concern.

Outdoor Recreation, Wildlife Habitat and Protecting Open Space and Farmland

- The DNR, in partnership with local governmental agencies and local conservation groups, should identify opportunities to provide public access on reaches of Rattlesnake Creek.

NOTE- In 2012, an assessment of water quality in the Lower Grant River Watershed was completed by James Amrhein, Water Quality Biologist WI DNR. Specific report details can be found online through the Wisconsin DNR website or at the Grant County CSZD office.


MOUNT HOPE
GRANT
PATCH GROVE
BLOOMINGTON
Upper Grant River Watershed
Lower Grant River Watershed
LANCASTER
Blake
Fork
Hackett Branch
River
Grant
Pigeon
Creek
18
35
61
129
Middle Grant River Watershed (GP05)
Monitoring Sites - Parameters Monitored
1
2
3
4
5
Middle Grant River Watershed
Adjacent Watersheds
Major Highways
Interstate Highways
U.S. Highways
State Trunk Highways
County Boundaries
Impaired Water (303d)
Resource Waters
Outstanding
Exceptional
USGS Rivers and Streams
Perennial
Intermittent
Municipalities
DNR Managed Lands
Ownership
Easement
Lease
N
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May 1, 2001

MIDDLE GRANT RIVER WATERSHED (GP05)

The Middle Grant River watershed covers about 80 square miles in west central Grant County. The topography is gently to moderately rolling land with steep-sided valleys and broad ridge tops. The watershed is part of the larger Grant River drainage area that is one of the major contributors of sediment to the Mississippi River. The USGS maintains a flow monitoring station on the Grant River near Burton. Data from this station shows that almost 54,000 tons of sediment was discharged to the river above Burton during 1998 (Holmstrom, et.at., 1998).

There are 97.3 total miles of streams in the watershed. There are only a few wetlands in the watershed, lying next to or very near streams. These wetlands are disturbed by agricultural activities, primarily grazing or cultivation during drier periods. There are no cold-water streams or exceptional resource waters in the watershed. There are 42 miles of warm-water sport fishery. Hackett Branch was added to the state's list of impaired streams in 1998. The streams and watershed as a whole have been ranked as a medium priority for NPS and the groundwater is considered vulnerable to potential contamination as a result of NPS. Blake Fork has been ranked as a high priority for a small-scale NPS abatement project.

Agriculture is the main land use in the watershed. Approximately 70% of the land use is either cropland or pasture. The watershed's estimated annual soil loss is 7.4 tons per acre per year (Midwest Reclamation Planners, no date). Grant County LWCD has ranked this watershed as Grant County's second priority area for erosion control in the county. There are only three municipalities in the watershed; Lancaster (4,242), Patch Grove (204), and Bloomington (761). None of these municipalities are experiencing rapid growth. Each of the municipalities has a public wastewater treatment plant that discharges treated effluent to surface waters and all of these facilities are generally functioning well with no recent significant problems.

Public recreational opportunities are minimal in the watershed. The only public lands are municipal parks in the three municipalities. Public access to streams is available only at road crossings. Hunting is allowed on private lands with the permission of the property owner.

The City of Lancaster has been known to have a significant water quality impact on Pigeon Creek (Fix, 1991). Since 1991, however, Lancaster has undertaken improvements to its wastewater treatment plant and collection system to address this problem. Recent compliance monitoring annual reports submitted by the city and Department inspection reports show the facility to be in good operating condition. The primary problem the facility has now is excessive influent loading during major storm events that has resulted in some bypassing of effluent. The City is reviewing the infiltration problem with its collection system and will be addressing this problem through better maintenance and improvements if that system. Recent whole effluent toxicity testing of the City's effluent indicated no problems. Lancaster also needs to address potential construction site erosion control and community-wide storm water management issues and problems. As of October 2000, Lancaster is challenging the phosphorous limits in its WPDES wastewater discharge permit. Foremost Foods operates a milk processing plant in Lancaster. Foremost treats its wastewater on-site for discharge of the treated effluent to a tributary of Pigeon Creek.

RECOMMENDATIONS FOR THE MIDDLE GRANT WATERSHED

NON-POINT SOURCE POLLUTION

- The City of Lancaster, with the assistance of the DNR, Southwestern Wisconsin Regional Planning Agency, and Southwest Badger RC&D, should address storm water management issues and problems in the city.
-

PROTECTING AND IMPROVING WATER QUALITY AND IN-STREAM HABITAT

- The DNR, with the assistance of Integrated Science Services staff, should conduct basin monitoring to assess existing in-stream fisheries and in-stream habitat conditions should be done for the Middle Grant River watershed focusing on Pigeon Creek , Hackett Branch and Blake Fork.

- The DNR should identify and recommend reaches on the Pigeon Creek and Blake Fork for possible bank, riparian buffer area and in-stream habitat improvements/restoration in order to improve small mouth bass potential of these streams.

- The DNR should monitor Grant River, Hacket Branch and Pigeon Creek to track the status of state endangered/threatened species and state species of concern.

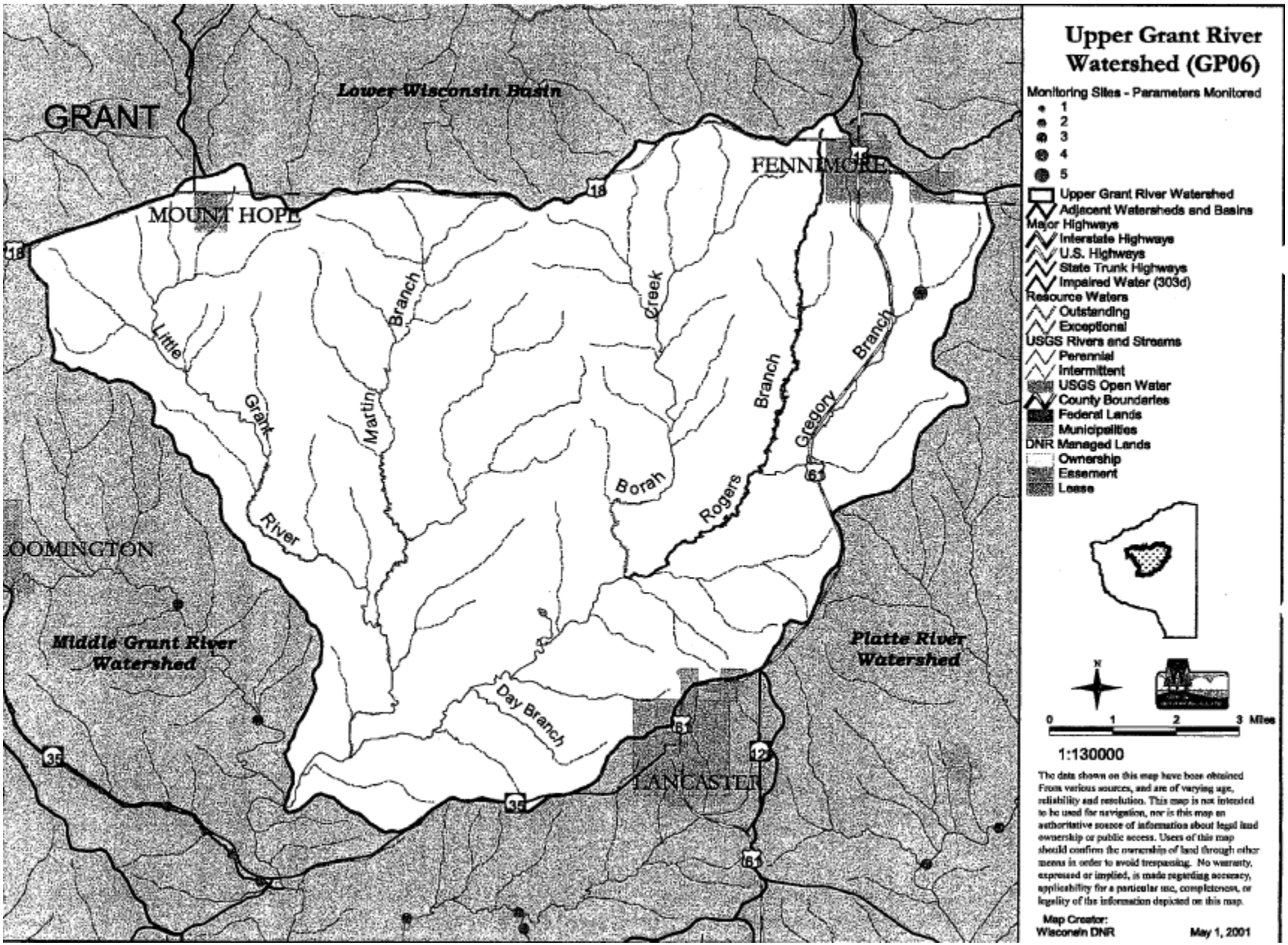
- The City of Lancaster, with the assistance of Southwestern Wisconsin Regional Planning Agency and Southwest Badger RC&D, should address storm water management issues and construction site erosion.

OUTDOOR RECREATION, WILDLIFE HABITAT AND PROTECTING OPEN SPACE AND FARMLAND

- Grant County, with the assistance of the Grant County UW-Extension office, Southwest Wisconsin Regional Planning Commission and the Southwest Badger Resource Conservation and Development, should investigate the feasibility and desirability of developing a county canoe trail on the Grant River.

- The DNR, working with the Grant County LWCD, local conservation groups and landowners, should identify and develop projects that improve smallmouth bass fishing in the watershed by improving in-stream and riparian habitat and reducing sediment loading to Pigeon Creek.

NOTE- In 2012, an assessment of water quality in the Middle Grant River Watershed was completed by James Amrhein, Water Quality Biologist WI DNR. Specific report details can be found online through the Wisconsin DNR website or at the Grant County CSZD office.


Upper Grant River Watershed (GP06)
Monitoring Sites - Parameters Monitored
1
2
3
4
5
Upper Grant River Watershed
Adjacent Watersheds and Basins
Major Highways
Interstate Highways
U.S. Highways
State Trunk Highways
Impaired Water (303d)
Resource Waters
Outstanding
Exceptional
USGS Rivers and Streams
Perennial
Intermittent
USGS Open Water
County Boundaries
Federal Lands
Municipalities
DNR Managed Lands
Ownership
Easement
Lease
GRANT
Lower Wisconsin Basin
MOUNT HOPE
FENNIMORE
LANCASTER
BOOMINGTON
Middle Grant River Watershed
Platte River Watershed
Little Grant River
Martin Branch Creek
Borah Branch
Rogers Branch
Gregory Branch
Day Branch
18
61
35
12
N
0 1 2 3 Miles
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May 1, 2001

UPPER GRANT RIVER WATERSHED (GP06)

The Upper Grant River watershed is a 106 square mile watershed in west central Grant County. It is on the south slope of Military Ridge. The topography of the watershed is typical of the driftless region and ridges are narrow to broad with steep slopes that lead down to narrow valley floors that widen downstream. As a result, runoff of melt and storm water is rapid, increasing the erosive potential of the runoff. The water quality and in-stream habitat problems in the watershed are directly related to this rapid runoff from barnyards and cultivated farm fields. Both excessive sediment and nutrient loading is affecting in-stream habitat and may be responsible for other water quality problems (Fix, 1998, 1991).There are 84 miles of streams in the watershed. The Upper Grant River watershed has the· greatest amount of coldwater stream miles in the Grant-Platte basin with over 33 stream miles being classified as coldwater streams. Approximately 20 stream miles are classified as either warm water sport fishery or warm water forage fishery. Martin Branch and Rogers Branch are both listed as impaired waters as a result of NPS. The streams and the watershed as a whole have been ranked as a high-priority with respect to NPS. The groundwater in the watershed has a high potential for contamination as a result of NPS.

Agriculture is the dominant land use and primary economic engine in the watershed. Over 83% of the land area in the watershed is cultivated or in pasture. Croplands in the watershed have been estimated to have an average annual soil loss of 7.6 tons per acre per year (Midwest Reclamation Planners, no date). There are fewer but larger farms and an overall larger trend toward a greater concentration of animals in the watershed. Although agriculture is the dominant land use, there are three communities within the watershed's boundaries: the Village of Mount Hope (174), the City of Fennimore (2,650) and the unincorporated community of Stitzer. Each of these municipalities have a wastewater treatment plant that discharges to surface waters in the watershed.

Despite the generally slow rate of growth in southwestern Wisconsin, the population of Fennimore has grown by about·11% since 1990. This growth rate is faster than the state average during the same time span. Due to its location on top of Military Ridge and in the headwaters of three coldwater streams, Gregory Branch, Rogers Branch and Fennimore Fork (Lower Wisconsin Basin), without careful planning, sources of non-point pollution from the city have the potential to negatively impact these water resources. Documentation from around Wisconsin and the country has shown that sediment from construction sites and increased storm water flow from developing areas can adversely affect water quality, fisheries and in-stream habitat. Fennimore will need to address these erosion control and storm water management issues as it continues to grow.

Public recreational activities in the watershed are limited and fishing is the most accessible recreational opportunity. Until 1995, except for several state-owned public easements along the Little Grant River, Martin Branch and Rogers Branch, the Borah Creek Fishery was the main public land for recreation in the watershed. In 1995, the City of Lancaster received a small grant to improve the 14.5-acre Klondike Park, which lies along the Grant River just off of County Highway K. The grant provided funds to construct a walking trail, improve the restroom, and purchase some accessible picnic tables, The City of Lancaster has some plans for future improvements, which would include improving the fishing area and stabilizing the shoreline along the river. Hunting on private lands is allowed with permission of the property owner. There is good wildlife habitat in many parts of the watershed, especially in woodlots on the steeper slopes. Additional habitat could be provided if additional lands were enrolled in the CRP and CREP programs.

RECOMMENDATIONS FOR UPPER GRANT RIVER WATERSHED

NON-POINT SOURCE POLLUTION

- The City of Fennimore should develop a storm water management plan and ordinance to control urban storm water form currently developed and future development areas to nearby streams.

- The City of Fennimore should develop a construction site erosion control ordinance to control sources of sediment form developing areas from reaching nearby surface waters.

- The Upper Grant River watershed should be considered by the DNR as a high-priority candidate for NPS abatement.

- The DNR staff, in cooperation with the Grant County LWCD, should identify and apply for grants through the Targeted Runoff Management (TRM) or EQIP programs to work towards NPS abatement on the following streams or stream segments; Little Grant River, Grant River, Borah Creek, Rogers Branch, Martin Branch and Day Branch.

PROTECTING AND IMPROVING WATER QUALITY AND IN-STREAM HABITAT

- The DNR Waters Program staff, in cooperation with the Grant County LWCD, should conduct basin assessment monitoring in the Upper Grant River watershed. Particular streams on which to focus are the Little Grant River, Grant River, Borah Creek, Gregory Branch, Rogers Branch, Martin Branch and Day Branch.

- The DNR should monitor Grant River to track the presence of state endangered species.

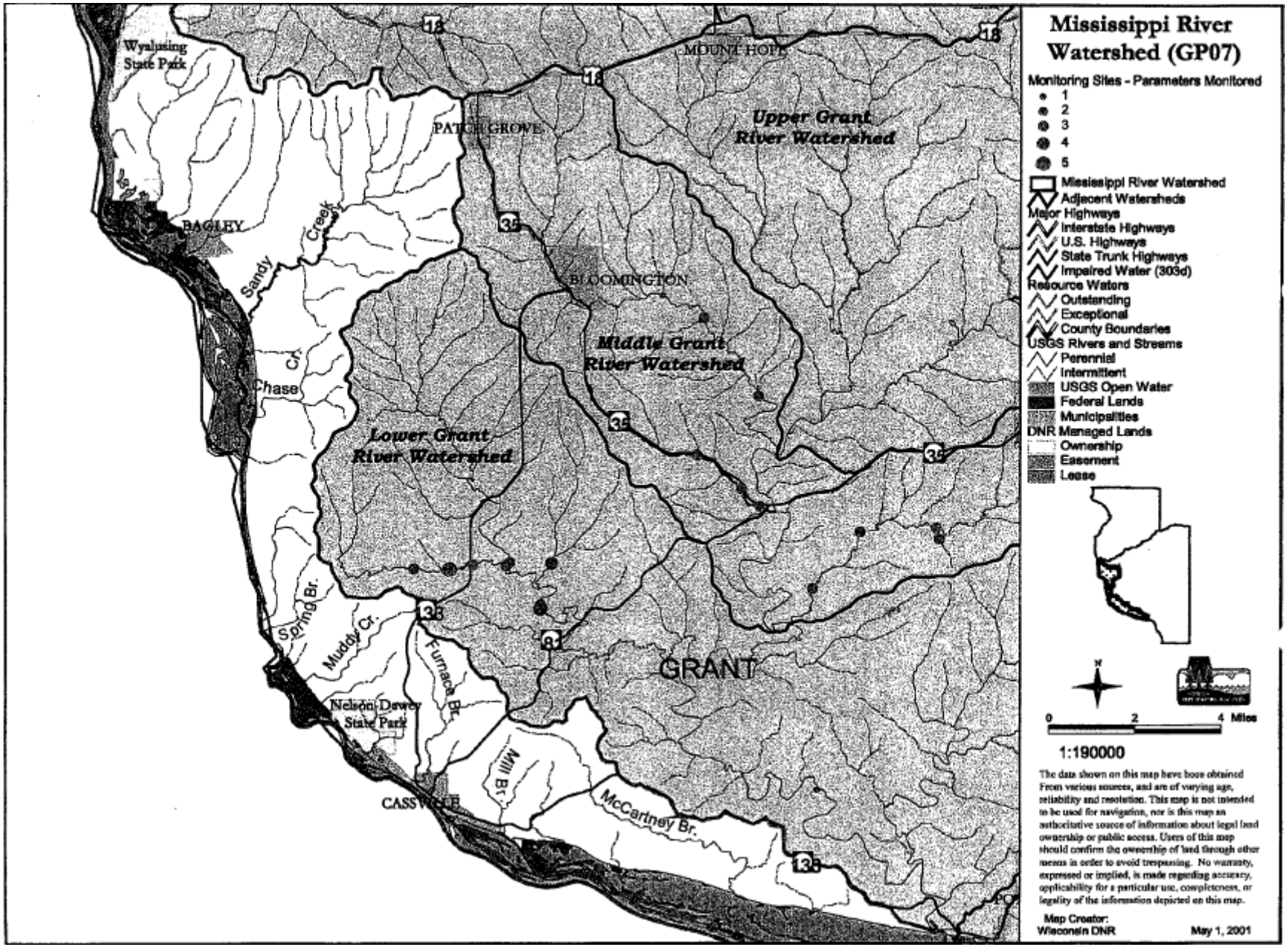
- The following streams should be monitored to determine if they should be considered for addition to Wisconsin's 303(d) impaired waters list as a result of habitat impairments due to non-point sources of pollution: Martin Branch, Little Grant River and Gregory Branch.

- The DNR in partnership with local governmental agencies and local conservation groups, should identify opportunities to better protect riparian habitat on reaches of the Little Grant River, Rogers Branch and Borah.

OUTDOOR RECREATION, WILDLIFE HABITAT AND PROTECTING OPEN SPACE AND FARMLAND

- The DNR in partnership with local governmental agencies and local conservation groups, should identify opportunities to provide public access on reaches of the Little Grant River, Rogers Branch and Borah Creek.

- The DNR should encourage the establishment of open space buffers around the Dewey Prairie Natural Area through educational and financial incentives.


Mississippi River Watershed (GP07)
Monitoring Sites - Parameters Monitored
1
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3
4
5
Mississippi River Watershed
Adjacent Watersheds
Major Highways
Interstate Highways
U.S. Highways
State Trunk Highways
Impaired Water (303d)
Resource Waters
Outstanding
Exceptional
County Boundaries
USGS Rivers and Streams
Perennial
Intermittent
USGS Open Water
Federal Lands
Municipalities
DNR Managed Lands
Ownership
Easement
Lease
Upper Grant River Watershed
Middle Grant River Watershed
Lower Grant River Watershed
GRANT
Wyalusing State Park
BAGLEY
PATCH GROVE
MOUNT HOPE
BLOOMINGTON
CASSVILLE
Nelson Dewey State Park
Sandy Creek
Chase Ck.
Spring Br.
Muddy Ct.
Furnace Br.
Mill Br.
McCartney Br.
18
35
61
133
N
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4 Miles
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May 1, 2001

MISSISSIPPI RIVER WATERSHED (GP07)

The Mississippi River watershed is a 107 square mile watershed in Grant County that stretches along the Mississippi River from Wyalusing State Park to Grant River's confluence with the Mississippi River. Steep, wooded slopes that drain to the Mississippi River floodplain characterize the topography of the watershed. Local topographic relief near the Mississippi River is significant, and some bluffs rise over 400 feet above the river.

Agriculture is the dominant land use in the watershed. There are sizable woodlots in the watershed, particularly on the steeper slopes. Only about 55% of the land is in cropland or pasture in the watershed (Fix, 1991). Due to the slopes and local relief, this watershed has the highest annual soil loss (16.3 tons per acre per year) in the Grant-Platte basin (Fix, 1991). There are only 2 communities with wastewater treatment plants in the watershed. They are Cassville and Bagley. These facilities discharge to Jack Oak Slough and an unnamed tributary to the Mississippi River, respectively.

There are 68 miles of streams in the watershed and most of these are small with steep gradients. The streams are very "flashy" (rapid water level increases and decreases during runoff events) because of the steep gradients. Consequently, local erosion is a problem during runoff events. The smallness of the streams and the steep gradients tend to limit natural habitat. There is little recent information on water quality, habitat or fisheries conditions for streams in the watershed. Overall, the watershed and the streams in the watershed have been ranked low with respect to NPS, although the groundwater has a high potential for groundwater contamination as a result of NPS.

The streams in the Mississippi River watershed drain to either Pool 10 or 11 of the Mississippi River. There are a number of backwater sloughs along the Mississippi River and in these pools. They all lie within the Upper Mississippi River Wildlife and Fish Refuge administered by the US Fish and Wildlife Service (FWS). The sloughs are used as feeding and resting areas by waterfowl and other migratory birds. The area is a destination for bird watchers as well as sportsmen and women. Many of these sloughs offer excellent fishing and hunting opportunities. There are a number of federal, state and local boat launch areas providing access to the Mississippi and the sloughs.

The primary water quality problem of the backwater sloughs and pools 10 and 11 is the sediment in runoff from uplands that fill in portions of the pools and sloughs. The sediment also brings nutrients, which in tum promotes excessive aquatic plant growth and exacerbates downstream water quality problems. Waves created by the large river barge tows plying the river have eroded some of the islands reducing habitat and adding to the sediment load. The Wisconsin DNR in cooperation with the FWS are working on projects to improve habitat along the river and pools. Zebra mussels, an invasive exotic species, have become a problem in pools 10 and 11 of the Mississippi River. The presence of excessive numbers of zebra mussels in pools 1- and 11 are thought to be a reason for low dissolved oxygen (DO) in the river during a period of low flow in 1997 (Sullivan and Endris, 1997).

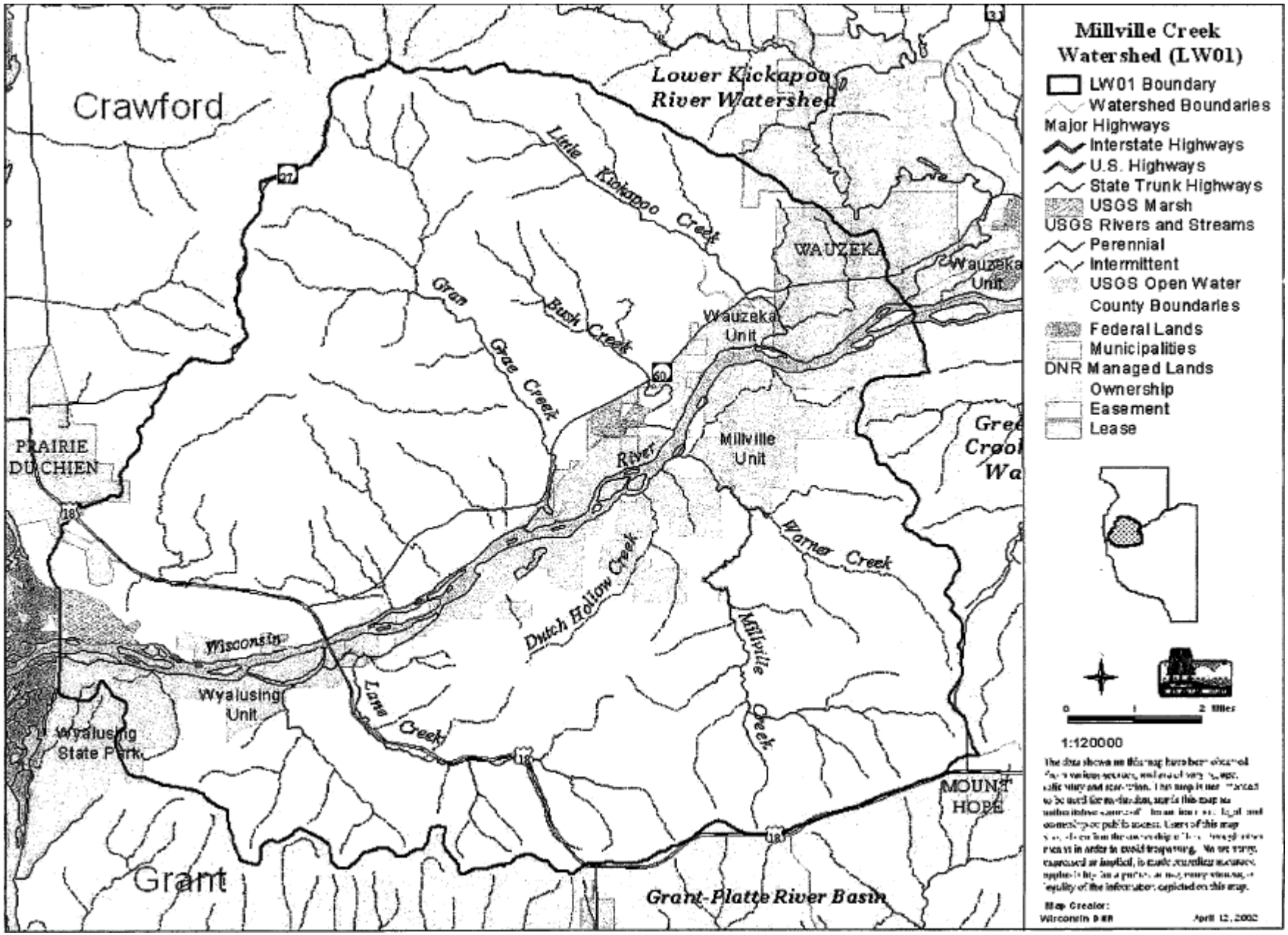
Hunting, fishing and boating are important recreational activities in the watershed and the adjoining Mississippi River pools. Camping, nature study and hiking are other recreational activities available in the watershed. The watershed sits on the Mississippi River flyway, a major highway for migratory birds of all types.

There are two Wisconsin state parks at least partially in the watershed, Wyalusing and Nelson Dewey. Both provide visitors with opportunities for camping, hiking, birding, boating and canoeing, nature study and just plain relaxing. Wyalusing is also open during winter offering winter camping and cross-country skiing. Stonefield Village, a recreated 1890's village, is the site home of Wisconsin's first governor, Nelson Dewey. It's also the site of the State Agricultural Museum. While technically not in the watershed, the U.S. Army Corps of engineers runs a campground near Potosi. It offers camping as well as access to the Mississippi River. There are also private campgrounds in the watershed.

RECOMMENDATIONS FOR THE MISSISSIPPI RIVER WATERSHED

PROTECTING AND IMPROVING WATER QUALITY AND IN-STREAM HABITAT

- The DNR should conduct baseline monitoring on Chase Creek and Sandy Creek.
- The DNR should monitor Sandy Creek to track the presence of rare water-related species.


Millville Creek
Watershed (LW01)
LW01 Boundary
Watershed Boundaries
Major Highways
Interstate Highways
U.S. Highways
State Trunk Highways
USGS Marsh
USGS Rivers and Streams
Perennial
Intermittent
USGS Open Water
County Boundaries
Federal Lands
Municipalities
DNR Managed Lands
Ownership
Easement
Lease
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Crawford
Grant
Lower Kickapoo
River Watershed
Little Kickapoo Creek
Gran Grae Creek
Bush Creek
WAUZEKA
Wauzeka Unit
Wauzeka Unit
Millville Unit
PRAIRIE DU CHIEN
Wisconsin River
Dutch Hollow Creek
Warner Creek
Millville Creek
Lane Creek
Wyalusing Unit
Wyalusing State Park
MOUNT HOPE
Grant-Platte River Basin
Map Creator:
Wisconsin DNR
April 12, 2002

MILLVILLE CREEK WATERSHED (LW01)

The Millville Creek watershed is located in the southwestern corner of Crawford County and the northwestern corner of Grant County. The watershed includes all streams in Crawford and Grant counties that flow into the Wisconsin River from just downstream of Wauzeka to the mouth of the Wisconsin River. Steep gradient streams are common in this watershed. The gradients of Bush, Gran Grae and Little Kickapoo Creek decrease significantly on their lower end where wetlands extend from the railroad tracks down to the Mississippi River.

The City of Prairie du Chien lies just north of the watershed where the Wisconsin River joins the Mississippi River. The only municipality in the watershed, however, is the village of Wauzeka. Overall population in the watershed is estimated to be around 2,600

Due to the steep topography in the area, much of the acreage in the watershed is forested. The remainder is either in agriculture or private property that is not farmed. There are significant wetlands in the floodplain near the mouth of the Mississippi River.

Overall, nonpoint source pollution is considered the primary cause of water quality problems in streams in the watershed. However, since there is very little data to reflect current conditions, no overall watershed nonpoint source priority ranking has been assigned. A portion of the watershed on the Lower Wisconsin River Valley is in an atrazine prohibition area. These areas indicate that elevated levels of atrazine, an herbicide used on com, have been found in some tested private water wells. Soils are permeable, which has allowed atrazine to reach groundwater in some locations. There are no permitted point source discharges in the basin.

The Millville Creek watershed has a variety of good quality habitats and rare plant communities. One example of these is the Mississippi River floodplain and terraces that provide important habitat to migratory birds, reptiles, and amphibians. In addition, there are several other important and rare plant communities in the watershed that are listed on the state's Natural Heritage Inventory (NHI), kept by the Bureau of Endangered Resources. These communities:

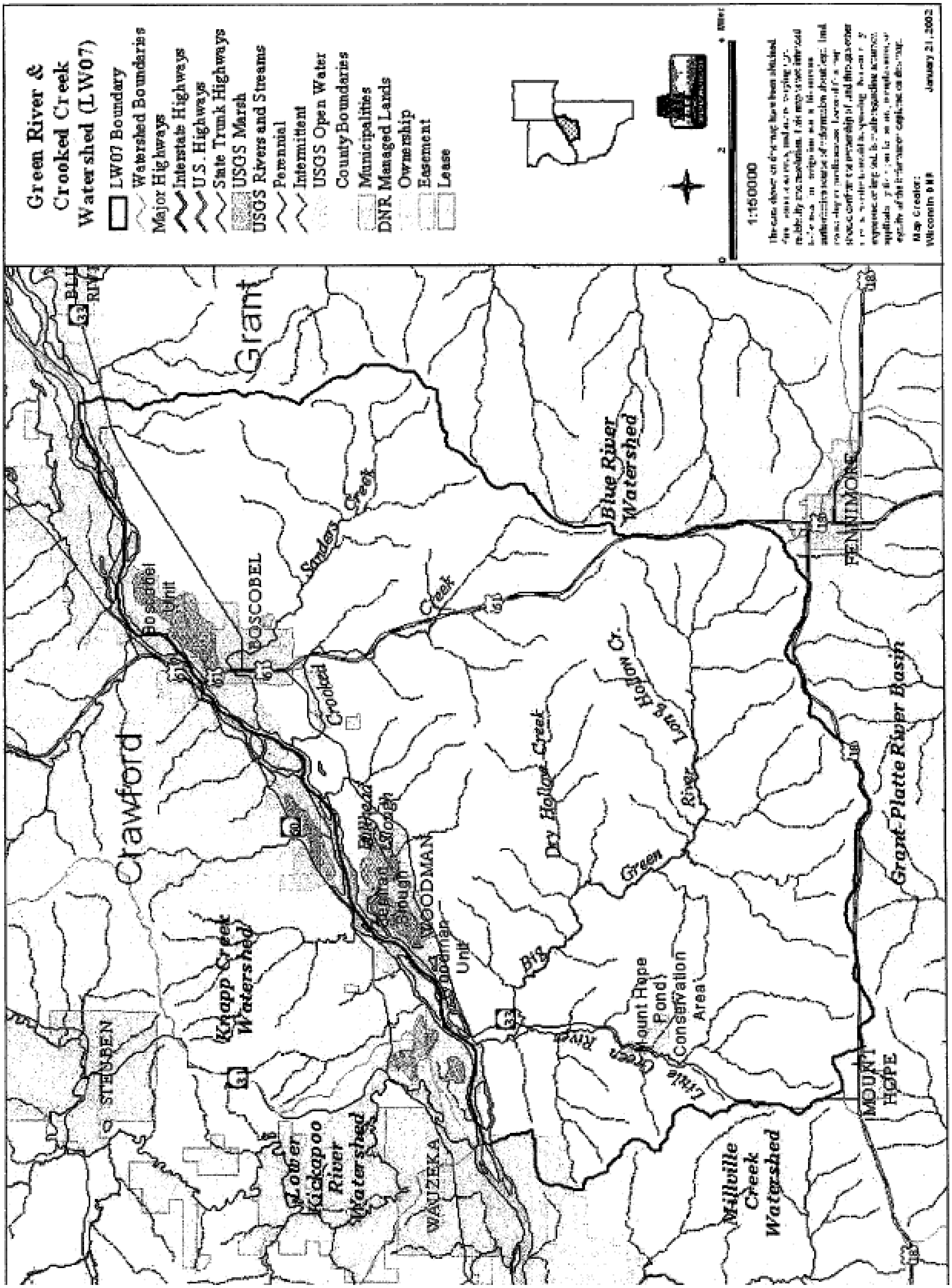
- Cedar glade
- Southern mesic forest
- Emergent aquatic
- Floodplain forest
- Southern sedge meadow
- Springs and spring runs, hard
- Pine relict
- Southern dry forest
- Southern dry-mesic forest
- Wet-mesic prairie
- Moist cliff
- Oak barrens
- Oak opening

In addition to these special communities, the watershed is also home for a variety of rare plant and animal species including; 7 species of birds, 2 species of butterflies, 7 species of dragonflies, 15 species of fish, 1 species of frog, 1 species of mayfly, 13 species of mussels, 27 plant species, 2 species of snails, 3 species of snakes and 1 species of turtle. These plants and animals are also listed on the state's NHI.

The watershed contains public land that can be used for a variety of recreational purposes from fishing and boating to hiking and bird watching. The Wyalusing, Millville and Wauzeka Units of the Lower Wisconsin Riverway contain 7,850 acres of state-owned land (690, 3,625 and 3,535 acres respectively). Much of the WDNR owned land along the riverway is bordered by private property, so watch for property boundary signs and consult county plat books for specific land ownership parcels. A small portion of the Kickapoo River State Wildlife Area-Wauzeka Unit is located in the northeast portion of this watershed. Hunting, fishing, and other recreational opportunities exist in this area. The Wyalusing State Park is located on the south side of the Wisconsin River where it meets the Mississippi River. This park contains miles of hiking and cross-country ski trails as well as camping sites, shelters and stunning views atop the bluffs along the Mississippi and Wisconsin Rivers.

RECOMMENDATIONS FOR THE MILLVILLE CREEK WATERSHED

- Conduct baseline monitoring on Bush, Lane, Millville and Warner Creeks.
- Bush, Gran Grae and Millville Creeks should be surveyed to determine if rare aquatic elements previously found in the streams are still present.
- Little Kickapoo Creek should be stocked with wild brook trout fingerlings and their progress tracked over time with fishery surveys.
- Pursue a Targeted Runoff Management grant for Gran Grae Creek or some other non-point source pollution reduction project.
- A fishery and habitat survey should be conducted on Gran Grae Creek to confirm the stream classification and determine if changes in land management have occurred which may improve the fishery.
- Conduct stream assessment on Millville Creek to determine if it should be upgraded to a Class I trout stream and subsequently an ERW.
- Conduct stream monitoring to see if Warner Creek has naturally reproducing brook trout.


Green River & Crooked Creek Watershed (LW07)
LW07 Boundary
Watershed Boundaries
Major Highways
Interstate Highways
U.S. Highways
State Trunk Highways
USGS Marsh
USGS Rivers and Streams
Perennial
Intermittent
USGS Open Water
County Boundaries
Municipalities
DNR Managed Lands
Ownership
Easement
Lease
1:150000
Map Creator:
January 21, 2002
Crawford
Grant
BOSCOBEL
Boscobel Unit
WOODMAN
Woodman Unit
STEUBEN
WAUZEKA
MOUNT HOPE
FENNIMORE
Knapp Creek Watershed
Lower Kickapoo River Watershed
Millville Creek Watershed
Blue River Watershed
Grant-Platte River Basin
Sanders Creek
Crooked Creek
Dry Hollow Creek
Long Hollow Cr.
Big Green River
Little Green River
Mount Hope Pond Conservation Area

GREEN RIVER AND CROOKED CREEK WATERSHED (LW07)

The Green River and Crooked Creek Watershed is approximately 122 square miles and is located in Grant County. Streams in this watershed are tributary to the Wisconsin River. The watershed is in the unglaciated, or driftless, region of the state and lies on the north slope of Military Ridge. Most streams are spring fed and have a high gradient and as a result, streams exhibit generally good water quality and have a high recreational use potential. Overall population in the watershed is low and growth is not rapid

The dominant land cover in the watershed is broad-leaf deciduous forest. Agriculture is a major land use in the watershed and counts for approximately 37% of total land cover in the watershed. There are some larger grassland areas as well.

The primary water resource problem in the watershed results from nonpoint sources of pollution such as barnyard runoff, overgrazing along streams, and streambank and cropland erosion. As a result of these sources of pollution, this watershed is ranked as a high priority for nonpoint source reduction projects. In addition, the portion of the watershed in the Lower Wisconsin River Valley is considered an atrazine prohibition area These areas indicate that elevated levels of atrazine, an herbicide used on com, have been found in some tested private water wells. Soils are permeable and have allowed atrazine to reach groundwater in some locations.

The City of Boscobel wastewater treatment plant discharges treated wastewater to the Wisconsin River. One industrial discharge from Milk Specialties discharges treated wastewater to Crooked Creek.

The Green River and Crooked Creek Watershed has a variety of good quality habitats and rare plant communities that are listed on the state's Natural Heritage Inventory, (NHI), which is kept by the Bureau of Endangered Resources. The communities found in the watershed include:

- Dry prairie
- Dry-mesic prairie
- Pine relict
- Sand barrens
- Southern mesic forest
- Emergent aquatic
- Floodplain forest
- Shrub-carr
- Southern sedgemeadow

In addition to these special communities, the watershed is also home for a variety of rare plant and animal species including 5 species of birds, 7 species of dragonflies, 11 species of fish, 4 species of mayflies, 12 species of mussels, 24 species of plant species, and 1 species of snake. These plants and animals are also listed in the state's Natural Heritage Inventory (NHI).

The Woodman and Boscobel Units of the Lower Wisconsin State Riverway, (LWSR), are in this watershed. These units combined have 3,268 acres of public land, 1,926 and 1,342 acres each respectively. The Woodman unit has a boat launch and fishing with disabled access while the Boscobel Unit offers fishing and dog training. Other wildlife areas in the watershed include the Mount Hope Pond Conservation Area and the Semrad Slough. Trout fishing is available at the 200-acre conservation area and fishing and bird watching are the primary recreational opportunities on the 278-acre slough.

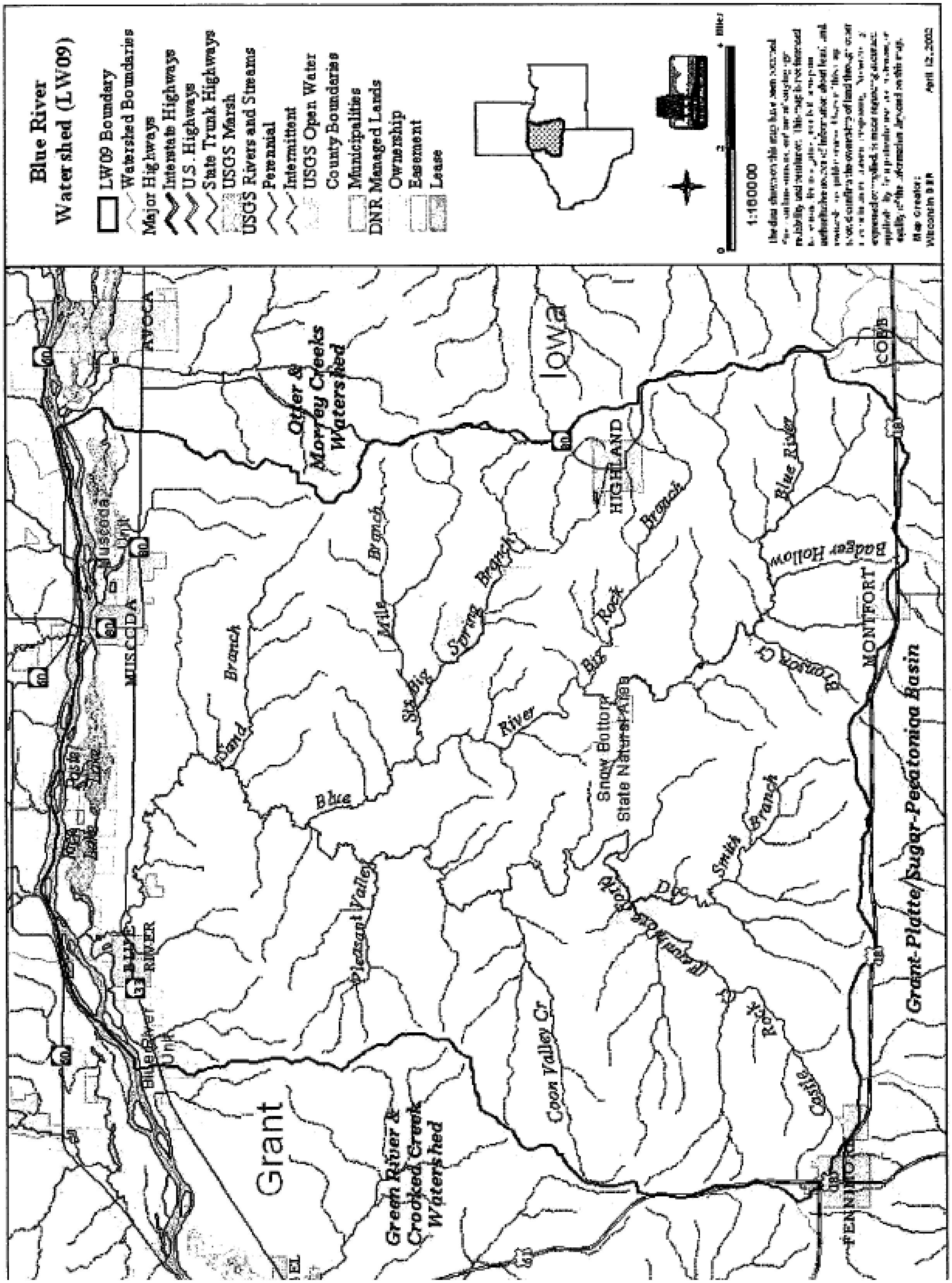
RECOMMENDATIONS FOR THE GREEN RIVER AND CROOKED CREEK WATERSHED

- Areas along the Little Green River, Big Green River, Sanders Creek and Crooked Creek should be identified and prioritized for streambank protection and terrestrial and in-stream habitat restoration work.

- A water quality assessment and classification monitoring should be conducted on Sanders Creek to determine the potential of the lower 1.5 miles now that the Boscobel Sewage Treatment Plant no longer discharges to the stream. This monitoring should also assess the potential for in-stream habitat work.

- Baseline monitoring on the Big Green River, Little Green River and Crooked Creek should be conducted.

- The Big Green and Little Green Rivers, Crooked Creek and Sanders Creek should be considered for nonpoint source pollution reduction projects through programs such as the Targeted Runoff Management grant program (TRM).


Blue River Watershed (LW09)
LW09 Boundary
Watershed Boundaries
Major Highways
Interstate Highways
U.S. Highways
State Trunk Highways
USGS Marsh
USGS Rivers and Streams
Perennial
Intermittent
USGS Open Water
County Boundaries
Municipalities
DNR Managed Lands
Ownership
Easement
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Miles
Map Creator: Wisconsin DNR
April 12, 2002
Otter & Morrey Creeks Watershed
Green River & Crooked Creek Watershed
Grant-Platte/Sugar-Pecatonica Basin
Grant
Iowa
AVOCA
MUSCODA
BLUE RIVER
HIGHLAND
MONTFORT
COBB
FENNIMORE
Snow Bottom State Natural Area
Blue River
Six Mile Branch
Spring Branch
Big Rock Branch
Sand Branch
Pleasant Valley
Coon Valley Cr
Smith Branch
Castle Rock
Badger Hollow
Fenton Cr

BLUE RIVER WATERSHED (LW09)

The Blue River Watershed, located in Grant and Iowa Counties, drains to the Wisconsin River from Military Ridge, which is the feature that divides the Lower Wisconsin and the Grant-Platte river drainage basins. Many of the streams in the watershed are spring-fed and have high gradients.

Population in the watershed for the year 2000 was estimated to be close to 6,554. There are several municipalities in the watershed including Blue River, Muscoda, Highland, Montfort and Fennimore. Overall, population growth in the communities is low.

The watershed is located in the driftless region of Wisconsin. Overall, land cover in the watershed is predominately broad-leaf deciduous forest and agriculture, although a large portion of the watershed is grassland.

There are several permitted discharges in the watershed. The villages of Blue River, Highland and Montfort wastewater treatment plants discharge to the Blue River, Big Spring Branch and Blue River respectively. The Village of Highland's new facility was put into operation in January 1998. The Village of Muscoda lies on the sandy Wisconsin River outwash plain and discharges to groundwater via an aerated lagoon system and seepage cells. Muscoda placed a new treatment system into operation in October 1998.

Overall, nonpoint source pollution is considered the primary cause of water quality problems in the watershed. The watershed has been ranked as a high priority for nonpoint source pollution reduction. In addition, a portion of the watershed on the Lower Wisconsin River Valley is an atrazine prohibition area. These areas indicate that elevated levels of atrazine, an herbicide used on com, have been found in some tested private water wells. Soils are permeable, which has allowed atrazine to reach groundwater in some locations.

The Blue River Watershed has a variety of good quality habitats and rare plant communities that are listed on the state's Natural Heritage Inventory (NHI) kept by the Bureau of Endangered Resources. These communities include:

- Cedar glade
- Dry Cliff
- Dry prairie
- Moist cliff
- Oak barrens
- . Pine barrens
- Pine relict
- Sand barrens
- Springs and spring runs
- Sand Prairie
- Southern dry forest
- Southern dry-mesic forest
- Calcareous fen
- Emergent aquatic
- Ephemeral pond
- Floodplain forest
- Oxbow lake
- Southern sedge meadow
- Fast, hard and cold streams

In addition to these special communities, the watershed is also home for a variety of rare plant and animal species including; 2 bird species, 2 species of beetles, 6 species of butterflies, 4 species of dragonflies, 12 species of fish, 1 species of frog, 1 species of grasshopper, 2 species of mayflies, 2 species of moths, 12 species of mussels, 24 plant species, 1 species of snake and 1 species of turtle. These plants and animals are listed on the state's natural heritage inventory.

In the watershed, there are two stream flow-gauging stations in operation. These stations are owned by the USGS and used to continually measure the flow in select streams and rivers throughout the United States. In the Blue River watershed, these stations are located on the Wisconsin River at Muscoda and on the Fennimore Fork (or Castle Rock Creek) at Homer Road. For more information, see the USGS website at http://wi.water.usgs.gov.

The watershed contains public land that can be used for a variety of recreational purposes, from fishing and boating to hiking and bird watching. The Blue River and Muscoda Units of the Lower Wisconsin Riverway are in this watershed. The Blue River Unit is about 1,904 acres and has fishing and bird watching. The Muscoda Unit is a bit larger and contains 2,291 acres that are primarily used for fishing and birdwatching. The Muscoda Unit has a boat launch located in Muscoda and contains trails for snowmobiles and horses. The Big Spring Fishery Area is also in the watershed. Trout fishing and hiking are the most common recreational uses on the 286 acres of state-owned land.

RECOMMENDATIONS FOR THE BLUE RIVER WATERSHED

- Partnering between the WDNR; agencies and other groups and organizations, such as local watershed groups, should continue to assist with stream monitoring in the Blue River Watershed.
- South Central Region must strive for cooperation between the development of the State Natural Area on the Blue River and the water quality and fish habitat needs in the river.
- Upland BMPs should be installed within the Doc Smith Branch and Fennimore Fork sub-watersheds to decrease the volume of cropland erosion that reaches the stream.
- In-stream habitat work should be conducted on Sand Branch.
- Sand Branch should be surveyed to determine if the rare aquatic element previously found in the stream is still present.
- The spring heads on Doc Smith Branch should be protected.
- The upper 1 mile of Pleasant Valley Creek should be designated a no-kill fishery to help establish a Class I fishery.
- Baseline monitoring on the Blue River is needed.

- Big Spring Branch, Big Rock Branch and Doc Smith Branch should be considered for nonpoint source pollution reduction projects through programs such as Targeted Runoff Management program (TRM).

- Educational materials should be developed for visitors to the Castle Rock Creek area.

- Jones Slough and Fish Trap Lake, an artificial waterfowl production pond, should be monitored to determine the cause of the orange tint to the water. Specifically, Fish Trap Lake's temperature and dissolved oxygen profile, and iron concentration in bottom waters -should be monitored.

- Modify or remove the existing water control structure on Jones' Slough to minimize the negative water quality impacts from the upstream impoundment.

- Conduct point source assessment monitoring on Big Spring Branch below the Village of Highland discharge to determine if there are any adverse water quality impacts on the stream.

- The Village of Highland should continue to provide attention to plant operation to insure compliance with permit limits.

GLOSSARY

303(d) Waters-This list identifies waters which are not meeting water quality standards, including both water quality criteria for specific substances, and the designated uses. It is used as the basis for development of Total Maximum Daily Loads(TMDL's) under the provisions of section 303(d)(1)(C) of the Clean Water Act, U.S. EPA requires that the DNR update its list every 2 years. Also called List of Impaired Waters.

Animal Waste Management Program-This regulatory program, administered by the DNR via NR 243, seeks to identify and correct animal waste-related water quality problems.

ATCP 50-The chapter of Wisconsin's Administrative Code that implements the Land and Water Resource Management Program as described in Chapter 92 of the State Statutes. It identifies those conservation practices that may be used to meet performance standards.

Best Management Practices (BMPs)-The most effective practice or combination of practices for reducing nonpoint source pollution to acceptable levels.

Chapter 92-Portion of Wisconsin Statutes outlining the soil and water conservation, agricultural shoreland management, and animal waste management laws and policies of the State.

Conservation Plan-A record of decisions and intentions made by land users regarding the conservation of the soil, water and related natural resources of a particular unit of land.

Conservation Reserve Enhancement Program (CREP)-An add-on to the CRP program which expands and builds on CRP's success in certain areas of the state.

Conservation Reserve Program (CRP)-A provision of the federal Farm Bill that takes eligible cropland out of production and puts it into grass or tree cover for 10-15 years.

Cooperator-A landowner or operator who is working with, or has signed a cooperative agreement with, a county LWCC.

County Conservationist-County Conservation, Sanitation, and Zoning head, responsible for implementing programs assigned to the CSZD and for supervising CSZD staff.

Critical Sites-Those sites that are significant sources of nonpoint source pollution upon which BMPs shall be implemented as described in s. 281.65(4) (g) 8.am., stats.

CSZD-Grant County Conservation, Sanitation, & Zoning Department

Department of Agriculture, Trade and Consumer Protection (DATCP)-The state agency responsible for establishing statewide soil and water conservation policies and administering the state's

soil and water conservation programs. The DATCP administers state cost-sharing funds for a variety of LWCC operations, including support for staff, materials and conservation practices. Referred to in the LWRM plan guidelines as the "department".

Department of Natural Resources (DNR)-The state agency responsible for managing state owned lands and protecting public waters. DNR also administers programs to regulate, guide and assist LWCC's, LWCD's and individual land users in managing land, water, fish and wildlife. The DNR administers state cost-sharing funds for priority watershed project, Targeted Runoff Management (TRM) grants, and Urban Nonpoint Source Construction and Planning grants.

District Conservationist (DC)-NRCS employee responsible for administering federal conservation programs at the local level.

Environmental Protection Agency (EPA)-The agency of the federal government responsible for carrying out the nation's pollution control laws. It provides technical and financial assistance to reduce and control air, water and land pollution.

Environmental Quality Incentives Program (EQIP)-Federal program to provide technical and cost-sharing assistance to landowners for conservation practices that provide water quality protection.

Farm Service Agency (FSA)-USDA agency that administers agricultural assistance programs including price supports, production controls and conservation cost sharing.

Farmland Preservation Program (FPP)-A DATCP land-use program under Chapter 91, Wisconsin Statutes, that helps preserve farmland through local planning and zoning, promotes soil and water conservation and provides tax relief to participating farmers.

Geographic Information System (GIS)-A computerized system of maps and layers of data about land including soils, land cover, topography, field boundaries, roads and streams. Such geographically based data layers improve the ability to analyze complex data for decision making.

Impaired Waters List-Same as the 303(d) list.

Land and Water Conservation Board (LWCB)-Composed of 3 local elected officials, 4 appointed by the Governor (1 shall be a resident of a city with a population of 50,000 or more, 1 shall represent a governmental unit involved in river management, 1 shall be a farmer and 1 shall be a member of a charitable corporation, charitable association or charitable trust and leaders from three state agencies, the LWCB oversees the approval of county land and water management plans (s.92.04, stats.).

Land and Water Resource Management Plan (LWRM)-A locally developed and implemented multi-year strategic plan with an emphasis on partnerships and program integration. The plan includes a resource assessment, identifies the applicable performance standards and related control of pollution from nonpoint sources, identifies a multiyear description of planned activities, establishes a progress tracking system, and describes an approach for coordinating information and implementation programs with other local, state and federal agencies, communities and organization (ATCP 50.12).

Land Conservation Committee (LWCC)-The portion of county government empowered, by Chapter 92 of the Wisconsin Statutes, to conserve and protect the county's soil, water and related natural resources. Referred to in the LWRM guidelines as the "committee".

Land Conservation Department (LWCD)-The department of county government responsible for administering the conservation programs and policies of the Land Conservation Committee.

Natural Resources Conservation Service (NRCS)-Part of USDA, NRCS provides soil survey, conservation planning and technical assistance to local land users.

Nonpoint Source Pollution (NPS)-Pollution from many small or diffuse urban and rural sources. Livestock waste finding its way into a stream and causing water pollution is an example of a non-point source pollution.

Nonpoint Source Pollution Abatement Program-A DNR water quality program under Chapters 120 and s. 281, Wisconsin Statutes, which provides technical assistance and cost-sharing to landowners to develop and maintain management practices to prevent or reduce nonpoint source water pollution in designated watersheds.

NR 151-DNR's administrative code that establishes runoff pollution performance standards for non-agricultural facilities and transportation facilities and performance standards and prohibitions for agricultural facilities and practices designed to meet water quality standards.

Nutrient Management Plan-The Nutrient Management Plan means any of the following: (a) A plan required under s. ATCP 50.04 (3) or 50.62 (5) (f). (b) A farm nutrient plan prepared or approved, for a landowner, by a qualified nutrient management planner.

ORW/ERW-DNR classifies streams as Outstanding Resource Waters (ORW) and Exceptional Resource Waters (ERW) as listed in NR 102.10 and NR102.11. ORW waters have excellent water quality and high-quality fisheries and do not receive wastewater discharges. ERW waters have excellent water quality and valued fisheries but may already receive wastewater discharges

Priority Farms-Farms identified by the county for having excessive runoff from soil erosion and/or manure resulting in existing or potential water quality problems.

Soil and Water Resource Management Program (SWRM)-DATCP program that provides counties with funds to hire and support Land Conservation Department staff and to assist land users in implementing DATCP conservation programs (ATCP 50).

Soil Loss Tolerance ("T")-Erosion rate in tons per acre per year at which a soil could maintain productivity.

Soil Survey- NRCS conducts the National Cooperative Soil Survey and publishes soil survey reports. Soils data is designed to evaluate the potential of the soil and management needed for maximum food and fiber production.

TMDL (Total Maximum Daily Load)- The maximum amount of a pollutant that a body of water can receive while still meeting water quality standards.

United States Department of Agriculture (USDA)-Branch of federal government with responsibilities in the areas of food production, inspection, and storage. Agencies with resource conservation programs and responsibilities, such as FSA, NRCS and Forest Service and others are agencies of the USDA.

University of Wisconsin-Extension (UWEX)-The outreach of the University of Wisconsin system responsible for formal and informal educational programs throughout the state.

Watershed-The geographic area from which a particular river, stream or water body receives its water supply.

Wetlands Reserve Program (WRP)-A provision of the federal Farm Bill that compensates landowners for voluntarily restoring and protecting wetlands on their property.

Wildlife Habitat Incentives Program (WHIP)-Federal program to help improve wildlife habitat on private lands.

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