# WINNEBAGO COUNTY

## 2011-2020
## LAND AND WATER RESOURCE MANAGEMENT PLAN

# Winnebago County
# 2011-2020
# Land and Water Resource Management Plan

**June, 2010**

Prepared under the jurisdiction of
the Winnebago County Land Conservation Committee

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# ACKNOWLEDGEMENTS

The following individuals are recognized for giving of their time and effort toward development of this Plan. Their contributions are greatly appreciated.

**WINNEBAGO COUNTY LAND AND WATER RESOURCE MANAGEMENT PLAN**
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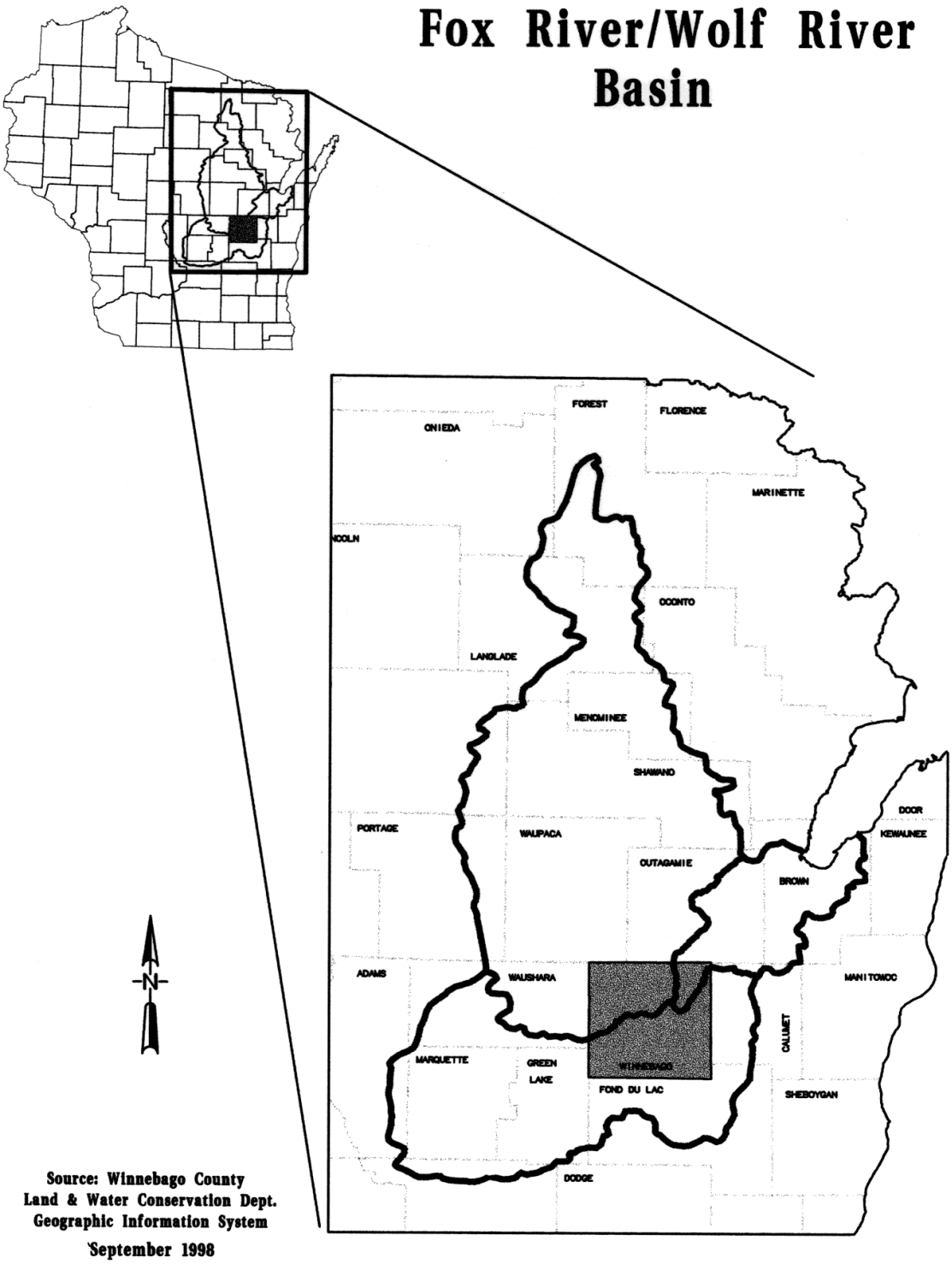



Source: Winnebago County
Land & Water Conservation Dept.
Geographic Information System
September 1998

# PLAN SUMMARY

In 1997 the Land and Water Resource Management Plan concept became law as Chapter 92.10 of the Wisconsin Statutes was amended. This created a County Land and Water Resource Management Planning Program that is intended to:

- rely on a locally driven process for plan development and implementation;
- maximize flexibility in how program funds are used;
- foster comprehensive efforts without excessive planning;
- support innovation and cost effectiveness toward achieving objectives;
- foster the "seamless" integration of programs and funding sources; and
- establish a credible means to measure the extent to which planned objectives are achieved.

This plan provides structured means that will integrate and leverage available programs, funds, and other resources to:

- guide the process for resource management planning and decision making;
- evaluate land and water resource conditions;
- identify land and water related resource problems and priorities;
- develop a multi-year work plan to address land and water resource problems;
- strengthen partnerships with landowners, other agencies, municipalities, and organizations;
- coordinate with Township and County comprehensive land use planning efforts;
- develop effective information and education strategies that will strengthen and maintain community support for the Land and Water Resource Management Plan goals and objectives; and
- track progress toward the achievement of the plan's goals and objectives.

Winnebago County has a long-standing record of leadership and participation in natural resource protection and improvement. These actions include prior plan development, program design, and project implementation which all emphasize cooperation and integration to get the most accomplished with the least amount of dollars available.

The driving force behind the development of the Winnebago County Land and Water Resource Management Plan is the opportunity to establish a true locally driven process. Individual citizens, units of government, and local, state, and federal agency representatives working together to develop a framework which: 1) positively integrates natural resource management programs and funding sources; and 2) provides the necessary flexibility to allocate staff and financial resources where they will do the most toward accomplishing resource management objectives.

The overriding theme of this Plan is **"Back to Basics".** Our intention is to meet with landowners, identify the resource concerns and address them with the appropriate BMPs utilizing all the financial and human resources available. We will recognize and document the pollutant load reductions provided by each installed practice. We will not make broad unquantifiable estimates based on models that cannot be substantiated. We will however set realistic and achievable practice installation goals that can be measured, evaluated and adjusted as the environment that surrounds and impacts this Plan fluctuates.

## Basin Assessment

Winnebago County encompasses an outstanding variety of natural resources that are part of a much larger ecosystem critical to sustaining a healthy economic and natural environment for the people of Winnebago County and the entire Fox-Wolf River Basin. The basin is a 6,400 sq. mi. watershed that outlets into the Bay of Green Bay. Misuse of the land and water resources within the Fox-Wolf River Basin is widespread and the main source of nonpoint pollution. The direct loading of sediments and nutrients into the adjacent Winnebago System, coupled with extensive loss of wetlands, results in increased turbidity and extreme fluctuations in dissolved-oxygen in the water column. The System has been negatively impacted and is impaired.

## Basin Goals and Objectives

In the past ten years broad public involvement in natural resource management issues has generated an overall goal that calls for the restoration of a balanced aquatic ecosystem and the protection of water bodies throughout the Fox-Wolf River Basin from future impacts of nonpoint source pollution. The success of reaching that goal is dependent on achieving reductions in nonpoint source pollution. This long-term objective is totally dependent upon pollutant load reductions through improved land use and land management throughout the Fox-Wolf River Basin.

## Approach

***"The watershed approach requires that we accept the proposition that we're all in this together. If we work together, we can clean up the Fox-Wolf watershed. If we don't work together, we can't and we'll waste a lot of money. It's that simple."*** (Northeast Wisconsin Waters of Tomorrow, Executive Summary, 1994)

Winnebago County endorsed the Fox-Wolf River Basin goals and objectives from the time they originated. Following suit, the adopted overall goal of the Winnebago County Land & Water Resource Management Plan is: *To restore, improve, and protect ecological diversity and quality and to promote beneficial uses of its land, water, and related resources*. To accomplish the Plan goals, the primary objective is to work with landowners one on one to achieve compliance with the Ag Performance Standards and implement other erosion control and land management practices to reduce pollutant loading. This plan identifies the implementation schedule for 2011 to 2020. Annual reviews will be conducted to report on, track, and evaluate progress.

> ***The goal of the Winnebago County Land and Water Resource Management Plan is to restore, improve, and protect the ecological diversity and quality and promote the beneficial uses of the land, water, and related resources found throughout the County.***

Winnebago County endorses an approach that focuses on integration of the Land & Water Conservation Department programs and services with individual citizens, groups, organizations, other agencies, and units of government working throughout the Fox-Wolf River Basin. This is not a new concept, more so it has been the County's approach for many years. This Land & Water Resource Management Plan is a revised and dynamic guide that builds upon past accomplishments in order to help carry out future work. It serves to identify and address nonpoint source pollution abatement in Winnebago County during the next 10 years.

**Winnebago County's continued Commitment is to:**

- Provide technical and financial assistance for the implementation of cost-effective Best Management Practices (BMPs) at priority sites in order to achieve the greatest pollutant load reduction possible;
- Provide technical and financial assistance for the implementation of cost-effective BMPs that help to support or improve the economic vitality of rural and urban communities;
- Pursue any and all applicable financial resources that will support this Plan;
- Strengthen the working relationships with DNR Basin Teams and staff, other agencies, groups, and units of government in an on going effort to achieve the mutual goal of natural resource improvement and protection throughout the entire Fox-Wolf Basin.

**Winnebago County's Land & Water Resource Management Plan**

- Is developed around concerns and recommendations from involved citizens, organizations, governmental units, and agencies throughout the county and the Fox-Wolf River Basin.
- Identifies priorities, needs, and goals for achieving the Plan objectives.
- Identifies true integration of local, state, and federal programs as the key to improving and sustaining effective service delivery to the public.
- Increases efficient use of funding for the implementation of Best Management Practices (BMPs) at priority locations in the county.
- Provides a mechanism to ensure that the plan objectives contribute toward achievement of basin-wide natural resource management goals and objectives.

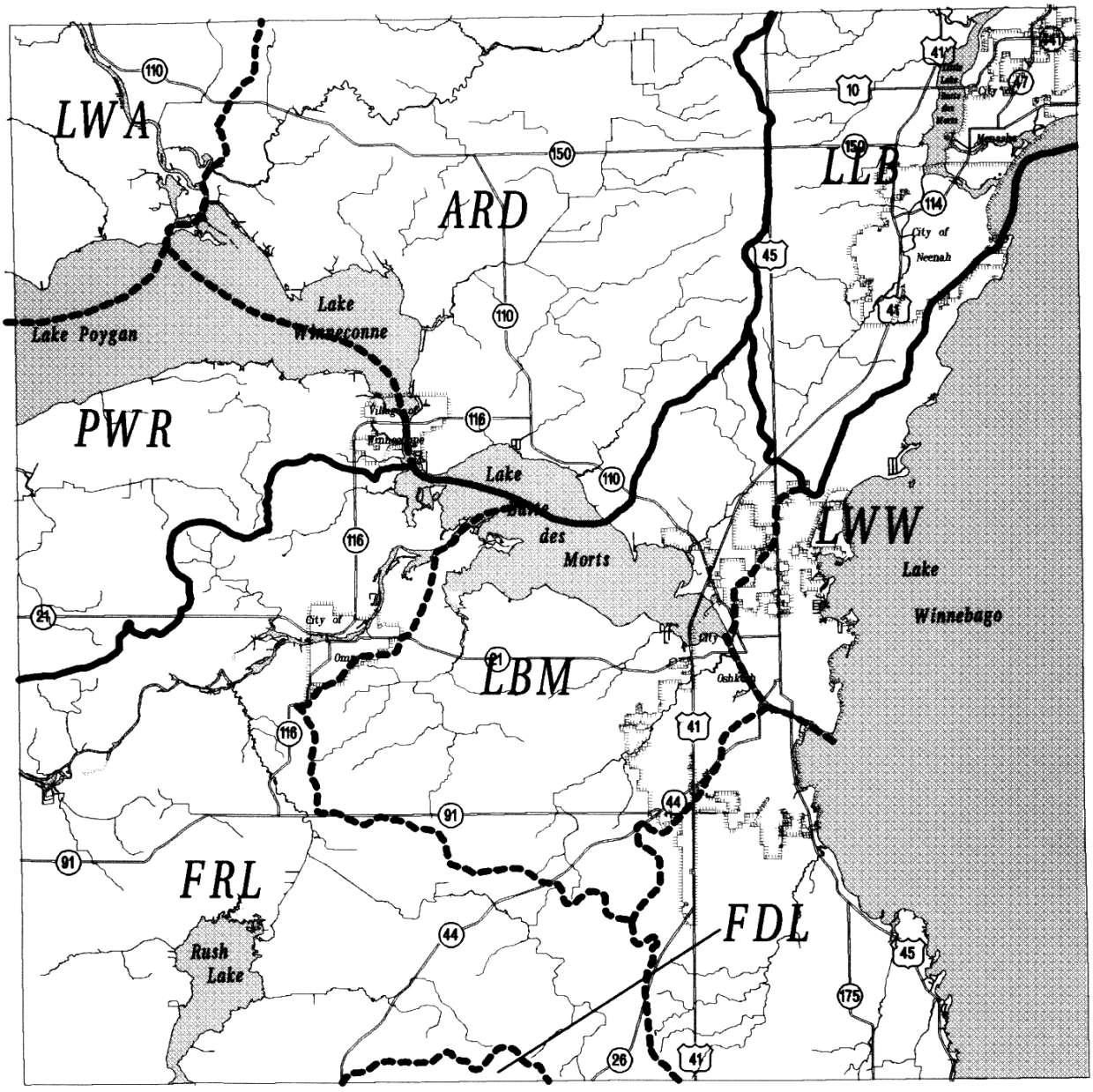
## Conclusion

In developing this Land & Water Resource Conservation Plan it is important to review past goals and objectives identified through similar efforts that were based on extensive public participation. It is equally important to recognize that most of the resource issues and concerns that have been identified in the past are still with us. The magnitude and scope of those issues and concerns may have changed, but the hard fact is they still exist. As our population increases, so do the demands and pressures on our resources. Our challenge is to make the right decisions and take the necessary actions to maintain that critical balance between societal growth and our natural resources – the very resources that we claim to value so highly.

The extent to which this Land and Water Resource Management Plan is successful, depends entirely upon continued community support, landowner participation, maintaining sufficient numbers of competent staff working to meet the objectives, securing necessary funding to accomplish plan objectives, and establishing true integration of county, state, and federal programs. With these essential elements in place, the natural resource management objectives can be accomplished.

# Fox River/Wolf River Basin

## Winnebago County, WI

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Source: Winnebago County
Land & Water Conservation Dept.
Geographic Information System
September 1998

- Basin Boundary
- Watershed Boundary
- Cities/Villages
- US/State Roads
- Rivers/Streams

**Watershed Codes**

**Lower Fox River Basin**
- LLB Little Lake Butte des Morts

**Upper Fox River Basin**
- LWW Lake Winnebago West
- FDL Fond du Lac River
- LBM Lake Butte des Morts
- FRL Fox River/Rush Lake

**Wolf River Basin**
- ARD Arrowhead River/Rat River/Daggets Creek
- LWA Lower Wolf River/Alder Creek
- PWR Pine River/Willow Creek

# County Setting, Natural Resources, and Trends

### General Characteristics

Winnebago County, established in 1840, is situated in east central Wisconsin. It is bordered on the east by, and includes, part of Lake Winnebago. It covers about 578 square miles with an actual land area of about 447 sq. miles. There are over 84,000 acres of surface water, the largest area of inland surface water of any county in Wisconsin. The majority of population and industry is located along the eastern side of the county with a large urban and industrial corridor running north to south along the west shore of Lake Winnebago. Comparative census figures show the number of County residents at 151,000 in 2000, 156,000 in 2004, approximately 167,000 in 2010 and 177,000 by 2020. The population is concentrated in the cities of Menasha, Neenah, Omro, Oshkosh (county seat), the village of Winneconne, and two urban townships, Algoma and Menasha. The county has 16 civil townships and most of them have predominant rural/agricultural characteristics. Cash grain farming and dairy farming are the main agricultural activities and paper, and commercial and military vehicle manufacturing is the principal industrial activity of the county.

## Natural Resources

To fully understand the importance of natural resources to Winnebago County and the surrounding region, it is essential to recognize that, in addition to the countless environmental benefits they provide the resources generate millions of dollars in revenue to local communities throughout the county each year. That revenue comes primarily from industry, along with the vast array of recreational users of the resources. While it is difficult to place a specific dollar value on these resources, common sense tells us that we absolutely cannot afford to waste them and must do all we can to protect them, for present and future generations.

### Geology & Topography

The entire landscape of Winnebago County reflects the influences of glacial activity. The most recent glacier to cover the county occurred about 10,000 years ago. It covered all but the southwestern part of the county and deposited the reddish clayey till we see today. Southwestern Winnebago County was covered by older glacial activity that deposited brownish, loamy till.

The topography is nearly level or gently rolling with slopes of 6% or less over 90% of the terrain. Two escarpments run northeasterly across the county ranging from 750 to about 950 ft. above sea level providing land relief on the order of about 200 feet. The most prominent features are the broad expanses of lakes and adjacent marshes. Topographic features are controlled by the subsurface geology which is mainly sandstone and limestone positioned equally throughout the western and eastern parts of the county. A varying thickness of glacial till overlies the irregular surface of these rock formations. The glacial material over the limestone formation is, however, much thinner than the material over the sandstone.

#### Surface Water Resources

The county is entirely within the Fox-Wolf River Basin and contains 84,000 acres of surface water. Its' network of lakes, rivers, and streams make up the major portion of what is known as the 'Winnebago System'. The System includes the 'Pool' Lakes of Winnebago, Butte des Morts, Winneconne, and Poygan along with the main tributary waters of the Upper Fox and Wolf Rivers.

The Fox River enters Winnebago County near Eureka, flows northeasterly through Lake Butte des Morts and Lake Winnebago, flows over the dams at Neenah and Menasha, and continues down through Little Lake Butte des Morts. It outlets into Green Bay 39 miles downstream from Lake Winnebago after it follows a meandering course with a vertical drop of 168 feet. Lake Winnebago divides the Fox River into the Upper and Lower Fox.

The Wolf River enters the county in the northwestern corner, flows southeasterly through Lakes Poygan and Winneconne, and then converges with the Fox River at the west end of Lake Butte des Morts. The Wolf River accounts for approximately 60%of the combined inflow to the Winnebago Pool from the Fox and Wolf Rivers.

Two lakes in the County that are not located in the Pool are Rush Lake and Little Lake Butte des Morts. Rush Lake is a natural and unique prairie pothole about 3,000 acres in size and is situated in the southwest corner of the county. It contains large bog areas and lake adjacent wetlands and receives direct runoff from much of the surrounding agricultural watershed through streams and man made drainage ditches. It flows out to the Fox River by way of Rush/Waukau Creek and it is used for hunting, fishing, trapping, and canoeing. Little Lake Butte des Morts, about 1,300 acres in size, is situated in the northeast part of the county immediately downstream from the dams at Neenah and Menasha. The 15,000 acre Neenah Slough Watershed also outlets into the south end of the lake downstream from the dam at Neenah. The lake receives additional runoff from a mixed agricultural and urban watershed to the west. Primary uses of the lake include boating, fishing, and hunting. It is impacted by point and nonpoint source pollution and it contains beds of PCB contaminated sediments that are currently being remediated through targeted efforts between industries, the WDNR, and the USEPA.

The Winnebago System is one of Wisconsin's most significant water resources, representing 17% of the State's total surface water acreage. It is located within 75 miles of over 2 million people and receives heavy recreational use for fishing, boating, swimming, hunting, and trapping. In addition, Lake Winnebago alone provides drinking water to over 200,000 people in the communities of Oshkosh, Neenah, Menasha, Appleton, Sherwood and Waverly.

Before the dams at Neenah and Menasha were constructed, the System supported massive areas of emergent and submergent rooted aquatic plants. Lake Winnebago contained great numbers of bays and marshes. Lakes Butte des Morts, Winneconne, and Poygan were characterized as river marshes. Through the decades, high water levels combined with erosive action from wind, wave, and ice have lead to the destruction of tens of thousands of acres of wetland habitat within the Pool. This has resulted in the loss of natural filtration capabilities that once served to trap sediments and nutrients. Shoreline and streambank erosion is a continuing problem in most areas of the System where wetlands once flourished and helped to buffer erosive forces. Left unprotected the problems only worsen.

Given the natural characteristics of the Winnebago System, it is likely that the waters were always fertile; however, they are now described as being highly eutrophic and are included in the 303D list of impaired waters. This is the direct result of impacts from nonpoint pollution. Excessive nutrient and sediment delivery into the System from agricultural and urban sources contribute towards algae blooms that occur with proper conditions. The algae and sediments increase turbidity, hinder growth of beneficial aquatic plants, and deplete important fish spawning areas.

As a result of the non-point efforts made by agriculture, other land use erosion controls and certain aquatic species, during the last ten years users of the system have mentioned noticeably

clearer water within the system. This is also supported by the more demanding species of fish flourishing within the system. But much improvement is still needed.

## Fishery Resources

Despite the losses of aquatic habitat within the Winnebago System, it continues to be known throughout the Midwest for its excellent walleye, northern pike and white bass populations, as well as its world class population of lake sturgeon.

The lower 125 miles of the Wolf River and 37 miles of the upper Fox River contain the spawning and nursery grounds for the Winnebago Pool sturgeon and walleye populations. In addition to lake sturgeon, walleye, northern pike and white bass, the major species of the Winnebago Pool fisheries community include freshwater drum, sauger, yellow perch, largemouth and smallmouth bass, panfish, trout perch, and emerald shiner. The recreational fishing opportunities supported by this diverse fishery provides over one million angler hours and $234 million to the local economy annually based on a 2007 Winnebago County UWEX study entitled: **"The Lake Winnebago System sustains a recreational fishery that annually contributes $234 million to the local economy of its five surrounding counties".**

## Groundwater Resources

Groundwater resources in Winnebago County are, for the most part, of very good quality and in plentiful supply. There are three aquifers that supply potable groundwater. The *sandstone aquifer* is the most extensive and the only one of the three that can sustain high capacity pumping wells for municipal and industrial uses. The *Platteville-Decorah-Galena aquifer* is composed primarily of dolomite which is present in the eastern third of the County and provides adequate private water sources. Local problems in this aquifer include high sulfate, iron and arsenic concentrations along with hardness that results from the geochemistry of the dolomite formation. The *water table aquifer* is composed of varying thicknesses of glacial sediments, primarily sand and gravel, whose seams transmit adequate amounts of water for private wells.

All of the groundwater in the county originates from local precipitation that infiltrates through the soil into recharge areas of the aquifers. Contamination risks from land use practices are the greatest threat to groundwater resources. The potential sources of contaminants are from old unregulated landfills, old and operating quarries, underground storage tanks, on-site waste disposal systems, livestock waste handling, application and storage, and septic disposal. All of these sources are presently regulated or are being addressed through ordinances, State rules and/or technical assistance services provided by various county and state agencies.

Future availability of potable water is also a concern that is receiving attention. At the present time, based on the demand from agricultural, industrial, and residential uses, concerns center on the Fox Cities, from northeastern Winnebago County, downstream to Green Bay. A **U.S.G.S Fox Cities Water Study** indicates that existing potable water supplies will be adequate to meet projected demand through 2050. However, water treatment costs may be higher for communities that depend on groundwater due to a significant lowering of the prime use aquifer. Other conservation and protection options that are being considered include regulatory mechanisms and development of a groundwater withdrawal management program.

In order to better advise the general public regarding groundwater, a county wide groundwater flow, volume and aquifer location model needs to be completed. This will be a separate large scale, long term goal of this plan and project for our Land and Water Conservation Department.

## Wetland Resources

Approximately 44,380 acres of wetland still exist in Winnebago County. This is less than half of the total wetland acreage that existed in the county prior to the late 1800's. Most of the wetlands are located in the western and northern parts of the county. The largest areas are associated with Lake Poygan, Rush Lake, Rush/Waukau Creek, and the Fox, Rat, and Wolf Rivers.

As the result of high water levels along with draining and filling in the System, the greatest and most rapid loss of wetlands has occurred during the past 75 years, although, there were extensive areas of wetlands that were lost during the late 1800's and early 1900's. The primary causes for wetland destruction in the county have been seasonably high lake levels coupled with filling for urban development. This has resulted in degraded water quality, loss of natural filtration and storage areas, increased localized flooding, and loss of important fish and wildlife habitat.

There are three wetland habitat types found in Winnebago County, the Emergent Wetland, the Scrub-shrub Wetland, and the Forested Wetland. Each of these represents a unique ecosystem based on hydrologic conditions, vegetation, and location in relationship to other wetlands, drier upland areas, or adjacent water bodies.

In addition to providing habitat for fish, waterfowl, and other wildlife species, the remaining wetlands are important for the recharge of aquifers and the protection of groundwater quality. They are extremely efficient at trapping and filtering out nutrients and sediments contained in runoff and they provide highly effective flood storage areas. It is critical that the remaining wetland resources in Winnebago County be protected from further destruction. Existing county, state, and federal regulatory protection mechanisms need to be integrated and enforced. In addition, for the protection of wetlands adjacent to lakes and rivers, technical and financial resources for streambank and shoreline erosion and off shore control measures need to be expanded.

## Wildlife Resources

The lakes, marshes, rivers, and adjacent uplands in Winnebago County have provided prime waterfowl habitat for centuries. Sharp declines in waterfowl populations during the 1970's and 80's coincided with the loss of important aquatic food sources, such as wild rice and celery. In recent years, DNR, LWCD and local sporting clubs have been working cooperatively to restore these plants in Lake Poygan and Rush Lake Waterfowl hunting, as always, remains an important recreational activity in the county. Other important wildlife, providing hunting opportunities in the county, include deer, pheasant, rabbits, turkey and fur baring animals.

Because Winnebago County is located in what was formerly one of the best regions of the state for duck and pheasant production, the Department of Natural Resources initiated the Glacial Habitat Restoration Area (GHRA) project in the southwestern part of the county. This project is designed to restore wetlands and grasslands on private and public lands to benefit waterfowl, pheasants, and grassland songbirds. Winnebago County also has the State Acres For wildlife Enhancement (SAFE) program in designated townships within the GHRA that allows landowners to enroll blocks of cropland in a USDA, CRP contract to provide grassland habitat.

## Woodland Resources

According to the 2008 forest inventory analysis Winnebago County has a total of approximately 28,000 acres of forested land which is about 5 percent of all of the land in Winnebago County. Nearly all of this land is held by private landowners and is widely distributed across the county.

The amount of forested land has increased from about 20,000 acres in 1996. Most of this gain in forested acres is due to the planting of young tree seedlings by private landowners.

Programs such as the Conservation Reserve Program and the Wisconsin Forest Land Owner Grant Program have provided some financial incentives for tree planting. In addition to these programs the Managed Forest Law (MFL) program provides a tax break for landowners to manage their land for timber products. Currently 2213 acres are enrolled in the MFL program.

Oak/hickory forests make up the bulk of the forested land with 15,000 acres in total. Ash/ Elm forests comprise 4100 acres of the total forested land in the county while maple, pine and aspen forest types comprise the remaining acreage.

In Winnebago County the forest products and processing industrial output is 19.4% of the total county industrial output and accounts for 6.6% of the total employment.

Future trends in forest lands continue to show problems with increasing amounts of parcelization, large deer populations and problems with invasive species. Parcelization makes forest management difficult because of the small size of each unit. Overpopulation of deer and invasive species has made regeneration of the many of the forest types very difficult. Oak/hickory types are extremely hard hit because of the slower growth rates of the seedlings. As this cover type ages the understory is being replaced by faster growing and less palatable tree species and/or invasive plants such as buckthorn.

A relatively new invasive insect in Wisconsin is the Emerald Ash Borer (EAB). This pest arrived from China via Michigan. Since that time it has devastated large areas of ash in Michigan, Ohio, Indiana, and Ontario. It has been found in several areas in Wisconsin. Because EAB bores into the trunk of a tree it is extremely difficult to find and control. This insect has the potential to devastate the ash stands in Winnebago County.

Continuation of forest assistance and incentive programs to encourage the planting of new trees and proper management of existing forests are critical to the future of these forested lands.

**Mineral Resources**

The geologic and glacial history of the county is reflected in its mineral resources that provide a substantial volume of the total aggregate material used in construction activities throughout the county and surrounding region. Estimated acreage of those mineral resources that occur within 5 feet of the surface is: limestone = 5,500 acres; sand and gravel = 6,000 acres; and mason sand = 3,000 acres. These mineral resources are distributed quite equally around the county. Currently there are 41 active permitted extraction sites with reclamation plans encompassing 740 acres.

Winnebago County has high quality limestone. This material is used extensively for rip rap on shoreline and streambank protection projects throughout the Winnebago System. It should be noted that a number of old inactive pits and quarries have filled with water and provide unique fish and wildlife habitat. Unfortunately they also provide a conduit for surface water to enter groundwater unchecked, which can and has created contaminated groundwater issues.

It is important from an economical and environmental standpoint that these mineral and groundwater resources be protected through the development and implementation of sound reclamation plans.

### Soils

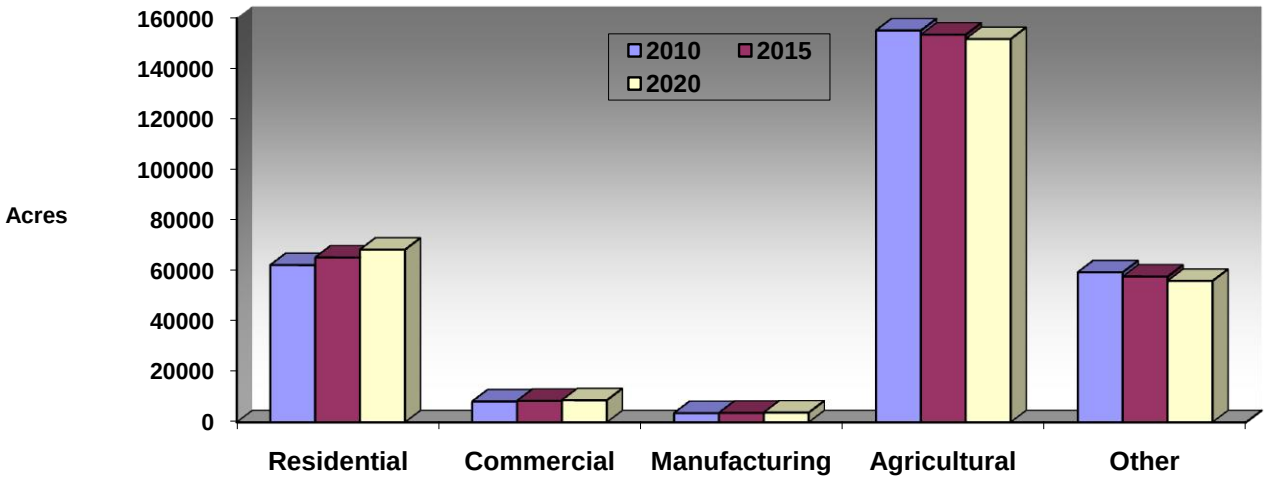
Individual soil types, with specific and unique characteristics, directly influence land uses. (See Appendix B) Soil type is the primary factor that affects the selection of the types and extent of agricultural practices and management techniques that may be used to sustain high productivity levels.

There are 74 different soil types found throughout Winnebago County. These are grouped into seven major soil associations that have distinctive soil patterns, relief, and drainage features. The Winnebago County Soil Survey contains detailed descriptions for each soil type, including information on suitability and limitations for various types of land use and land management. The Winnebago County Land & Water Conservation Department uses the soils information and related data extensively in determining soil erosion estimates and sediment load calculations. Under most cropping situations with the proper cultural practices soil erosion rates are easily maintained below the tolerable soil loss (T).

## Land Use Trends

Agriculture remains the dominant land use in Winnebago County and is expected to maintain that role well into the 21st century while urban development in the form of residential, commercial, industrial, and highway expansion is expected to put continuous pressure on the county's natural resource base. The Fox River Valley is one of the fastest urbanizing areas in Wisconsin. Based on the USDA, 2007 Census of Agriculture, in the past 5 years, approximately 6400 acres of farmland have been converted to some other use. These changes often result in an increased impairment of natural resources due to the impacts associated with construction site erosion, increased volume of runoff, and polluted runoff. According to the East Central Wisconsin Regional Planning Commission estimates, the current population in Winnebago County is 168,538 increasing to 173,241 by 2015 and 178,543 by 2020, an increase of about 6% over the next ten years.

### Land Use Trends 2010-2020



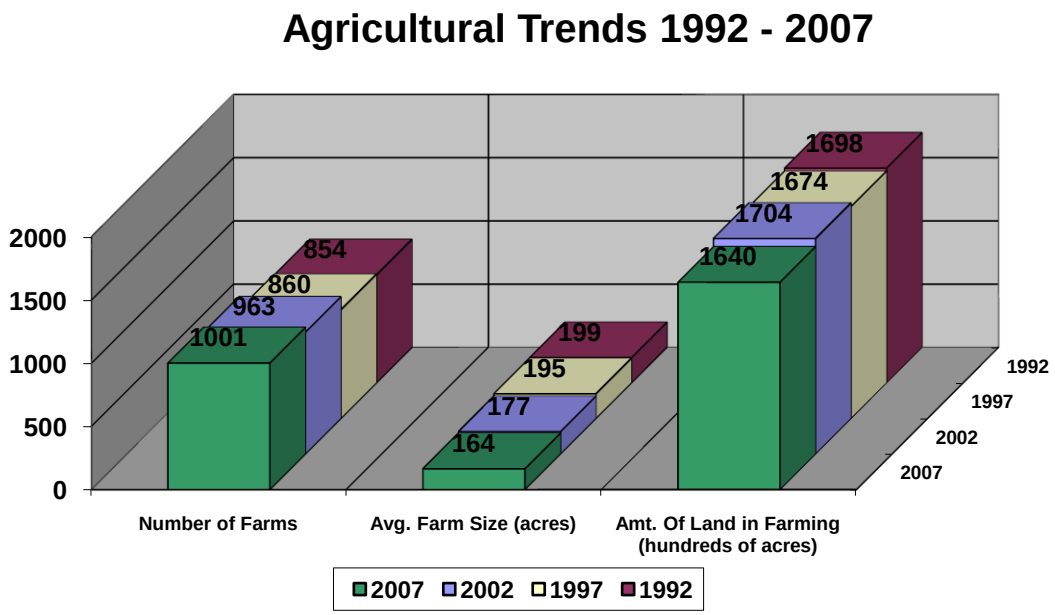

Data: East Central Wisconsin Regional Planning Commission-Land Use Goals, Strategies and a Plan for Action (April 2008)

Winnebago County and its 16 civil townships have completed their Comprehensive Land Use Plans. Common resource management concerns expressed throughout these planning efforts

include the preservation of farmland, open spaces, woodlands, wetlands and wildlife habitat. Added to the plan mix is the ever growing issue of stormwater and erosion control management, and groundwater protection in an ever developing environment.

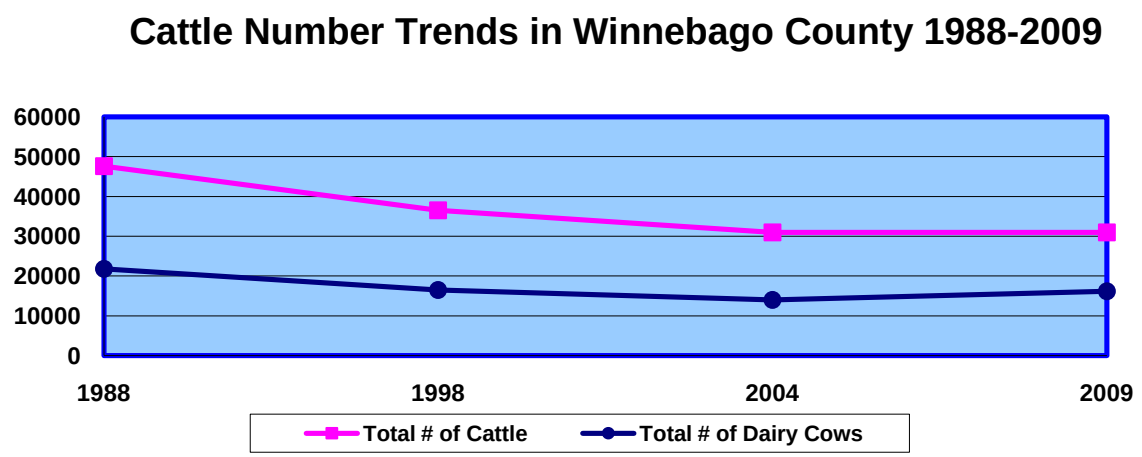
### Agricultural Trends

Since 2002 agriculture in Winnebago County has transitioned from predominantly cash grain to cash grain and dairy feed production. Many producers are providing feed and receiving manure for larger dairies in the area. The number of dairy cows in the County has been on a steady increase since 2005, gaining 2500 head over the last four (4) years. The number of farms has also increased due mainly to the exodus of urban dwellers into the rural landscape and the explosion of 5 to 10 acre "Farmettes". The acres in farms however continue to decline due to the ever increasing demand for land to development.




Data: USDA, National Agricultural Statistics Service (NASS), based on the last four Census of Agriculture, 1992, 1997, 2002 & 2007 – Winnebago County Data

Economic, political, and social factors will continue to impact farmland and related rural areas. We realize that "production agricultural farms" within the County are growing in size and decreasing in number and that animal numbers are being concentrated on fewer and larger operations. It is expected that over time, as the ownership matures, the number of production agricultural farms in the county will decline, while the size of the farms will increase. If the dairy industry continues to struggle we could see the current trend on cow numbers begin to level off and even start to decline. It will be interesting to observe the interaction/coexistence between the urban and rural sector, and witness the impacts of the Ag-Performance Stds., the Livestock Siting Rule and the Working Lands Initiative on agriculture over the next ten years.




Data: Wisconsin Agricultural Statistics, 1988, 1998, 2004 & 2009

## Assessment

Section 303(d) of the Clean Water Act requires the state to prepare a list of water bodies that are impaired and will remain so even after the application of technology-based standards typically applied to point sources of pollution. The state is to identify the pollutants causing the problem, identify the sources of that pollutant and develop a Total Maximum Daily Load (TMDL) of that pollution that a water body can receive and still meet water quality standards. The state is then required to set priorities for implementing strategies to meet the TMDL.

All of Winnebago County's water bodies are included on the 303(d) list. The reasons are sediments, nutrients, dissolved oxygen, polychlorinated biphenyl (PCB), toxic levels of contaminants in the water column, and mercury related fish consumption advisories, all caused by a blend of nonpoint sources, municipal wastewater treatment plant discharges and previously loaded industrial waste.

The other issue is the mismanagement of our land resources. It is time to start addressing the things we do and the amendments we make or add to our land. We need to manage our land for the sake of the land, in addition to the surface and groundwater concerns.

Our focus will be on those things identified as priorities that we can directly affect through the implementation of this plan.

# Plan Development Process

## Citizen Participation

Since 1976 Winnebago County, through its Land & Water Conservation Department, under jurisdiction of the Land Conservation Committee, has been directly responsible for resource conservation planning and program development. Direct citizen participation has always been a critical part of that process. The members of the County Land Conservation Committee and the

staff of the Land & Water Conservation Department place a very high value on the guidance and insight received from citizens, organizations, other agencies and local units of government.

## Related Resource Management Plans

In developing this Land and Water Resource Management Plan, issues, concerns, needs, goals and objectives from many existing natural resource management plan documents were reviewed. Things learned during the implementation of these documents have influenced the goals and objectives of this Plan.

These include:

- Winnebago County Land and Water Resource Management Plan (2005)
- Winnebago Comprehensive Management Plan (1989)
- Arrowhead River/Rat River/Daggets Creek Priority Watershed Plan (1991)
- Fond du Lac River/Winnebago West Priority Watershed Plan (1997)
- Pine River/Willow Creek/Lake Poygan South Priority Watershed Plan (1997)
- The State of the Wolf Basin 2001
- The State of the Upper Fox River Basin 2001

It is important to recognize that these documents were developed with a great deal of public participation. Many of the concerns, ideas, and recommendations voiced by those people are incorporated in this document.

## LWRMP Revisions Agency Committee

In the fall of 2009 a LWRMP Revisions Agency Committee was organized and convened to identify and prioritize the resource concerns that might impact our county in the next ten years. The committee included representatives from; WDNR, UWEX, UWO, USDA-NRCS & FSA and Winnebago County Public Health Dept. The 16 -member Agency Committee met and identified issues and concerns in the following three categories: Resource Concerns; Grants and Programs; and Current or New Laws, Rules and Ordinances that may impact the Plan.

## Resource Concerns

<u>Resource Concerns Identified in the Current Winnebago County LWRMP;</u>

Runoff /Pollutant loading from cropland.
Runoff /Pollutant loading from shorelines, streambanks and drainage ditches.
Runoff /Pollutant loading from construction sites.
Runoff /Pollutant loading from barnyards, livestock feeding areas and pasturing areas.
Runoff /Pollutant loading from land that was spread with manure.

<u>Resource Concerns Identified & Addressed by or with assistance from LWCD since the 2005 LWRMP revisions;</u>

Pollutant loading to Groundwater/Private Wells
Invasive Species
Pollutant loading to lakes, streams and storm water inlets from “Developed Sites”

Additional Resource Concerns Identified by the Agencies Committee;

Managing the land for the sake of the land not Surface and Ground Water
(Soil Quality & Compaction; Promotion of Woodlots; Impacts from the Introduction of Bio-Solids/Wastes & Industrial Wastes; Land Base Demands vs. Land Base Availability)

Climate Change Mitigation and Adaptation
(Programs and Conservation Practices adjusted to address drought/irrigation needs & impacts, floods/rainfall amounts & frequency; long range planning that acknowledges climate change & possible hydrologic cycle disruptions)

Ground Water Quality Issues
(Coli form, E. coli, Arsenic and treatment wastes; Septic systems over shallow bedrock; livestock waste impacts)

Livestock Waste Issues
(Waste flowing into tiles and into streams; waste odor impacting public health & property values; Groundwater contamination; over application of manure; air quality concerns)

Wetland and Emergent Habitat Loss, Inland and on the Winnebago System
(Water level management impacts; reduced lake and wetland resiliency; climate change effects on water level fluctuations & associated aquatic & wetland habitat reductions)

Management Capacity on the Winnebago System is compromised due to the lack of a centralized governmental entity
(Create a Winnebago System Lakes District or Commission)

## Grants or Programs

Grants or Programs Currently Identified in the LWRMP to support the implementation and /or installation of Conservation Practices or Programs;

Priority Watershed Projects (ending in 2010)
Soil and Water Resource Management Grant (SWRM)
Targeted Runoff Management Grant (TRM)
Winnebago County Water Quality Improvement Program
Watershed Based Pollution Trading
Conservation Reserve Program (CRP)
Conservation Reserve Enhancement Program (CREP)
Environmental Quality Incentives Program (EQIP)
Wetland Reserve Program (WRP)
Stewardship Incentive Program (SIP)
Managed Forest Law (MFL)
Wisconsin Lakes Management Program
Self Help Monitoring Program
Lake Management Planning Grant Program
Lake Protection Grant Program

Grants or Programs Identified and/or used by LWCD since the 2005 LWRMP revisions;

State Acres for Wildlife Enhancement (SAFE)
Wildlife Habitat Incentives Program (WHIP)
Gypsy Moth Suppression Program/Grant
Conservation Stewardship Program (CSP)
Farmer Nutrient Management Training Grants
Farm and Ranch Protection Program (FRPP)
Stormwater Planning Grant
Stormwater Management Grant
US Fish and Wildlife Grant Program
Wisconsin Waterfowl Association Grant Program

Additional Grants or Programs Identified by the Agencies Committees

Partnership with UWO
(Utilize student labor, data collection, labs & internal grants)
Wisconsin State Statute ch. 29.0953 (new)
(Land Acquisition Grants for Counties for Educational use)
Emerald Ash Borer control Grants
Great Lakes Restoration Initiative Grants – EPA
Groundwater Research Fund Grants
NOD Funds / Grants

## Current or New Programs, Laws, Rules and Ordinances that may impact the revised LWRMP

Winnebago County Livestock Waste Management Ordinance – Issue Permits, Enforcement and Ordinance Review Program

Winnebago County Storm Water and Erosion Control Ordinance – Permits, Site Visits and Inspections

NR 151 & ATCP 50 - Soil and Water Resource Management and Run off Management (Agricultural Performance Standards (APS))

Working Lands Initiative/Farmland Preservation Program – Landowner Compliance with APS, Landowner Compliance Field Monitoring

NR 216, Storm Water Discharge Rule – MS4-Administer and Implement all aspects of County Compliance Requirements for all impacted Departments.

ATCP 51, Livestock Facilities Siting Rule – Deliver Rule guidelines to all townships considering adoption and provide technical assistance with local implementation.

Clean Water Act – Local TMDLs-Implications

Memorandum of Understanding with WDNR for compliance enforcement of the APS

**Additional Rules, Laws and/or Programs identified by the Agencies Committee that may have an impact on the LWRMP;**

NR 40, Invasive Species Identification, Classification and Control

Aquatic Plant Management Program-Will policies on chladophora removal in the Great Lakes (shoreline manipulation) be transferred/adopted for the Lake Winnebago System?

NR 115, Wisconsin's Shoreland Protection Program- Minimum Zoning Standards for Shorelands and Shoreland Wetlands

Great Lakes Compact-With a few limited and strictly regulated exceptions, the agreement bans Great Lakes water from being "diverted," or piped out of the basin.

NR 243 Revisions regarding permits for operations with 300-1000 animal units

## Citizen's Advisory Committee

The Land and Water Resource Management Plan Citizen's Advisory Committee(CAC) consisting of 58 towns officials representing County jurisdiction was asked to review the information above, add any Resource Concerns they thought were missing and then rank the entire list of Resource Concerns from 1(being the most important) to the last number being the least important. They were also asked to add any Programs and Grants, and Rules and Laws they thought might support and/or impact the revised LWRMP. This was all done by postage paid mail for participant convenience and to allow time for them to visit with constituents in their district. 36% of the CAC responded providing a variety of answers and resource concern rankings.

The CAC Resource Concerns rankings were tabulated and below are the top ten:

Ground Water Quality Issues
Pollutant loading to lakes, streams and stormwater inlets from "Developed Sites"
Pollutant loading to groundwater/private wells
Wetland and Emergent Habitat Loss, Inland and on the Winnebago System
Managing the land for the sake of the land not surface and groundwater
Sediment and Phosphorus delivery from cropland
Invasive Species
Sediment and Phosphorus delivery from construction sites
Climate Change Mitigation and Adaptation
Runoff/Pollutant loading from barnyards, livestock feeding areas / livestock waste issues

Listed below are the related comments and concerns provided by the CAC:

Rural Development has a Rural Energy Assistance Program (REAP) that can be used for the construction of digesters on farms. These digesters have been proven to reduce the odor of manure and render it 98% inert after the process. Efforts have been undertaken over the past few years to address the phosphorus levels in the end waste product but I'm not sure where this technology stands at this point.

Revisions for operations of more than 1000 animals. They should have their own manure treatment plant not spread manure throughout the watershed. They are after all equal in wastes to a city.

Need to enforce livestock waste better. Too much spreading of livestock waste without incorporation or on top of snow or right before a storm event. Too much runoff to lakes and streams.

Managing the land for the sake of the land not surface and groundwater- reduction of "chemical use" for the sake of the land.

Invasive Species- Make sure to have funding available to help alleviate this problem.

Additional Resource Concerns Identified by the Agencies Committee – This one directly contradicts the last item calling for a regional based system.

Climate Change Mitigation and Adaptation – This one is absolutely Nutty!

Pollutant loading to lakes, streams and stormwater inlets from "Developed Sites" should be corrected with current County Ordinance enforcement.

**Basin Team Coordination and Basin Priorities**

The Winnebago County Basin Educator is a member of the Agency Committee and has provided his concerns. Basin plans have not been revised since the last revisions to this plan. The priorities of the three basins impacting this plan are listed below.

**Upper Fox**: Habitat fragmentation, wetland loss, nutrient enrichment of waters, and urban sprawl/rural residential development.
**Wolf River:** Point and non-point pollution, fishing and hunting recreation, loss of habitat and changes in land use.
**Lower Fox:** Protect critical habitats, sustain a balanced and healthy ecosystem, surface and groundwater quality, self-sustaining edible fish community and improve program support and education.

Many of the priorities identified by the Basin Teams will be addressed through the Winnebago Land and Water Resource Management Plan.

**Public Hearing Comments**

To receive additional comments and suggestions a public hearing for the Plan was held on June 3, 2010. The following is a summary of the comments provided at the hearing.

There is no need for a separate commission or government unit to manage the Winnebago System. The Army Corps of Engineers and WDNR already do a fine job of managing the System. We should not support the creation of another layer of government or taxing authority. If funds are needed to support research or the work needed to by done by the WDNR then the taxpayers should contact their legislators and have them provide the needed funding to support the efforts. We should not be creating a commission to generate those funds.

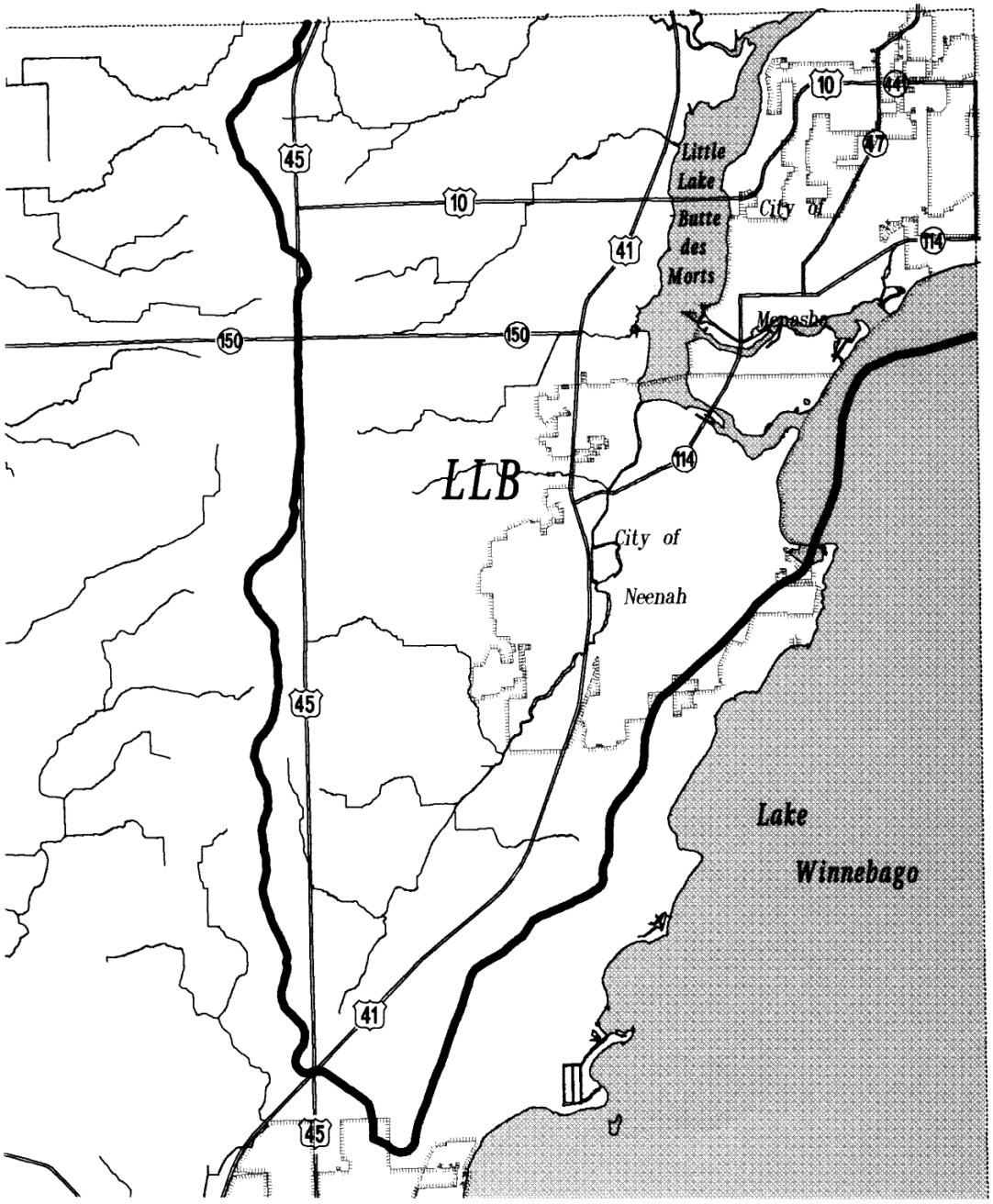
WDNR needs to manage the carp population to protect the weeds that filter the water and provide habitat for fish.

Grant requests do have commitments attached to them that can require additional funds and project installations. Be careful of what you request when applying for grants.

**Land Conservation Committee (LCC)**
The LCC agrees with the resource concerns identified by the contributing committees and general public and supports the Plans objectives and goals to address them. However, the LCC does not support a separate centralized entity such as a commission or district to manage the Winnebago System. The LCC unanimously opposes the creation of any additional layer of government or taxing authority to oversee the Winnebago System regardless of its charge.

**Summary**
In summary, the contributions made by all the committee members are extremely valuable, and along with the new and ongoing state requirements will be utilized in setting the direction of our LWRMP.

# Lower Fox River Basin
## Winnebago County, WI




1 in : 8500 ft

Basin Boundary
Watershed Boundary
Cities/Villages
US/State Roads
Rivers/Streams

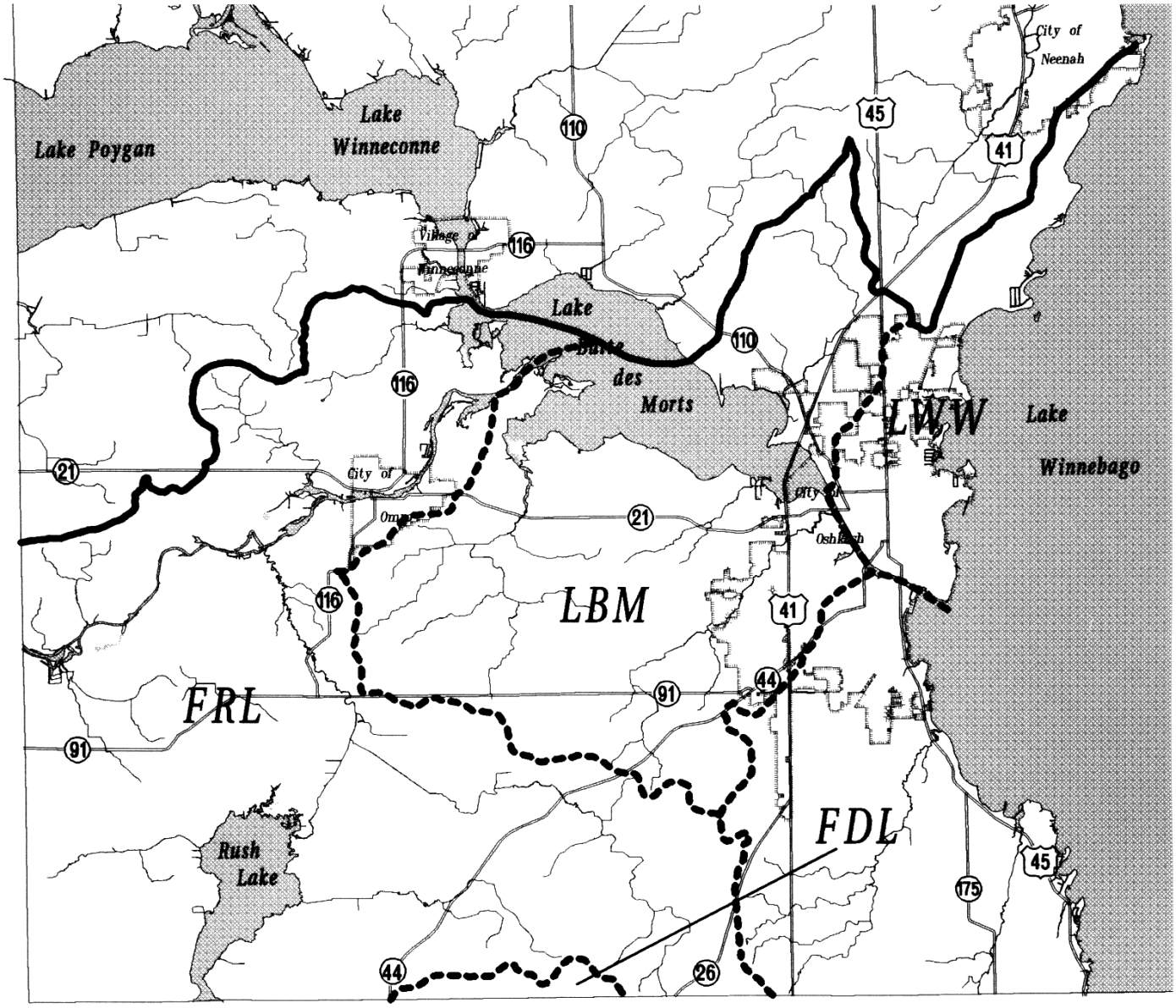
**Watershed Codes**

**Lower Fox River Basin**

LLB Little Lake Butte des Morts

Source: Winnebago County
Land & Water Conservation Dept.
Geographic Information System
September 1998

# Upper Fox River Basin
## Winnebago County, WI




1 in : 15500 ft

Basin Boundary
Watershed Boundary
Cities/Villages
US/State Roads
Rivers/Streams

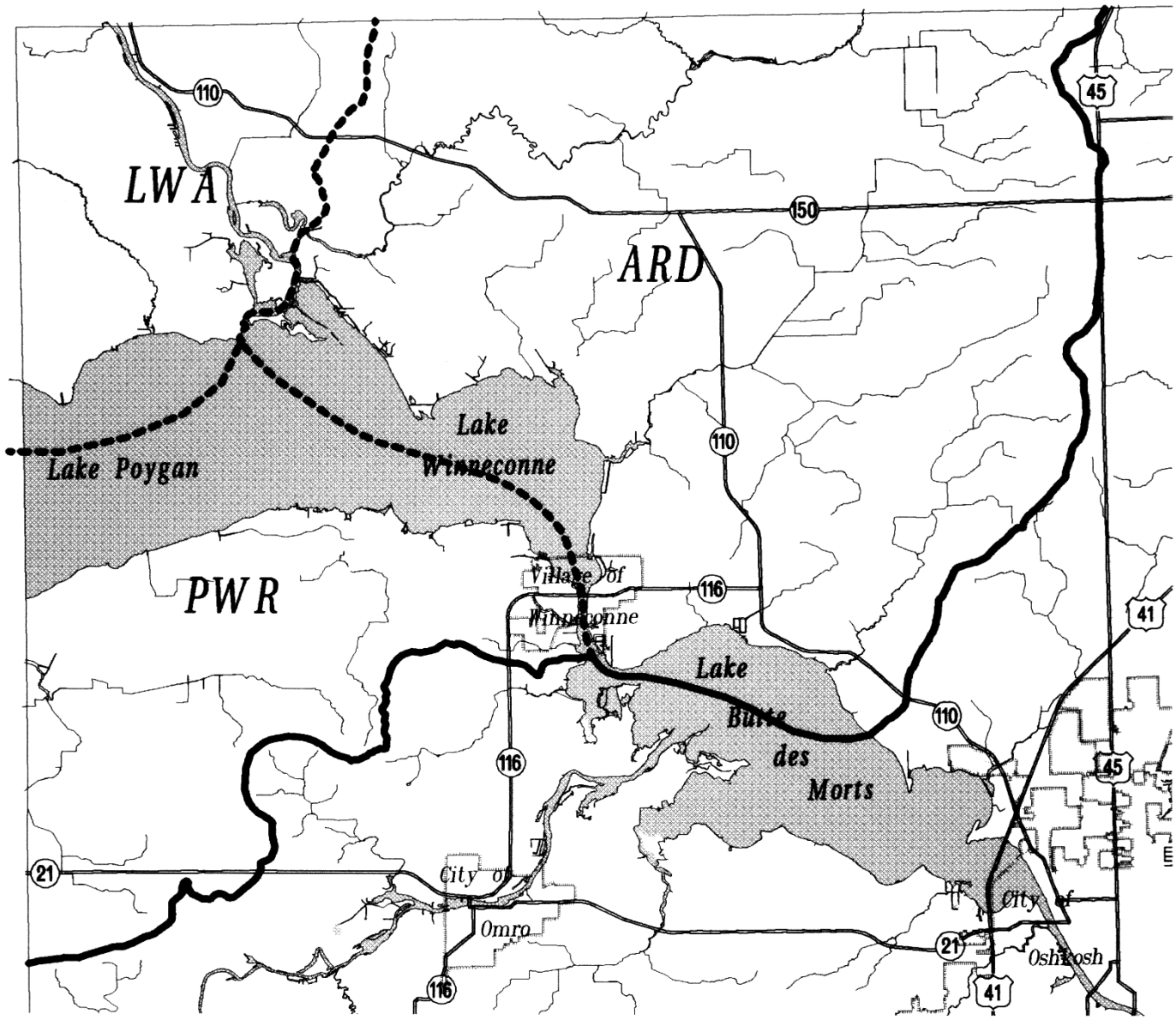
**Watershed Codes**

**Upper Fox River Basin**

| | |
|---|---|
| LWW | Lake Winnebago West |
| FDL | Fond du Lac River |
| LBM | Lake Butte des Morts |
| FRL | Fox River/Rush Lake |

Source: Winnebago County
Land & Water Conservation Dept.
Geographic Information System
September 1998

# Wolf River Basin
## Winnebago County, WI




1 in : 12500 ft

N

Basin Boundary
Watershed Boundary
Cities/Villages
US/State Roads
Rivers/Streams

**Watershed Codes**

**Wolf River Basin**

| | |
|---|---|
| ARD | Arrowhead River/Rat River/Daggets Creek |
| LWA | Lower Wolf River/Alder Creek |
| PWR | Pine River/Willow Creek |

Source: Winnebago County
Land & Water Conservation Dept.
Geographic Information System
September 1998

# OBJECTIVES, GOALS AND ACTIONS

## OBJECTIVE AND GOALS

Sediments and pollutants contained in runoff from the urban/rural and agricultural landscapes along with the mismanagement of land resources continue to be the most significant items impacting the soil and water resources of Winnebago County. This is reinforced by the resource concerns indentified by the contributing committees.

It is however State policy in the form of NR151, ATCP 50 and the Working Lands Initiative, that will set the direction for this plan and define the majority of our workload. There is no doubt that many of the resource concerns indentified by the committees and LWCD staff will be addressed by working with landowners to achieve compliance with state rule. It will however allow less staff time to address and support other resource concerns and not associated with said rules.

Therefore, those landowners required to comply with the Agricultural Performance Standards to remain or become eligible for the new and increased tax credits allowed by the revised Farmland Preservation Program will be our **Primary Priority Farms** until all are certified compliant.

As previously stated, the main contributor to the Sediment and Phosphorus loading is Cropland. This information combined with the extensive work already accomplished with the livestock owners through our Livestock Waste Management Ordinance Review Program (detailed on the following pages), and our Watershed Projects, leads us to identify Cash Crop operations as our second “Focus Group” or “Secondary Priority Farms”. The initial list of these farms has been generated by our Geographical Information Systems (GIS) database, guided by the following parameters.

- The land is located outside the Watershed Projects
- The owner/operator operates land within a Water Quality Management Area
- The land meets a predetermined soil type requirement
- The owner/operator has little or no livestock.

These landowners will be addressed as staff time and funding allows.

Consequently, based on current and future State requirements, countless WDNR, UWEX and related Reports and Management Plans, and the resource concerns identified by our LWCD Staff, the Agencies Committee and Citizens Advisory Committee, we consider the following Objectives and Goals to be the main drivers of our LWRMP for the next ten years.

Objective: Get all FPP participants eligible for the tax credit by December 31, 2015.
Goals: Complete a minimum of 20% of the required farm reviews each year, for five years.
Get 20% of participants in full compliance with the Ag-Perf Stds each year, for the first five years of the Plan (Currently 20% is estimated at 30 landowners)

Objective: Continue Ag Perf Stds implementation with the secondary focus group of landowners to help them achieve full compliance.
Goals: Complete a minimum of 20 farm reviews each year.
Get 20 farms in full compliance with the Ag-Perf Stds each year as staff time and funding allows.

Objective: Reduce agricultural pollutant loading to surface water and ground water / private wells
Goals: Reduce livestock waste and other surface runoff impacts
Increase proper well abandonments
Create awareness of water quality issues through well water testing
React quickly to pollutant runoff complaints or issues with our DNR partners

Objective: Reduce pollutant loading to surface waters from "Developed Sites"
Goals: Increase filtration and infiltration of on site stormwater
Create awareness of BMPs to reduce loading

Objective: Reduce pollutant loading from construction sites
Goals: Create awareness of the impacts of construction site erosion on resources
Enforce local efforts/ordinances to control construction site erosion
Test and/or demonstrate construction site erosion control BMPs

Objective: Reduce shoreland, streambank, wetland and emergent habitat loss, inland and on the Winnebago System
Goals: Increase shoreland and wetland restoration projects
Support stabilizing water levels to increase lake and wetland aquatic and plant habitat resiliency
Support the adoption of ecologically responsible seasonal water level management on the Winnebago System
Create awareness of the benefits of these plant communities to the resource

Objective: Increase the management of land for the sake/betterment of the land
Goals: Increase woodlot production
Create a greater awareness of soil quality and compaction
Create a greater awareness of the impacts of biosolids & industrial wastes on the land
Consider land base demands vs. land base availability in decision making process
Identify and protect high resource value Lands
Support efforts to preserve farmland/green space

Objective: Reduce invasive species impacting county resources
Goals: Support local efforts to contain and control Invasive Species
Create awareness of invasive species impacts on resources
Integrate resources with partner groups and agencies to address the issue
Utilize grant resources to administer a county program or partner with and integrate the resources of sister agencies, UWs and conservation organizations to address AIS

Objective: Adjust programs and conservation practices to address climate change impacts
Goals: Support long range planning that acknowledges climate change/hydrologic cycle disruption
Support efforts to address drought related irrigation needs and impacts
Support efforts to address flood/rainfall event amounts and frequency

# ACTIONS AND PLAN IMPLEMENTATION STRATEGY

As stated in the introduction, the theme and mission of this plan is to get back to the basics of achieving reasonable, tangible and measureable goals, using all available tools and resources. In this section we will discuss the tools and resources, and provide our action or work plan that will identify the tangible and measureable things we will do to achieve our goals.
Winnebago County will use existing ordinances, mentioned in this section to assist in the implementation of the Agricultural Performance Standards and the achievement of other plan goals. The extent to which these goals are accomplished depends on several factors including the degree to which landowners voluntarily implement the necessary conservation practices, and the level of funding and staff time that is available to complete the steps associated with implementation. Some of the conservation practices will require cost-sharing for installation, while others will require basic management changes directly related to tillage practices, livestock manure, application of commercial fertilizers, and land use activities adjacent to streams, rivers, and lakes.

## Water Quality Improvement Program

In 1998, the Winnebago County Board approved $100,000 for a Water Quality Improvement Program to be administered by the Land & Water Conservation Department. The purpose of this program was to provide landowners an alternative funding source for conservation practices that were outside the scope of other existing programs or funding sources. This program has been extremely successful and has allowed to the Land and Water Conservation Department to leverage funds from other sources and complete large projects that otherwise would not have been possible. It is currently budgeted annually from $90,000 to $100,000 depending on levy limitations.

The Winnebago County Water Quality Improvement Program funding is primarily used to cost-share “hard” conservation practices that aid landowners in achieving compliance with FPP Conservation Standards, the Agricultural Performance Standards and the water quality goals established in this plan. The eligibility criterion uses a different approach to determine priority sites. Based on experience gained through the watershed program as well as from recommendations of the Citizens Advisory Committee, the following specific eligibility criteria were established to determine priority sites for streambank and shoreline erosion, upland erosion, and nutrient loading from animal manure.

### Eligibility Criteria

#### Streambank/Lakeshore Erosion

Any individual with a site experiencing soil loss greater than 2,000 pounds per year with adjacent wetland or aquatic vegetation or with a site experiencing soil loss greater than 6,000 pounds per year may receive financial assistance**.**

#### Shoreline Habitat Restoration for Developed Areas

Any landowner with a site that: exhibits poor soil stability adjacent to their shoreline; has the potential to deliver nutrients/pollutants to a waterbody(ies); has depleted wildlife habitat or benefit (little or no native vegetation) along their shoreline, and where the landowner agrees NOT to use fertilizers containing phosphorus.

**Nutrient Loading from Animal Manure**

Any site that contributes 50 pounds or more of phosphorus per year may receive financial assistance for all barnyard runoff control practices necessary to reduce the phosphorus rating by 50%. Any site that contributes 20 – 49 pounds of phosphorus per year may apply for financial assistance for clean water Best Management Practices such as roof gutters, diversions, underground outlets or grass buffer areas. All landowners required by the County Livestock Waste Management Ordinance to do nutrient management planning (NMP) may apply for financial assistance. The maximum they can receive is 70% of the actual billed amount up to $7.00/acre per year for four years. Any landowner voluntarily wanting to do NMP may apply for financial assistance. Those landowners receiving the FPP tax credit are not eligible for NMP cost sharing.

**Soil Erosion (Sheet, Rill, Gully)**

Any cropped field within 1000 feet of surface water and a soil loss of ½ T or higher based on the current soil loss prediction model may apply for financial assistance for high residue management. Any landowner with a field experiencing gully erosion, as determined by LWCD staff, may apply for financial assistance for a grassed waterway or other needed BMPS. (Priority will be given to Ag Perf Std compliance requirements)

**Groundwater Contamination**

Any landowner with a dug or drilled well removed from service, posing a threat to groundwater quality and/or public safety as determined by LWCD staff, may apply for financial assistance. Any landowner with a naturally occurring sink hole and/or direct conduit to groundwater, posing a threat to groundwater quality and/or public safety as determined by LWCD staff, may apply for financial assistance.

## Agriculture Performance Standards

Certain land use and land management activities are known to impair surface and groundwater resources. Concern over this issue resulted in a call for minimum performance standards relating to land use activities. The State Legislature directed the Wisconsin Department of Natural Resources (WDNR) and the Department of Agriculture, Trade and Consumer Protection (DATCP) to develop performance standards for agricultural and non-agricultural nonpoint sources of pollution. The DNR rule, NR 151, sets minimum performance standards for farms to prevent runoff and protect water quality. The DATCP rule, ATCP 50, identifies the conservation practices that farmers must follow to meet DNR standards. Appendix A identifies the Conservation Practices that will be used to implement the Agriculture Performance Standards and to help achieve the goals of this plan. The Table below summarizes the Agriculture Performance Standards and the effective dates for each of the rules.

**Overview of Standards and Associated Conservation Practices**

| **Performance standard (type of standard covered)** | Effective Date | Conservation Practices |
|---|---|---|
| Control soil erosion to meet tolerable soil loss (T) calculated by RUSLE II model (cropland) | October 1, 2002 | Install contour buffer systems, crop rotation, conservation tillage, no-till planting, contour strip cropping, and contour farming. Related practices: grade stabilization structures, grassed waterways, critical area stabilization, and lined waterways. |

| | | |
|---|---|---|
| Divert clean water from feedlots<br>(Livestock facilities within Water Quality Management Areas) | October 1, 2002 | Install roof runoff management systems, earthen diversion and underground outlets |
| Construct, maintain and proper closure of manure storage facilities to prevent animal waste overflows and leakage. | October 1, 2002 | Follow NRCS standards for construction, maintenance and closure using technical standards 313 (Waste storage facility), 360 (Closure of waste impoundments), 634 (waste transfer system) |
| Manure Management Prohibitions<br>a. No overflow from manure storage facilities.<br>b. No unconfined manure stacks with Water Quality Management Areas.<br>c. No direct runoff from feedlots and manure storage facilities to waters of the state.<br>d. No unlimited access of livestock to shore lands that prevents maintenance of adequate sod cover. (Livestock facilities) | October 1, 2002 | Design and construct facilities to technical standards, maintain existing facilities, repair or replace facilities, as needed.<br>a. Relocate manure stacks to more environmentally safe areas. Construct storage facility.<br>b. Install barnyard runoff control systems, roof runoff management systems, wastewater treatment strips, relocate animal feeding facilities.<br>c. Install access roads and cattle crossings, watering facilities, livestock fencing, riparian buffers, prescribed grazing, stream bank protection. |
| Control nutrient runoff into water of the state (cropland) | Effective in 2003 for new operations, 2005 for land near impaired or exceptional water and 2008 for other existing farms | Develop and implement annual nutrient management plan for applying all nutrients. All soil tests must be completed by DATCP approved lab. Apply nutrients according to UWEX A-2809 publication. Install conservation practices to reduce runoff and nutrient loading. |

## Implementation Strategy for Performance Standards

### Information and Education

Every effort will be made to inform Winnebago County landowners about the required agriculture performance standards and prohibitions. Land & Water Conservation department staff will provide landowners with an overview of the regulatory requirements when working with them on programs administered by the department. Educational materials will be provided to

each landowner. The primary goal will focus on establishing a voluntary approach to meeting compliance.

### Records Review

Ultimately all landowners in Winnebago County will be reviewed to determine if they are in compliance with the Agriculture Performance Standards. Initially, the main focus for review will be based on checking Priority Farm files for compliance with NMP and other portions of the Ag Perf Stds.

### Onsite Evaluations

The Winnebago County Land & Water Conservation Department will perform onsite evaluations based on the following criteria:

1. Evaluation at the request of the landowners participating in FPP.
2. Landowners believed to be out of compliance based on the results of the records inventory.
3. Formal complaints received by the Winnebago County Land and Water Conservation Department.

Compliance will be determined by LWCD staff and documented. Any landowners found to be out of compliance will be contacted and given the following information in writing:

- A statement explaining the compliance issues. (Notice of Noncompliance)
- The corrective measures needed to achieve compliance.
- A timeline for achieving compliance. (Schedule of Compliance)
- The status of eligibility for cost-share assistance.
- The funding sources available and technical assistance to be received.
- An explanation of technical standards and maintenance requirements.
- A signature page attached to findings report indicating whether the landowner agrees or disagrees with the report.
- A copy of performance standards and prohibitions and any applicable technical standards.
- A notice of process and procedure for appeals stating: Any person aggrieved by a decision of the Land and Water Conservation Department may file a written appeal of the decision with the Winnebago County Land and Water Conservation Department within 30 days of the Departments decision. A hearing upon the appeal shall be commenced within 60 days of the date of the appeal.

### Administer Funding and Technical Assistance

The Winnebago County Land and Water Conservation Department utilizes all available sources of cost-sharing. Annual allocations of cost-share implementation dollars from the DATCP will be primarily earmarked for any conservation practices required for landowners to achieve compliance with the Ag Performance Standards. County Water Quality Improvement Program funding will continue to be utilized for practices that are necessary to achieve the objectives described in this plan and assist landowners in achieving compliance with the Ag Performance Standards.

### Enforcement Process

A landowner that is out of compliance with state performance standards and prohibitions and refuses technical and financial assistance from the Winnebago County Land & Water Conservation Department will be notified by mail that they are subject to enforcement actions. They will receive a multi-agency communication from the Land & Water Conservation Department and Department of Natural Resources. A copy of the enforcement letter will be

sent to the Department of Agriculture, Trade and Consumer Protection. Landowners who are in violation of NR151 and refuse to take corrective action will be referred to the Department of Natural Resources – Northeast Region in Green Bay. A fully executed Memorandum of Understanding between the DNR and Winnebago County for enforcement of the Ag Perf Stds is on file at the Winnebago County Land and Water Conservation Department.

Landowners who are in violation of the Winnebago County Livestock Waste Management Ordinance will be dealt with in accordance with County enforcement policy.

## Livestock Waste Management Ordinance

Winnebago County has had a Livestock Waste Management Ordinance since 1985. The original ordinance addressed all existing or planned manure storage facilities, including all aspects relating to design, construction, and management. In 1992, the Livestock Waste Management Ordinance was revised to include guidance regarding manure storage abandonment. With the trend in the County of expanding dairy operations and livestock facilities, the Land & Water Conservation Department initiated a comprehensive revision of the ordinance in 1999. With the assistance of a Livestock Waste Management Citizens Advisory Committee, guidance and recommendations were provided for the development of a reasonable, environmentally effective, and enforceable ordinance. The complete Livestock Waste Management Ordinance can be viewed at **http://www.wclwcd.org/PDF/LWMO.pdf**.

**The Winnebago County Livestock Waste Management Ordinance:**

- Regulates the on site location, design, construction, alteration, operation, and maintenance of all animal lots and livestock waste storage facilities, including abandonment of storage facilities.

- Regulates the land application of all livestock waste in Winnebago County, based on Technical Standard 590 with specific requirements for animal lots and livestock waste storage facilities.

- Provides specific regulations for agricultural lands within Water Quality Management Areas.

- Incorporates the four prohibitions.

**Livestock Waste Management Ordinance Review Program**

In 2001, the Land and Water Conservation Department began a comprehensive program designed to inform all livestock owners about the ordinance. The intent of the program is to educate all livestock owners of their responsibilities so they stay in compliance with the ordinance and the Livestock Performance Standards and Prohibitions. A road survey throughout the county yielded over 700 livestock sites ranging from large dairy operations to small hobby farms. Each livestock site was assigned a unique number. Each site is spatially located on our Geographical Information System (GIS) and specific data regarding who conducted the review, date of the review, type and number of livestock, animal lots and manure storage facilities and operator is logged into our data base. When a Livestock Waste Permit is issued for a new animal lot or manure storage facility, an ordinance review is conducted. These newly permitted sites are recorded and the information can then be added to our GIS system. A 5-year implementation strategy was developed to disperse the workload among the staff. To date Land and Water Conservation staff have met with nearly 625 livestock owners to review the requirements of the Ordinance and the Livestock Performance Standards and Prohibitions. The GIS data base allows us to generate contact lists at any time, based on multiple parameters, to exchange information with our livestock owners.

## Stormwater Management & Plan Reviews

The performance standards governing storm water management are found in the Winnebago County Zoning Ordinance. These are applicable to commercial, industrial and residential development on lands in the unincorporated areas of the County. The standard requires that stormwater runoff after development shall not be at a greater peak rate than the rate of flow under predeveloped conditions. The 2, 10, 100 year storm is the standard used in the process to determine both pre-and post development rates of runoff. USDA -Technical Release 55, Urban Hydrology for Small Watersheds is the methodology used in determining the rates of runoff. Where post-developed runoff exceeds pre-developed conditions, the standards require addressing the additional stormwater to achieve 80% TSS removal for new sites and 40% removal for redevelopment.

All proposed development projects require submittal of a stormwater management plan, subject to review by either the County Zoning Department or the County Land and Water Conservation Department. Construction site erosion control is an important component of that plan submittal and review process. In addition, an Erosion Control permit is required for all single and two family homes, buildings exceeding 1000 square feet and other land disturbing activities identified within the county ordinance. The County Land and Water Conservation Department is currently responsible for issuing both Stormwater and Erosion Control Permits.

Winnebago County Zoning Department is also responsible for the enforcement of Shoreland Zoning.

Winnebago County will comply with the State MS4 Permit requirements and recognize any installed BMPs for their pollutant load reductions. We will also recognize the efforts of those towns required to meet MS4 permit guidelines as quantifiable pollutant load reductions.

## Farmland Preservation Program

Under the new Working Lands Initiative, Farmland Preservation Program, tax credits may be claimed by agricultural landowners fulfilling certain eligibility requirements. To be eligible, all cropland and facilities associated with the farm must be in compliance with the Ag Perf Stds and meet certain zoning requirements. As previously stated, these landowners will be our Primary Priority Farms until all have achieved compliance. The County Land and Water Conservation Department is responsible for administering the landowner compliance portion of the program and anticipates a tremendous increase in workload associated with this new program.

## Goals Implementation Budget

The funds received by the Land & Water Conservation Department as a result of this plan will be used to supplement staff costs and provide cost sharing for those landowners and/or operators needing to be compliant with the Ag Perf Stds or that have other eligible projects. It is expected that due to limited staff and funds and the requirement for cost sharing, compliance with the Ag Perf Stds will be minimal for landowners not participating in FPP. We anticipate using the County Water Quality Improvement Program funds and other available grants to assist with our efforts. The amount of cost share dollars required will hinge on several unknowns. First is the amount of staff time available for design and implementation of the required practices. Second is the type and cost of the practices themselves. Based on past years and the type of hard and soft practices installed, we estimate that $350,000 to $400,000 of cost

share funds would be necessary annually. This equates to approximately $4,000,000 of landowner assistance funds for the 10 year implementation period (2011 to 2020).

Currently we have eight employees in our LWCD. We have seven full time technical positions, and one full time support staff. Current departmental employee salaries and benefits are approximately $570,000 annually and are expected to increase two to three percent each year. Total staff costs for the 10 year implementation period (2011 to 2020) are estimated to be $6,730,250. Total costs for staff and cost sharing the needed BMPs is estimated at $10,505,250. Realistically these costs can only be managed with increased outside revenues from grants and other revenue generating sales or activities. Please see the **Plan Implementation Budget Table** below.

**Plan Implementation Budget Table**

| Cost Center | Costs | | | | | Totals |
|---|---|---|---|---|---|---|
| | 2011 | 2012 | 2013 | 2014 | 2015 | |
| 8 LWCD Staff | $587,100 | $604,700 | $622,850 | $641,500 | $660,800 | $3,116,950 |
| BMPs | $350,000 | $350,000 | $350,000 | $375,000 | $375,000 | $1,800,000 |
| Totals | $937,100 | $954,700 | $972,850 | $1,016,500 | $1,035,800 | $4,916,950 |

| Cost Center | Costs | | | | | Totals |
|---|---|---|---|---|---|---|
| | 2016 | 2017 | 2018 | 2019 | 2020 | |
| 8 LWCD Staff | $680,600 | $701,000 | $722,000 | $743,700 | $766,000 | $3,613,300 |
| BMPs | $375,000 | $400,000 | $400,000 | $400,000 | $400,000 | $1,975,000 |
| Totals | $1,055,600 | $1,101,000 | $1,122,000 | $1,143,700 | $1,166,000 | $5,588,300 |

It is obvious from the numbers that the labor costs and cost share requirements to meet the technical standards and the design approval expectations of these BMPs are significant.

Financial assistance is available to landowners and local units of government with priority sites to help offset the costs of installing BMPs. Funding is distributed to landowners by the Land and Water Conservation Department after practices have been completed and inspected; or in the case of conservation tillage, residue is checked by staff after planting. To qualify for financial assistance, landowners must meet eligibility criteria defined by the program and agency from which they are receiving funds.

Currently Winnebago County uses multiple funding sources to install BMPs. We will continue to use every available funding source to get Conservation Practices and the Ag-Performance Standards Implemented in our County. Winnebago County is fortunate to have a county funded water quality improvement program providing up to $100,000 of cost-share dollars for landowners. There is a project funding cap of $20,000. With these funds we've been able to

leverage additional grant dollars to install large or expensive projects. On average, the taxpayers of Winnebago County are getting $3 to $4 of conservation practices installed, for every $1 invested from the levy. Other funding sources targeted for use include:

Land and Water Resource Management / SEG Grant

Targeted Runoff Management Grants

Environmental Quality Incentives Program

Conservation Reserve Enhancement Program

Conservation Organizations / Private Organizations Grants

Lake Planning Grants

Lake Protection Grants

Urban NPS and Stormwater Management Construction Grants

US Fish and Wildlife Service Grants

Wisconsin Waterfowl Association

Wisconsin Gypsy Moth Suppression Grants

WDNR Invasive Species Grants

To receive financial assistance, eligible landowners must enter into a cost-share agreement with the Land and Water Conservation Department or providing agency. Cost-share agreements are binding documents, which secure funds for an individual practice. Structural practices have the Agreement attached to the deed of the property. Non-structural practices such as Residue Management and Nutrient Management are not recorded with the deed.

Practices included on cost share agreements must be installed within the schedule agreed to on the agreement. Practices must be maintained for a minimum of ten years from the date of installing the final practice listed within the cost share agreement with the exception of conservation tillage, which has no term specified.

Local, state, or federal permits may be needed prior to the installation of some practices. Areas in which a permit is generally required include zoned wetlands and the shoreline areas of lakes and streams. These permits are needed whether the activity is a part of the County program or not. The cost share recipient is responsible for acquiring the needed permits prior to the installation of practices. With the new regulations in place, these permits will be needed on 90% or more of these projects. The Land and Water Conservation Department is responsible for enforcing compliance of cost share agreements. The LWCD will insure that practices installed through the program are maintained in accordance with their operation and maintenance plan for the appropriate length of time. Installed practices are logged in several places, including on the GIS. We are able to generate review lists based on multiple parameters to monitor previously installed practices for compliance with the agreement. Winnebago County has a formal site review plan.

## Cost Containment Procedures

Cost containment procedures are identified in this plan to control the costs of installing BMPs. The cost containment procedure used by Winnebago County is described below. The Request for Proposal (RFP) procedure, average cost and flat rate lists can be obtained from the Winnebago County Land and Water Conservation Department.

**RFPs**: Competitive RFPs will be required for all structural BMPs with estimated total costs, as determined by the project technician, exceeding $5,000. The process requires a minimum of three RFPs from qualified contractors in itemized RFP format. In cases where only one RFP is received, the Land and Water Conservation Department will determine if the RFP constitutes an appropriate cost for the project. If no RFPs are received or if the lone RFP is not deemed appropriate, the project may be placed back out for RFPs or the County may limit cost sharing based on average costs. The Land and Water Conservation Department and landowners reserve the right to refuse any RFPs that are not deemed appropriate for the practice.

**Average Costs:** Average costs can be used for structural BMPs with an estimated cost of less than $5,000, unless the cost share recipient decides, and the county agrees, to RFP the installation of the BMPs. If the financial assistance recipient or the county decides to RFP a structural BMP under $5,000, the RFP procedure will apply.

Payments for “in kind” contributions will be based on the County’s guidelines. Landowners who receive financial assistance who wish to install a BMP using their own labor, material, and equipment must submit a quote plus one quote from a qualified contractor for the practice installation.

Financial assistance payments will be based on actual installation costs. If actual installation costs exceed the amount of financial assistance determined by cost estimates, then the amount paid the grantee may be increased with the approval of the County Land Conservation Committee. Appropriate documentation regarding the need for changes will be submitted to the Land and Water Conservation Department.

# Plan of Action

The plan of action for this document is to identify, implement and install the proper practices and procedures to achieve the goals required to meet our previously indentified objectives. This will be accomplished using existing staff, volunteers, conservation groups, lake associations, and all applicable programs, rules, laws, ordinances and available financial resources.

### Program Integration

- **Winnebago County Water Quality Improvement Program**
  In 1998, the Winnebago County Board approved the Winnebago County Water Quality Improvement program allocating $100,000 per year for the installation of conservation practices within the county. The County Program funding is utilized on high priority sites outside of the priority watershed projects.

- **Total Maximum Daily Load (TMDL)**
  To the extent possible, regarding specific opportunities within Winnebago County, pollutant load reductions will be pursued through the Total Maximum Daily Load (TMDL) process. In accordance with Sec, 303(d) of the Clean Water Act and U.S. EPA regulations, states are required to develop TMDLs for waters not attaining quality standards after pollution control

requirements have been implemented. Simply stated, TMDLs provide a means, within a watershed or basin, for very targeted point source and nonpoint source pollution abatement as part of a regulated and quantifiable method to meet a particular water quality standard.

- **Biomass Crop Assistance Program (BCAP)**
  The BCAP assists agricultural and forest land owners and operators with matching payments for the amount paid for the collection, harvest, storage and transportation (CHST) of eligible material by a qualified Biomass Conversion Facility (BCF).

- **Conservation Reserve Program (CRP)**
  The Conservation Reserve Program was developed to assist landowners in voluntarily converting highly erodible and environmentally sensitive cropland from the production of annual crops to less intensive uses such as permanent grass, legumes, forbs, wildlife cover or trees. Regular sign-up, in most cases, involves offers of entire fields. Sign up applications are available at the Farm Service Agency.

  Continuous sign-up is primarily for partial fields and small plots. The sign-up is ongoing and covers priority practices such as filter strips, riparian buffers, shelter belts, field windbreaks, grassed waterways and shallow water areas for wildlife.

- **Conservation Reserve Enhancement Program (CREP)**
  The Conservation Reserve Enhancement Program is a joint, state-federal land retirement conservation program targeted to address State and nationally significant agriculture-related environmental effects. This voluntary program uses financial incentives to encourage farmers and ranchers to enroll in contracts of 10 to 15 years in duration to remove lands from agricultural production. It is authorized pursuant to the 1996 Federal Agriculture Improvement and Reform Act.

- **Conservation Stewardship Program (CSP)**
  CSP encourages land stewards to improve their conservation performance by installing and adopting additional activities, and improving, maintaining, and managing existing activities on agricultural land and nonindustrial private forest land. The NRCS has made CSP available nationwide on a continuous application basis.

- **Farm and Ranchland Protection Program (FRPP)**
  The Farm and Ranch Land Protection Program (FRPP) provides matching funds to help purchase development rights to keep productive farm and ranchland in agricultural uses. Working through existing programs, USDA partners with State, tribal, or local governments and non-governmental organizations to acquire conservation easements or other interests in land from landowners. USDA provides up to 50 percent of the fair market easement value of the conservation easement.

- **Environmental Quality Incentives Program (EQIP)**
  The intent of the EQIP program is to provide a voluntary conservation program for farmers who face serious threats to soil, water and related natural resources. The program provides technical, financial and educational assistance primarily in designated priority areas.

- **Wetland Reserve Program (WRP)**
  The Wetland Reserve Program is a voluntary program established to help landowners restore and protect wetlands on their property. To be eligible, land must have been drained for farming or pasture that is possible to be restored to natural wetland conditions. Land adjacent to restorable acreage is also eligible if it contributes to wetland functions and values.

- **Wildlife Habitat Improvement Program (WHIP)**
  The Wildlife Habitat Incentive Program (WHIP) is a voluntary program for conservation-minded landowners who want to develop and improve wildlife habitat on agricultural land, nonindustrial private forest land, and Tribal land.

- **Stewardship Incentive Program (SIP)**
  The Stewardship Incentive Program (SIP) was developed to stimulate enhanced management of forests by cost-sharing approved management practices. SIP provides cost share funding of up to 75% for practices that provide soil and water protection. The SIP program applies to non-industrial private forests of 10 acres or more.

- **Managed Forest Law (MFL)**
  The goal of the Managed Forest Law (MFL) program is to encourage long-term sound forest management. MFL is a tax incentive program for industrial and non-industrial private woodland owners who manage their woodlands for forest products while also managing for water quality protection, wildlife habitat and public recreation. In return for following an approved management plan, property taxes are set at a lower rate than normal.

- **Wisconsin Lakes Management Program**
  The Wisconsin Lakes Management Program is a cooperative program between the Wisconsin DNR, UW-Extension, the Wisconsin Association of Lakes (WAL), and lake organizations to assist management and protection of their lakes. The Wisconsin Lakes Management Program provides technical assistance, information and education to lake groups and lake residents, and planning, protection, and implementation grants to qualified lake organizations and local units of government.

- **Self Help Monitoring Program**
  The goal of the Self Help Monitoring Program is to educate lake property owners about lake ecology and water quality while building a long-term information base on a large number of Wisconsin lakes. The Self-Help Monitoring Team consists of volunteers who collect lake water quality data on a regular basis to track lake health and guide Wisconsin's Lake Management Program.

- **Lake Management Planning Grant Program**
  The Wisconsin Lake Management Planning Grant Program was developed to provide financial assistance to qualified lake organizations or local governments to collect and analyze data concerning the physical, chemical and biological health of their lakes. Grant money can also be used to investigate watershed conditions, review ordinances and conduct social surveys to gauge local concerns and perceptions as they relate to lake use and water quality. The end product of most lake management planning grants is a comprehensive lake management plan which addresses local concerns and analyzes alternatives for lake and watershed management.

- **Lake Protection Grant Program**
  Through the Lake Protection Grant Program qualified lake organizations can apply for funds to carry out a variety of lake protection projects. The state-share is 75%. Eligible projects include the purchase of lands critical to a lake ecosystem, restoration of important wetlands and the development of regulations and ordinances designed to protect and enhance water quality.

- **State Acres For wildlife Enhancement (SAFE)**
  In an effort to meet the Glacial Habitat Restoration Area habitat goals, WDNR has partnered with the FSA and NRCS to enroll additional acres into CRPs practice CP-38 (SAFE). The SAFE program will act to fill the void created by the lack of a current CRP general signup, provide thousands of acres of critically needed grassland and wetland wildlife habitat, and provide an attractive annual per acre payment to the participants.

- **Urban NPS and Stormwater Management Planning and Construction Grants**
  These grants are used by eligible municipalities to complete the modeling needed determine the amount of phosphorus loading currently occurring and install the practices needed to meet State MS4 requirements.

## Information & Education Strategy

### Background

This section will explain the information and education strategy that will be used to help the county achieve its goals. Implementation of this strategy is intended to build awareness about local resource concerns and encourage residents to adopt the Best Management Practices (BMP's) needed to preserve, protect and restore the resource.

Successfully encouraging people to adopt BMPs is not easy. Experience shows that individuals often lack the motivation to install a BMP because they don't believe a problem exists on their property or they may have other concerns they feel need to be addressed. Before people adopt a new BMP they must be willing to recognize the need to change their current management practices, feel that the risks imposed by the BMP are manageable, and feel that the rewards it offers are beneficial. The adoption process can be very slow (it can take many years) and is far from guaranteed. Farmers are especially wary of assuming more risk since they already operate in a volatile market place.

To address knowledge barriers the I & E Strategy contains activities designed to disseminate information throughout the county. Examples include websites, newsletters, direct mail, media coverage, or informational meetings. In order to address skill barriers, demonstrations, field days, and one-on-one instruction are planned. In order to address attitude barriers an individual could become a volunteer water quality monitor, help out at a river clean up, or help with storm drain stenciling. These types of activities get people involved in the project and give them a stake in its success.

### The I&E Strategy

This strategy is based on building awareness and inducing long term behavior modification to achieve the goals and objectives of the Plan. This strategy lists the I & E objectives that need to be accomplished. Each objective aims to provide information to support or teach a BMP to a particular audience. Each objective is accompanied with a list of activities to fulfill this function.

Accomplishing the goals in the I&E Strategy will require a collaborative effort between the Winnebago County Land & Water Conservation Department, UW-Extension, Department of Natural Resources, USDA - Natural Resources Conservation Service, and many other State agencies and local conservation organizations and lake associations..

**Information & Education Goals**

**Objective:** Communicate the requirements of the Farmland Preservation Program and the Agricultural Performance Standards to landowners of Winnebago County.

**I & E Strategy:**

- Direct mailings/Newsletters
- Website-provide Ag Perf Stds Info
- Informational meetings/Presentations
- One on one visits with landowners/operators

**Objective:** Raise awareness of the impacts of Agricultural pollutant loading.

**I & E Strategy:**

- Review and Promote Ag Perf Stds with landowners
- Website-provide BMP info
- Promote NMP and conduct NMP Farmer Certification Training
- Distribute BMP Program Pamphlet
- Promote drinking well testing

**Objective:** Raise awareness of the impacts of Pollutant Loading from "Developed Sites" and Construction Sites.

**I & E Strategy:**

- Demonstrate and Promote Shoreline Buffers
- Website-provide BMP info
- Promote Low and No Phosphorus Lawn Fertilizers
- Distribute BMP Program Pamphlet
- One on one landowner visits/Construction site inspections
- Education during ordinance implementation
- Demonstrate and Test Erosion Control BMPs
- Highlight these resources at the annual Conservation Expo

**Objective:** Communicate the importance of protecting Shoreland, Wetlands and Emergent Habitat.

**I & E Strategy:**

- Demonstrate and Promote Shoreland Buffers and Shoreland Protection BMPs
- Website-provide BMP info
- Promote stabilizing water levels through responsible seasonal lake level management
- Participate in the Winnebago Water Level Management Team
- Distribute BMP Program Pamphlet
- Promote the benefit of the plant communities to the resource
- Highlight these resources at the annual Conservation Expo

**Objective:** Create an awareness of the need to Manage Land for the Sake of the Land.

- Promote Soil Quality Workshops and Practices
- Work with partner agencies to communicate the effects of land applied Biosolids and Industrial wastes
- Promote tree plantings and managed forest law programs
- Promote native grass plantings and wildlife habitat creation
- Communicate to landowners the importance of considering Land Base Demands vs. Land Base Availability in their decision making process
- Communicate the need to preserve farmland and open space

**Objective:** Communicate the impacts of Invasive Species on County Resources

- Support local conservation organization efforts to create awareness of Invasive Species
- Partner with other County Departments, sister agencies and UWs to educate landowners and resource users of the impacts of Invasive Species
- Communicate the availability of, and support efforts to secure educational, planning and protection grants to address Invasive Species

**Objective:** Communicate the impacts of climate change on County Resources

- Create an awareness of climate change/hydrologic cycle disruption
- Communicate the impacts drought driven irrigation needs
- Communicate the impacts of changing flood/rainfall event amounts and frequency

## Evaluation

As part of the annual accomplishment report, the county will prepare a summary of its information and education efforts over the year. The report will address how the I & E strategy was implemented, how residents participated, and a measure of behavior changes.

**Evaluating the I & E Strategy**
The staff will summarize the I & E activities they accomplished during the year. If the strategy was used to select and plan activities, it will be seen as an indication that the strategy is working. Whether the activities actually reached their intended audiences and whether they caused participants to successfully change their behavior can be measured by evaluating participation rates and BMP adoption.

**Evaluating Participation**
Since the strategy depends on activities to get people aware and involved, participation at activities can help evaluate the success of I & E efforts. Participation means more than just attendance at field days and volunteer events, but also includes newsletter readership, website contacts, requests for information, and signed cost-share agreements. If residents are attending planned I & E events and signing cost share agreements, I & E activities are probably having their desired impact. If residents never call the LWCD office to learn more about the project or attendance at field days and demonstrations are consistently low, this would probably indicate that new activities are needed.

Evaluating I & E's success based primarily on participation can be misleading since participation is not an indicator of successful BMP adoption. For example, just because someone attended a demonstration does not mean that they learned what the staff wanted them to and just because a farmer installs a BMP does not mean that they are using it successfully. To determine if the I & E Strategy is persuading residents to successfully adopt BMPs involves monitoring the performance of the participants.

**Evaluating BMP Adoption and Behavior Modification**
Evaluating the adoption process involves monitoring the successes and failures that participants have using and maintaining their new BMPs, along with the performance of the BMP. This means that staff will continue working with participants after a BMP is installed to ensure that the practice has been adopted successfully. Landowners are very good communicators of their displeasure so we will know immediately if the newly installed BMP is not performing as designed or anticipated. Success means that the BMP benefits both the participants operation (profitability included) and water quality.

The techniques used to evaluate I & E activities include informal discussions with participants posing questions such as: "Did you find the information in the newsletter helpful?" "Did you learn from the demonstration? and "How can we improve future I & E activities?". Some other techniques include surveys that ask similar questions but do it confidentially or staff observations that can be completed by asking colleagues how they thought an activity went through the use of polls. The staff will use the information gathered from these evaluations to improve each activity the next time it is offered.

More formal ways to evaluate both activities and objectives are surveys, focus groups, and examining performance records. These methods are most useful when baseline data is available for comparisons. Nutrient management and tillage surveys are used to provide baseline data for later performance record evaluations of those two practices.

## Progress Measurement & Evaluation

If this Land & Water Resource Management Plan is to be successful, it is imperative to annually measure and evaluate the extent to which the goals are being achieved. It is through this process that necessary adjustments and revisions in the plan goals and objectives can be made.

At this time, the evaluation process includes the following components:

**Annual "Action Plan" Review**
Annually the I and E Activities, Programs and BMPs that are conducted, implemented and installed will be summarized and compared to the goals identified in their respective sections of the Action Plan and Work Plan. This review will allow us to make the needed adjustments either in focusing our efforts or in the Plan itself.

**Administrative Reporting**
Annually the Land & Water Conservation Department will summarize financial data for funds appropriated for the implementation of the Land and Water Resource Management Plan and other funds under LWCD administration used to implement the Plan. That information, along with the accomplishments summary will be used to complete an annual report for the LCC, County Board Supervisors, partnering Agencies and the general public. This information will also be used to complete the required progress reporting to DATCP.

# APPENDICES

# APPENDIX A: Conservation Practices and Definitions

**Contour Farming.** The farming of sloped land so that all operations from seed bed preparation to harvest are done on the contour.

**Contour Strip Cropping.** Growing alternating strips of row crops and grasses or legumes on the contour.

**Field Diversions.** A channel constructed across the slope with a supporting ridge on the lower side, to divert excess water to safe outlet in other areas.

**Terraces.** A system of ridges and channels with suitable spacing and constructed on the contour with a suitable grade to prevent erosion in the channel.

**Grassed Waterways.** A natural or constructed channel shaped, graded and established with suitable cover as needed to prevent erosion by runoff waters.

**High Residue Management.** A system which leaves at least 30 percent of the ground covered with crop residue after crops are planted.

**Nutrient Management.** The management and crediting of nutrients from all sources, including legumes, manure, and soil reserves for the application of manure and commercial fertilizers. Management includes the rate, method and timing of the application of all sources of nutrients to minimize the amount of nutrients entering surface and groundwater. This practice includes manure nutrient testing, routine soil testing, and residual nitrogen soil testing.

**Pesticide Management.** The management of the handling, disposal and application of pesticides including the rate, method and timing of application to minimize the amount of pesticides entering surface and groundwater. This practice includes integrated pest management scouting and planning.

**Cropland Protection Cover (Green Manure).** Cropland protection cover are close-growing grasses, legumes or small grain grown for seasonal soil erosion protection and soil improvement.

**Intensive Grazing Management (Rotational Grazing).** Intensive grazing management is the division of pastures into multiple cells that receive a short but intensive grazing period followed by a period of recovery of the vegetative cover. Rotational grazing systems can correct existing pasturing practices that result in degradation and should replace the practice of summer dry-lots when this practice results in water quality degradation.

**Critical Area Stabilization.** The planting of suitable vegetation on nonpoint source sites and other treatment necessary to stabilize eroding lands.

**Grade Stabilization Structure.** A structure used to reduce the grade in a channel to protect the channel from erosion or to prevent the formation or advance of gullies.

**Agricultural Sediment Basins.** A structure designed to reduce the transport of sediment of other pollutants eroded from agricultural fields to surface waters and wetlands.

**Shoreline and Streambank Stabilization.** The stabilization and protection of stream and lake banks against erosion and the protection of fish habitat and water quality from livestock access.

**Shoreline Buffers.** A permanently vegetated area immediately adjacent to lakes, streams, channels and wetlands designed and constructed to manage critical nonpoint sources or to filter pollutants from nonpoint sources.

**Lake Sediment Treatment.** Lake sediment treatment is a chemical, physical, or biological treatment of polluted lake sediments. Sources of pollution to the lake must be controlled prior to treatment of lake sediments. Treatment does not include dredging.

**Wetland Restoration.** The construction of berms or destruction of the function of tile lines or drainage ditches to create conditions suitable for wetland vegetation.

**Barnyard Runoff Management.** Structural measures to redirect surface runoff around the barnyard, and collect, convey or temporarily store runoff from the barnyard.

**Barnyard Abandonment or Relocation.** Relocation of an animal lot from a critical site such as a floodway to a suitable site to minimize the amount of pollutants from the lot to surface or groundwater.

**Manure Storage Facility.** A structure for the storage of manure for a period of time that is needed to reduce the impact of manure as a nonpoint source of pollution. Livestock operations where this practice applies are those where manure is winter spread on fields that have a high potential for runoff to lakes, streams and groundwater. The facility is needed to store and properly spread manure according to a management plan.

**Manure Storage Facility Abandonment.** Manure storage system abandonment is the proper abandonment of leaking and improperly sited manure storage systems, including: a system with bottom at or below groundwater level; a system whose pit fills with groundwater; a system whose pit leads into the bedrock; a system which has documented reports of discharging manure into surface or groundwater due to structural failure; and a system where there is evidence of structural failure. The practice includes proper removal and disposal of wastes, liner materials, and saturated soil as well as shaping, filling, and seeding of the area.

**Milking Center Waste Control Systems.** A milking center waste control system is a piece of equipment, practice or combination of practices installed in a milking center for purposes of reducing the quantity or pollution potential of the wastes.

**Roofs for Barnyard Runoff Management and Manure Storage Facilities.** Roofs for barnyard runoff management and manure storage facilities are a roof and supporting structure constructed specifically to prevent rain and snow from contacting manure.

**Livestock Exclusion from Woodlots.** The exclusion of livestock from woodlots to protect the woodlots from grazing by fencing or other means.

**Cattle Mounds.** Cattle mounds are earthen mounds used in conjunction with feeding and dry lot operations and are intended to provide a dry and stable surface area for cattle.

**Structural Urban Best Management Practices.** These practices are source area measures, transport systems and end-of-pipe measures designed to control storm water runoff rates, volumes and discharge quality. These practices will reduce the amount of pollutants carried in runoff and flows destructive to stream habitat. These measures include such practices as infiltration trenches, porous pavement, oil water separators, sediment chambers, sand filtration units, grassed swales, infiltration basins and detention/retention basins.

**Easements.** Easements are legally binding restrictions on land titles. Easements are purchased to provide permanent vegetative cover.

**Land Acquisition.** The purchase of land or the interest in land which is contributing or will contribute nonpoint source pollution or for the construction of an urban structural practice.

**Well Abandonment.** The proper closure of drinking water wells to prevent pollutants from entering the groundwater.

## APPENDIX B:

## WINNEBAGO COUNTY SOIL UNIT ACREAGES & "T" VALUES

| | Soil Name | Soil Symbol | Acres | % | "T" |
|---|---|---|---|---|---|
| 1 | Adrian Muck | AK | 1,625 | 0.6% | 2 |
| 2 | Atterberry silt loam | AtA | 1,309 | 0.5% | 5 |
| 3 | Borth silty clay loam | BoB | 7,400 | 2.6% | 3 |
| 4 | Brems fine sand | Brb | 1,995 | 0.7% | 5 |
| 5 | Casco loam | CeB | 825 | 0.3% | 3 |
| 6 | Casco loam, eroded | CeC2 | 667 | 0.2% | 3 |
| 7 | Eleva loam | E1D2 | 149 | 0.1% | 4 |
| 8 | Edwards muck | Ed | 333 | 0.1% | 2 |
| 9 | Fisk loamy fine sand | FkA | 1,233 | 0.4% | 5 |
| 10 | Fluvaquents | Fn | 1,629 | 0.6% | - |
| 11 | Fox silt loam | FsB | 1,069 | 0.4% | 4 |
| 12 | Fox silt loam, eroded | FsC2 | 285 | 0.1% | 4 |
| 13 | Grellton fine sandy loam | GnB | 290 | 0.1% | 5 |
| 14 | Hochheim loam | HmB | 1,566 | 0.5% | 3 |
| 15 | Hortonville loamy fine sand | HoB | 1,882 | 0.7% | 4 |
| 16 | Hortonville loamy fine sand, erod. | HoC2 | 449 | 0.2% | 4 |
| 17 | Hortonville silt loam | HrB | 29,541 | 10.3% | 4 |
| 18 | Hortonville silt loam, eroded | HrC2 | 1,217 | 0.4% | 4 |
| 19 | Houghton muck | Hu | 8,181 | 2.8% | 2 |
| 20 | Houghton muck, ponded | Hw | 3,806 | 1.3% | - |
| 21 | Kaukauna silty clay loam | KaB | 1,314 | 0.5% | 3 |
| 22 | Keowns silt loam | Ke | 3,055 | 1.1% | 5 |
| 23 | Kewaunee loamy fine sand | KmB | 2,185 | 0.8% | 3 |
| 24 | Kewaunee silt loam | KnB | 39,289 | 13.7% | 3 |
| 25 | Kewaunee silty clay loam, erod. | KoC2 | 1,979 | 0.7% | 3 |
| 26 | Kidder loamy fine sand | KpB | 1,015 | 0.4% | 5 |
| 27 | Kidder loamy fine sand, eroded | KpC2 | 258 | 0.1% | 5 |
| 28 | Kidder silt loam | KrB | 537 | 0.2% | 5 |
| 29 | Kidder silty loam, eroded | KrC2 | 865 | 0.3% | 5 |
| 30 | Kingsville muck loamy fine sand | Ks | 807 | 0.3% | 5 |
| 31 | Knowles silt loam | KwB | 872 | 0.3% | 4 |
| 32 | Knowles silt loam, eroded | KwC2 | 283 | 0.1% | 4 |
| 33 | Korobago silt loam | KyA | 6,581 | 2.3% | 5 |
| 34 | Lamartine silt loam | LmA | 2,650 | 0.9% | 5 |
| 35 | LeRoy silt loam | LrB | 3,307 | 1.2% | 4 |
| 36 | LeRoy silt loam, eroded | LrC2 | 2,078 | 0.7% | 4 |
| 37 | Lomira silt loam | LvB | 3,041 | 1.1% | 5 |
| 38 | Lorenzo Variant loam | LzB | 2,447 | 0.9% | 3 |
| 39 | Manawa silty clay loam | MaA | 26,309 | 9.2% | 3 |
| 40 | McHenry silt loam | MhB | 2,629 | 0.9% | 5 |
| 41 | McHenry silt loam, eroded | MhC2 | 558 | 0.2% | 5 |
| 42 | Menasha clay | Mn | 24,821 | 8.6% | 3 |
| 43 | Morocco loamy fine sand | MoA | 1,593 | 0.6% | 5 |
| 44 | Mosel silt loam | MtA | 4,006 | 1.4% | 5 |

## APPENDIX B Cont'd. – WINNEBAGO COUNTY SOIL UNIT ACREAGES & "T" VALUES

| | | | | |
|---|---|---|---|---|
| 45 Navan silt loam | Na | 2,647 | 0.9% | 4 |
| 46 Nebago fine sand | NeA | 6,671 | 2.3% | 4 |
| 47 Nebago Variant muck/loam fine sand | Ng | 955 | 0.3% | 4 |
| 48 Neenah silty clay loam | NhA | 7,346 | 2.6% | 3 |
| 49 Nenno loam | NnA | 610 | 0.2% | 4 |
| 50 Oakville fine sand | OaB &C | 1,790 | 0.1% | 5 |
| 51 Omro clay loam | OmB | 2,279 | 0.8% | 5 |
| 52 Ossian silt loam | Os | 4,289 | 1.5% | 5 |
| 53 Palms muck | Pa | 2,342 | 0.8% | 2 |
| 54 Pits, gravel | Pg | 764 | 0.3% | - |
| 55 Pits, quarries | Ph | 353 | 0.1% | - |
| 56 Plano silt loam | PsB | 1,300 | 0.5% | 5 |
| 57 Poy silty clay loam | Pt | 8,819 | 3.1% | 3 |
| 58 Poygan silty clay loam | Pu | 6,167 | 2.1% | 3 |
| 59 Puchyan loamy fine sand | PzB | 444 | 0.2% | 5 |
| 60 Ritchey silt loam | RhB | 383 | 0.1% | 2 |
| 61 Ritchey silt loam, eroded | RhC2 | 425 | 0.1% | 2 |
| 62 Ritchey silt loam, eroded | RhD2 | 348 | 0.1% | 2 |
| 63 St. Charles silt loam | ScB | 1,330 | 0.5% | 5 |
| 64 Tustin fine sand | TuB | 2,499 | 0.9% | 4 |
| 65 Udorthents | UoA | 4,126 | 1.4% | - |
| 66 Wauseon silt loam | We | 1,926 | 0.7% | 4 |
| 67 Whalan loamy fine sand | WfB | 358 | 0.1% | 4 |
| 68 Whalan silt loam | WhB | 1,979 | 0.7% | 4 |
| 69 Whalan silt loam, eroded | WhC2 | 252 | 0.1% | 4 |
| 70 Willette muck | Wm | 8,874 | 3.1% | 2 |
| 71 Winneconne silty clay loam | WnB | 7,009 | 2.4% | 3 |
| 72 Yahara silt loam | YaA | 1,048 | 0.4% | 5 |
| 73 Zittau silty clay loam | ZtA | 12,083 | 4.2% | 3 |
| | | 287,344 | 100.0% | |

## APPENDIX C

# 2011- 2020 WORK PLAN

| **Objective: Get all FPP Participants eligible for the tax credit by December 31, 2015** | | | |
|---|---|---|---|
| Anticipated Outcome – Approximately 150 FPP Participants will be in compliance with the Ag Perf Stds by 2016 providing quantifiable pollutant load reductions. | | | |
| **Workplan Goals (High Priorities in Bold)** | **Annual Activities** | **Partnering Agencies (Lead agency listed first)** | **Time Frame** |
| **Complete a minimum of 20% of the required Ag Perf Stds compliance reviews and get 20% of the Participants in full compliance with the Ag Perf Stds each year for five years. (20% is estimated at 30)** | Send letters to current participants regarding new FPP rules and requirements<br>Conduct group and one on one meetings<br>Post and update FPP information on the LWCD Website<br>Review 20 to30 FPP Participants for Ag Perf Stds Compliance<br>Record Current Compliance Status<br>Identify needed BMPs<br>Send appropriate communication to Participants<br>Create Schedule of Compliance<br>Complete and provide needed BMP Cost Projections<br>Communicate the availability of cost share funds<br>Sign CSAs to provide funding for eligible BMPs<br>Complete Annual FPP Certification and Progress Monitoring | LWCD<br>NRCS<br>UWEX<br>DATCP<br>WDNR | 2011-2015 |

| **Objective: Continue Ag Perf Stds implementation with the secondary focus group of landowners to help them achieve full compliance.** | | | |
|---|---|---|---|
| Anticipated Outcome – Approximately 100 to 150 additional landowners will be in compliance with the Ag Perf Stds by 2020 providing quantifiable pollutant load reductions. | | | |
| **Workplan Goals (High Priorities in Bold)** | **Annual Activities** | **Partnering Agencies (Lead agency listed first)** | **Time Frame** |
| **Complete a minimum of 20 to 30 landowner reviews each year.**<br><br>**Get a 20 to 30 farms in full compliance with the Ag Perf Stds each year as staff time and funding allows.** | Conduct group and one on one meetings to promote Ag Perf Stds<br>Post and update Ag Perf Stds information on the LWCD Website<br>Distribute various BMP and Program information<br>Review 20 to 30 Landowners for Ag Perf Stds Compliance<br>Record Current Compliance Status<br>Identify needed BMPs<br>Send appropriate communication to Participants<br>Complete and provide needed BMP Cost Projections<br>Promote NMP and conduct NMP Farmer Certification Training<br>Promote drinking water well testing program<br>Communicate the availability of cost share funds<br>Sign CSAs to provide funding for eligible BMPs | LWCD<br>NRCS<br>UWEX<br>DATCP<br>WDNR | 2016-2020 |

| Objective: Reduce Agricultural Pollutant Loading to Surface Water and Groundwater/Private Drinking Water Wells | | | |
|---|---|---|---|
| Anticipated Outcome – Out of service wells will be abandoned, Groundwater quality will be improved, pollutant runoff impacts will be reduced and installed BMPs will provide quantifiable pollutant load reductions. | | | |
| **Workplan Goals (High Priorities in Bold)** | **Annual Activities** | **Partnering Agencies (Lead agency listed first)** | **Time Frame** |
| **Reduce livestock waste and other surface runoff impacts** | Conduct group and one on one meetings to promote Ag Perf Stds<br>Implement the Ag Perf Stds<br>Distribute various BMP and Program information<br>Promote NMP and conduct NMP Farmer Certification Training<br>Communicate the availability of cost share funds<br>Sign CSAs to provide funding for eligible surface runoff BMPs<br>Enroll 1500 to 3000 new acres into NMP CSAs<br>Enroll 500 to 1000 new acres into High Residue Management | LWCD<br>UWEX<br>DATCP<br>NRCS<br>WDNR | 2011-2020 |
| **Create awareness of groundwater issues through well water testing and promote proper well abandonments** | Work with Public Health to promote well water testing<br>Distribute groundwater and well abandonment info via: brochures, website and newsletters<br>Provide info to local licensed pump installers and well drillers<br>Communicate the availability of cost share funds<br>Sign 5 to 10 CSAs for Well Abandonments | LWCD<br>UWEX<br>WDNR | 2011-2020 |
| **React quickly to pollutant runoff complaints/spills with our DNR partners.** | Maintain open communication with WDNR staff.<br>Conduct spill prevention , reporting and clean up seminars<br>Distribute manure spill brochures and reporting protocol information<br>Review manure spill procedures with 20 to 30 landowners annually | LWCD<br>WDNR<br>UWEX | 2011-2020 |

| **Objective: Reduce Pollutant Loading from "Developed" Sites** | | | |
|---|---|---|---|
| Anticipated Outcome – Runoff from Developed Sites will be reduced in quantifiable amounts through the installation of Urban Stormwater BMPS. | | | |
| **Workplan Goals (High Priorities in Bold)** | **Annual Activities** | **Partnering Agencies (Lead agency listed first)** | **Time Frame** |
| Create awareness of runoff impacts and the BMPs to address it.<br><br>Increase filtration and infiltration of on site stormwater | Distribute Developed Site BMP Program Pamphlets<br>Demonstrate and promote Shoreland and streambank buffers<br>Promote phosphorus free lawn care products<br>Promote deep rooted native plants for infiltration<br>Communicate the availability of cost share funds<br>Sign CSAs to provide funding for eligible surface runoff BMPs<br>Install 2 to 4 Shoreland/streambank buffers<br>Install 1 to 2 Rain Gardens | LWCD<br>DATCP<br>WDNR<br>UWEX | 2011-2020 |

| Objective: Reduce Pollutant Loading from Construction Sites | | | |
|---|---|---|---|
| Anticipated Outcome – Runoff from Construction Sites will be reduced greatly in quantifiable amounts through the installation of Stormwater BMPS. | | | |
| **Workplan Goals (High Priorities in Bold)** | **Annual Activities** | **Partnering Agencies (Lead agency listed first)** | **Time Frame** |
| **Create awareness of the impacts of Construction Site Erosion on resources.** | Distribute Erosion Control BMPs Pamphlets<br>Demonstrate and Test Erosion Control BMPs<br>Provide one on one training during on site inspections<br>Review needed BMPs with 150 to 200 permittees<br>Provide Erosion Control/Stormwater training sessions for contractors, landscapers and developers. | LWCD<br>UWEX<br>DATCP<br>WDNR | 2011-2020 |
| **Enforce Local Ordinances to control Construction Site Erosion** | Issue 150 to 250 Permits requiring the proper BMPs<br>Conduct site inspections as required per the Ordinance<br>Contact landowners if permit requirements are not met<br>Issue stop work orders or citations if needed | LWCD | 2011-2020 |
| Test and/or Demonstrate Construction Site Erosion Control BMPs | Install or Review 1 to 2 new BMPs for efficacy<br>Share results at training sessions or on site tours | LWCD<br>UWEX<br>DNR | 2011-2020 |

| **Objective: Reduce Shoreland, Streambank , Wetland and Emergent Habitat Loss, Inland and on the Winnebago System** | | | |
|---|---|---|---|
| Anticipated Outcome – Shoreland, Streambank and Wetland Restoration project installations will provide quantifiable pollutant load reductions. Responsible lake level management will reduce Shoreland impacts and increase Emergent Plant Communities on the Winnebago System. The Winnebago System will be managed to its fullest by centralized regional oversight. | | | |
| **Workplan Goals (High Priorities in Bold)** | **Annual Activities** | **Partnering Agencies (Lead agency listed first)** | **Time Frame** |
| **Complete Shoreland, Streambank and Wetland Restoration Projects** | Demonstrate and Promote Restoration BMPs<br>Distribute various BMP and Program information<br>Communicate the availability of cost share funds<br>Sign CSAs to provide funding for eligible surface runoff BMPs<br>Install 2 to 4 Restoration BMPs<br>Promote CREP and sign 2 to 4 contracts | LWCD<br>NRCS<br>WDNR<br>DATCP | 2011-2020 |
| Support the adoption of Ecologically Responsible Lake Level Management to stabilize and maintain Lake and Wetland Aquatic and Plant habitat Resiliency | Provide info on the LWCD Website<br>Promote the benefit of Plant Communities to the resource<br>Promote Stabilizing water levels through centralized management<br>Participate in the Winnebago Water Level Management Team | LWCD | 2011-2020 |

| Objective: Increase the Management of Land for the Sake and Betterment of the Land | | | |
|---|---|---|---|
| Anticipated Outcome – The number of Small and Diverse Woodlots will increase. Landowners will slowly reduce the amount of tillage and amendments used on their land and Soil Quality will increase. Less Industrial Wastes and Biosolids will be allowed on cropland. The limited amount and availability of land will dictate a more responsible use and the drive to preserve it. | | | |
| **Workplan Goals (High Priorities in Bold)** | **Annual Activities** | **Partnering Agencies (Lead agency listed first)** | **Time Frame** |
| Increase Woodlot Development | Promote the DNR tree sale<br>Provide tree planting equipment and tree supplies<br>Communicate the tax credits of the Managed Forest Law Program<br>Communicate the long term profitability of timber<br>Communicate the availability of cost share funds | LWCD<br>WDNR<br>NRCS | 2011-2020 |
| **Create a greater awareness of Soil Quality and Compaction** | Provide info on the LWCD Website<br>Conduct 1 to 2 Soil Quality Workshops<br>Promote soil quality testing<br>Promote no-till and reduced till farming with 20 to 30 landowners<br>Communicate the availability of cost share funds | LWCD<br>UWEX<br>NRCS<br>DATCP | 2011-2020 |
| Create an awareness of the Impacts of Biosolids and Industrial Wastes on the Land | Work with partner agencies to communicate the negative impacts of harmful soil amendments<br>Support efforts to eliminate treatable wastes from being added to soil<br>Work with partner agencies to reduce unpermitted applications of wastes to the land | LWCD<br>WDNR | 2011-2020 |
| **Communicate the importance to Landowners of Considering Land Base Demands vs. Land Base Availability in their Decision Making Process** | Assist 20 to 30 Landowners with land evaluations and conservation planning<br>Communicate the value of certain land as it relates to resource protection<br>Communicate the availability of cost share funds to help them achieve land use balance | LWCD<br>UWEX<br>NRCS<br>DATCP | 2011-2020 |

CONTINUED:

| **Objective: Increase the Management of Land for the Sake and Betterment of the Land** | | | |
|---|---|---|---|
| Anticipated Outcome – The number of Small and Diverse Woodlots will increase. Landowners will slowly reduce the amount of tillage and amendments used on their land and Soil Quality will increase. Less Industrial Wastes and Biosolids will be allowed on cropland. The limited amount and availability of land will dictate a more responsible use and the drive to preserve it. | | | |
| **Workplan Goals (High Priorities in Bold)** | **Annual Activities** | **Partnering Agencies (Lead agency listed first)** | **Time Frame** |
| Identify and Protect High Resource Lands and Support efforts to Preserve them and Farmland / Green Space | Promote and Support the Working Lands Initiative<br>Promote and Support the Farmland Preservation Program<br>Promote and Support CREP, SAFE, CRP and other Easement and PDA Programs<br>Communicate the availability of cost share funds<br>Sign CSAs for eligible lands | LWCD<br>UWEX<br>NRCS<br>WDNR | 2011-2020 |

| Objective: Reduce Invasive Species Impacting County Resources | | | |
|---|---|---|---|
| Anticipated Outcome – Create awareness with Landowners and Users of the Resource of the Serious Impact Invasive Species can have on the Environment. Reduce Invasive Species County Wide by supporting the efforts of other County Departments, Partner Agencies, Conservation Organizations, Lake Associations and other Environmental Groups targeting Invasive Species. | | | |
| **Workplan Goals (High Priorities in Bold)** | **Annual Activities** | **Partnering Agencies (Lead agency listed first)** | **Time Frame** |
| Support Local Efforts to Contain and Control Invasive Species and Integrate Resources with Partner Agencies and Organizations to Address the issue | Provide information using the LWCD Website, Newsletters and Fact Sheets<br>Partner with sister Agencies, and UWs to Educate resource users of the impacts of Invasive Species<br>Species Containment and Control. | WDNR<br>LWCD<br>UWEX<br>NRCS | 2011-2020 |
| Utilize Grant Resources to administer a County Program or partner with and integrate the resources of sister Agencies, UWs and Conservation Organizations to address Invasive Species | Contact other County Departments, Agency and Local Partners to Identify county Invasive Species concerns<br>Identify the actions needed to address AIS concerns<br>Identify funding sources that may be available to cost share expenses<br>Apply for or Support Funding Acquisition efforts of Partners targeting Invasive Species<br>Implement or support the implementation of the needed practices to address the Invasive Species of concern<br>Communicate the availability of cost share funds to landowners | WDNR<br>LWCD<br>UWEX<br>NRCS | 2011-2020 |

| **Objective: Adjust Programs and Conservation Practices to Address the Impacts of Climate Change** | | | |
|---|---|---|---|
| Anticipated Outcome – Create awareness of Climate Change relating to Conservation BMP adaptation. Long Range planning that acknowledges climate change and hydrologic cycle disruption will become part of the BMP revisions process. Drought related irrigation needs and impacts will be addressed through BMP adaptation and/or rule. Flood and Rainfall event frequency and amounts will be addressed through BMP adaption and/or rule. | | | |
| **Workplan Goals (High Priorities in Bold)** | **Annual Activities** | **Partnering Agencies (Lead agency listed first)** | **Time Frame** |
| Support Long Range Planning that acknowledges Climate Change and Hydrologic Cycle Disruption<br><br>Support efforts to address Drought related Irrigation needs and Groundwater Impacts<br><br>Support efforts to address Flood and Rainfall event Amounts and Frequency | Meet with sister Agencies, UWs and other sources to identify Climate Change issues and concerns.<br>Seek out support documents from weather monitoring institutions.<br>If concerns are validated, partner with sister Agencies, UWs and other sources to create I& E materials and programs.<br>Share information with SOC and other Agency Engineers<br>Support efforts to get BMP technical standards revised to address the current climatic situation. | WDNR<br>LWCD<br>UWEX<br>NRCS | 2011-2020 |