

CHIPPEWA COUNTY LAND AND WATER RESOURCE MANAGEMENT PLAN

2015-2019



CHIPPEWA COUNTY LAND AND WATER RESOURCE MANAGEMENT PLAN

Developed by the
Chippewa County Land Conservation Committee

Chippewa County Land Conservation Department
Chippewa County, Wisconsin
September 10, 2014

Land Conservation Committee:

M. Goettl, Chair	L. McIlquham
C. Cronquest	G. Sikorski
M. Leisz	B. Stimeling

Citizens Ad Hoc Advisory Committee:

L. Danielson	Farmer's Union	R. Kosheshek	Citizen Interests at Large
R. Smith	Land Trusts/Conservation Nonprofits	S. Hilger	Citizen Interests at Large
D. Dukerschein	Outdoor Recreation Interests	A. Gordon	Citizen Interests at Large
S. Raether	Woodlot & Forestry Interests	C. Anderson	Non-Metallic Mine Interests
G. Sikorski	Farm Bureau		

Agency advisors:

D. Clary, Chippewa Co. Planning & Zoning Dept.	J. Skorczewski, DNR
J. Clark, UWEX	T. Kafka, DNR
T. Lindsay, NRCS	B. Sorge, DNR
M. Dahlby, Chip. Co. Land Conservation & Forest Mgt.	
J. Tetzloff-Jensen – Chip. Co. Land Conservation & Forest Mgt.	

Plan prepared by:

D. Masterpole
J. Tetzloff-Jensen

Clerical and editorial support:

J. Schemenauer

For information about this document, please contact:
Dan Masterpole or Jane Tetzloff-Jensen
Chippewa Co. Dept. of Land Conservation Department
711 N. Bridge Street
Chippewa Falls, WI 54729
#715-726-7920
www.co.chippewa.wi.us/lcfm

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CHIPPEWA COUNTY LAND AND WATER RESOURCE MANAGEMENT PLAN

EXECUTIVE SUMMARY

In Wisconsin, counties have been assigned statutory authority to plan and implement conservation programs to meet local needs. Wisconsin Stats., Chapter 92 requires the county to develop a county land and water resource management plan.

This plan has been developed by the Chippewa County Land Conservation & Forest Management Committee to meet state requirements and to serve as a guide for local conservation efforts administered by the county and cooperating state, and federal agencies.

The plan has been developed using input from a citizens advisory group representing a wide-range of local agricultural, forestry, land development, and environmental interests.

This plan describes the existing condition of land and water resources in Chippewa County, and outlines conservation issues of primary concern. It also describes how the county will direct its programs to address these issues.

The plan places a priority on land and water conservation programs that will conserve the natural resource base and contribute to the rural economy through sustained agriculture and forest production.

A review of resource conditions has shown that global trends are placing an increasing demand on the local resource base.

The plan clarifies how the county will begin to respond to climate change, and how it will support efforts to encourage recycling and pursue renewable energy production from biomass and waste stream products.

The plan clarifies how the county will work with interested landowners and nonprofit conservation organizations to identify and preserve unique parcels of high environmental value.

The plan outlines an approach to preserve blocks of “agricultural working lands” and forests using voluntary conservation agreements. These agreements would be augmented through use of rural density limits and agricultural zoning, if established and adopted by individual towns.

The plan clarifies how the county will manage nonpoint water pollution from both agricultural and nonagricultural sources. In agricultural areas, public funds will be used to establish stream buffers and to maintain a Voluntary Farm Evaluation and Certification Program. This program will be used to administer state mandated agricultural performance standards. Enforcement of these standards will be pursued through the county’s existing animal waste storage and comprehensive zoning ordinances, and in response to public complaint.

In urbanizing areas, the county will work with municipalities to control storm water runoff. The county will work with the Village of Lake Hallie and several towns in the Chippewa Falls urban area to maintain a joint storm water management program to meet state storm water permit requirements.

With regard to management of public lands, the county will work with town officials, state agencies, and nonprofit organizations to purchase conservation easements or select parcels from willing sellers in designated management areas.

The county will manage the Chippewa County Forest for timber production, resource protection, and public use as defined in the Chippewa County Forest Management Plan.

Chippewa County will implement this plan within the limits of available resources using a schedule of activities contained in the plan. The county will use an annual work planning and budget process to systematically evaluate progress toward plan implementation.

This plan was developed using a ten (10) year planning horizon to meet the requirements of Wis. Stats. 92.06 for a five (5) year period. If, at the end of those five years, no amendments are warranted, the county may seek a five (5) year extension to the plan.

1.0 INTRODUCTION

1.1 Overview of Statutory Authorities and Requirements

In Wisconsin, counties have been assigned the responsibility to plan and manage the local land, water, and natural resource base. In carrying out this responsibility, counties work directly with individual landowners, other municipalities, state and federal agencies, and nonprofit conservation organizations.

Wisconsin Stats., Chapter 59 assigns counties the authority and responsibility to plan and regulate land use to protect the public health, safety, and welfare. Wisconsin Stats., Chapter 287 assigns the authority to plan and administer solid waste and recycling programs. Wisconsin Stats., Chapter 28 assigns the authority to establish, plan, and manage county forest land.

Wisconsin Stats., Chapter 92 establishes a general framework for land and water conservation programs. Wisconsin Stats. 92.06 requires that each county create a land conservation committee.

Wisconsin Stats. 92.10 establishes a state land and water resource management planning program and requires that each county prepare a land and water management plan. Wisconsin Admin. Code ATCP 50.10(1)(a) requires each land conservation committee to establish a land and water resource management plan and a program to implement that plan.

2.0 PURPOSE OF PLAN

This plan has been developed by the Chippewa County Land Conservation & Forest Management Committee to:

1. Define local environmental issues of priority concern and to establish local natural resource management and conservation program objectives.
2. Serve as a contributing component to the Agricultural, Natural, and Cultural Resource Element of the Chippewa County Comprehensive Plan.
3. Document the procedures that are now used by Chippewa County to coordinate land and resource management programs administered by county departments and state and federal agencies.
4. Provide an implementation framework, activity schedule, and budget projections to pursue the natural resource management and associated rural economic development objectives, as initially defined through the Chippewa County strategic planning process.
5. Meet the formal criteria established by the U.S. Environmental Protection Agency (EPA) for “watershed-based plans” and provide an implementation framework for state and federally-sponsored water conservation and nonpoint source water pollution control projects.
6. Meet the statutory requirements for a county land and water resource management plan, as required in 92.10(6):

“92.10(6) IMPLEMENTATION; COMMITTEE DUTIES. (a) Plan preparation. A land conservation committee shall prepare a land and water resource management plan that, at a minimum, does all of the following:

1. *Includes an assessment of water quality and soil erosion conditions throughout the county, including any assessment available from the Department of Natural Resources.*
2. *Specifies water quality objectives for each water basin, priority watershed, as defined in s. 281.65(2)(c), and priority lake, as defined in s. 281.65(2)(be).*
3. *Identifies the best management practices to achieve the objectives under subd. 2. and to achieve the tolerable erosion level under s. 92.04(2)(i).*
4. *Identifies applicable performance standards and prohibitions related to the control of pollution from nonpoint sources, as defined in s.281.65(2)(b), and to soil erosion control, including those under this chapter and chs. 281 and 283 and ss. 59.692 and 59.693.*

5. *Includes a multi-year description of planned county activities, and priorities for those activities, related to land and water resources, including those designed to meet the objectives specified under subd. 2. and to ensure compliance with the standards and prohibitions identified under subd. 4.*
6. *Describes a system to monitor the progress of activities described in the plan.*
7. *Includes a strategy to provide information and education related to soil and water resource management.*
8. *Describes methods for coordinating activities described in the plan with programs of other local, state, and federal agencies.”*

3.0 PLANNING METHODS

This plan was prepared by the Chippewa County Department of Land Conservation & Forest Management using an interagency process for natural resource planning, adopted by Chippewa County and cooperating state and federal agencies through an interagency Memorandum of Understanding titled: Chippewa County Operational Agreement, (April, 1999). Participating agencies include the Chippewa County Land Conservation & Forest Management Committee, the U.S. Dept. of Agriculture, Farm Service Agency and Natural Resource Conservation Service, the University of Wisconsin-Extension Service, the Wisconsin Dept. of Natural Resources, and the Wisconsin Dept. of Agriculture, Trade, and Consumer Protection.

Minor changes to this process were made to meet requirements for planning and public participation, as defined in Wisconsin Stats. 92.10, and ATCP 50.12 and 50.16.

This land and water planning process was scheduled to coincide with the county's comprehensive planning process to provide structured input toward the development of the Agricultural, Natural Resource, and Cultural Element of the Chippewa County Comprehensive Plan in 2008.

Planning oversight was provided by the Chippewa County Land Conservation & Forest Management Committee through scheduled committee meetings.

At the onset of the planning effort, a web page was created. This web page was then used to inform the public of the plan revision process and opportunities for public participation.

A local stakeholder advisory committee was appointed to assure structured input from a wide range of public interests. The assigned charge of the advisory committee and stakeholder representation is provided in Appendix 1, Figure 1.1.

To assure coordination between the Land Conservation & Forest Management Committee and the Advisory Committee, a parallel planning process was used. Under this process, a coordinated meeting schedule was set, with identical planning materials provided to each group. Minutes of meeting discussions and working drafts of the plan elements were systematically exchanged through the course of the planning process.

The Advisory Group met twice in April, 2014, to systematically review the existing Chippewa County Land and Water Resource Management Plan. All meetings were publically noticed and posted following requirements of the Wisconsin Open Meetings Law. The minutes of these meetings and the documenting points of discussion are on file as public record.

Revised portions of the 2009 Chippewa County Land and Water Resource Management Plan were completed in August, 2014. These revisions to the plan included an updated work plan schedule and benchmark measures (Table 7 & 8).

An informational meeting & open house was held on August 13, 2014, to present the updated plan. Opportunities for public comment were conducted on the same date.

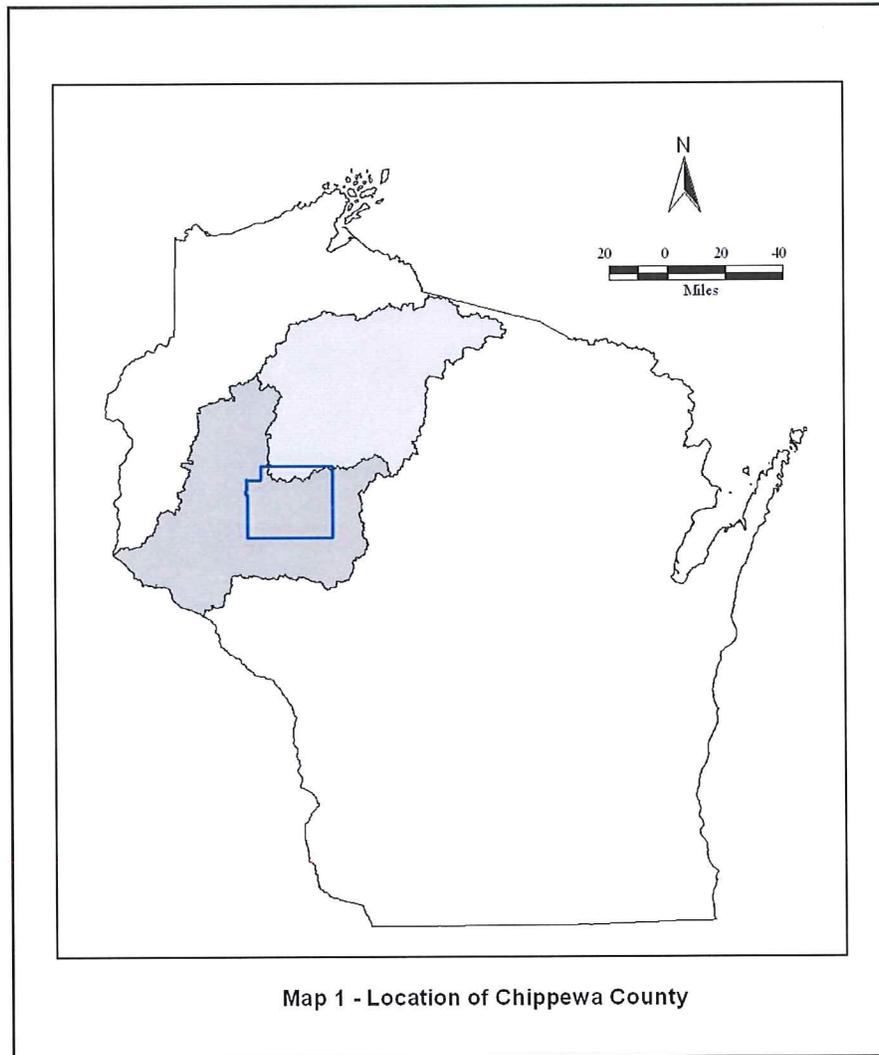
Revised and updated portions of the Chippewa County Land and Water Resource Management Plan, (2015-2019), were completed September 10, 2014, and forwarded to the Dept. of Agriculture, Trade, and Consumer Protection for review and approval.

The press release used to inform the public of the informational meeting and open house and is provided as Appendix 1, Figure 1.2. A summary of the meeting and information presented, is provided in Appendix 1, Figure 1.3. A copy of the published public hearing notice is provided as Appendix 1, Figure 1.4.

4.0 GEOGRAPHIC AND PHYSICAL CHARACTERISTICS OF THE COUNTY

Chippewa County is located in West Central Wisconsin. It encompasses 656,000 acres and lies entirely within the Chippewa River Basin of the Mississippi River. Map 1 shows the location of the county in proximity to the state and the upper Mississippi River drainage basin.

The county is located in an ecological transition zone and contains a diverse mix of high quality northern and southern plant communities.



Four (4) geographic areas can be distinguished based upon landscape type and drainage features: a well-defined recessional moraine, till plain, outwash plain, and a steeply rolling sandstone upland.

Moraine

A well-defined recessional moraine extends southeast from New Auburn, in the northwest corner of the county, to Jim Falls on the Chippewa River. From Jim Falls, glacial deposits extend further southeast to Cadott providing evidence of earlier glacial advances. Surface features of the moraines are characterized by hummocky topography, closed surface depressions, and numerous kettle hole lakes, bogs, and wetlands. Soils of the area are of the Amery association. Land is used predominantly for forest production, outdoor recreation, and residential development.

Till Plain

A gently rolling till plain, drained by the Fisher River and Yellow River watersheds, extends north and east of Cadott to the borders of Clark, Taylor, and Rusk County. Drainage patterns in these watersheds are poorly defined and reflect glacial processes. Many perched and groundwater contact wetlands are found in closed surface depressions and along drainage ways.

Soils are generally of the Magnor-Almena-Spencer Association. Till deposits are in turn underlain by Cambrian sandstone or Precambrian granite or gneis. Land is used predominately for dairy-based agriculture.

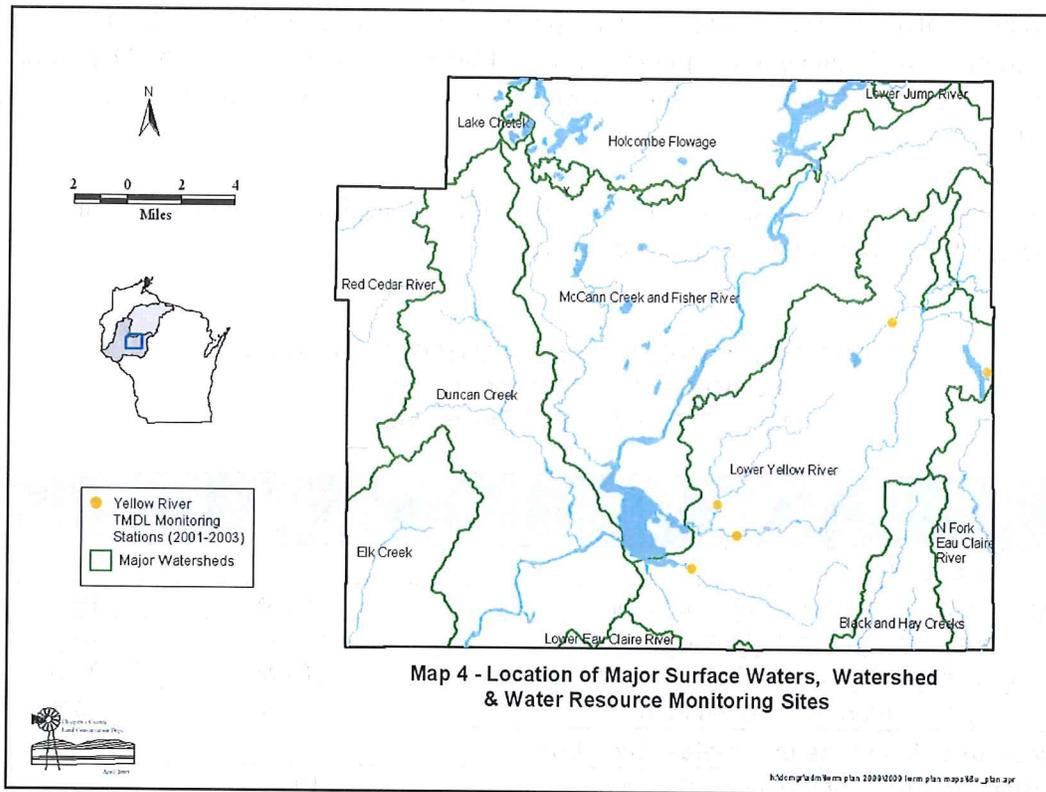
Outwash Plain

A broad, nearly level, outwash plain extends south from the recessional moraine to the Chippewa River. The area is drained by subbasins of the Duncan Creek, Fisher River, and Lower Yellow River watersheds. Drainage patterns are very poorly defined. Wetlands are limited to groundwater contact areas adjacent to surface waters. Soils are of the Menahga-Friendship and Billett-Rosholt-Oesterle associations. Outwash deposits may extend 100 feet below the land surface and are underlain by Cambrian sandstone and Precambrian Granite. Land is used predominately for cash grain agriculture.

Sandstone Upland

A steeply rolling sandstone upland abuts the central outwash plain and extends west to the Dunn County border. The area is drained by the Red Cedar, Muddy Creek, and Duncan Creek Watersheds. Drainage patterns are very well defined with channelized intermittent streams often extending to the upper reaches of the landscape. Wetlands are limited to groundwater seep areas found in association with contact springs in hillside draws or adjacent stream channels. Soils are generally of the Elkmound-Plainbo-Eleva association or the Seaton-Gale association. Land is used predominately for dairy and cash grain agriculture.

Map 4 shows the location of surface water resources and watershed management areas.



5.0 RESOURCE MANAGEMENT PLANNING RESULTS

5.1 Information on Resource Conditions

A series of reports, maps, and data sets have been compiled that summarize the condition of land, water, and associated natural resources in Chippewa County. Much of this information is contained in published management plans developed by county departments, the Department of Natural Resources (DNR), and the West Central Wisconsin Regional Planning Commission (WCWRPC).

A listing of resource-based management plans and studies that describe natural resource conditions in Chippewa County, is provided in Table 1.

Table 1

**A LISTING OF RESOURCE-BASED MANAGEMENT PLANS
FOR AREAS OF CHIPPEWA COUNTY
PREPARED BY PUBLIC AGENCIES**

Type of Plan	Responsible Agency	Date of Plan
Land Resource- Based Plans		
Chippewa County Farmland Preservation Plan	LCFM	1985
Chippewa County Erosion Control Plan	LCFM	1993
Chippewa County 10 Year Forest Plan	LCFM	2007
Chippewa County Outdoor Recreation Plan	LCFM	2008
Water Resource-Based Plans, Studies, Inventories		
Surface Water Inventory of Chippewa County	DNR	1963
Chippewa/Eau Claire Urban Area Sewer Service Plan	WCWRPC	1985
Duncan Creek Priority Watershed Plan	DNR/LCFM	1995
Lower Chippewa River Basin Water Quality Mgt Plan	DNR	1996
Yellow River Nonpoint Source Pollution Inventory	LCFM	1998
Hallie Water Quality Management Plan - Phase I	DNR	1999
Upper Chippewa River Basin Water Quality Mgt Plan	DNR	2000
Hallie Water Quality Management Plan - Phase II	DNR	2000
State of the Lower Chippewa River Basin Report	DNR	2001
Phosphorus Loading & Trophic Status of Lakes in the Yellow River Watershed	DNR	2004
Biotic Inventory of Native Plant Communities and Threatened/Endangered Resources	DNR/LCFM	2006
Chippewa County Forest 15-Year Plan 2006-2020	DNR	2007
Pleistocene Geology of Chippewa County, WI	WGNHS	2007
Chippewa Falls Urban Area Storm Water Mgt Plan	LCFM	2007
2007 Chippewa County Groundwater Inventory	LCFM	2008
Little Lake Wissota WQ Modeling Study & TMDL Plan	DNR	2008
Chippewa County Flood Plain Map & Report	FEMA	2008
Phosphorus Loading Model for Lake Eau Claire & Altoona	UWSP	2008
Current Resource Inventories		
Little Lake Wissota Watershed Soil Test Inventory	LCFM	2009
Chippewa Falls Urban Area Storm Water Facilities Cond Inv	LCFM	2009

This information is augmented by a number of detailed resource inventories that are systematically updated and maintained by county, state, and federal agencies. A listing of pertinent resource inventories, data sets, and computer maps routinely maintained by Chippewa County is provided in Table 2.

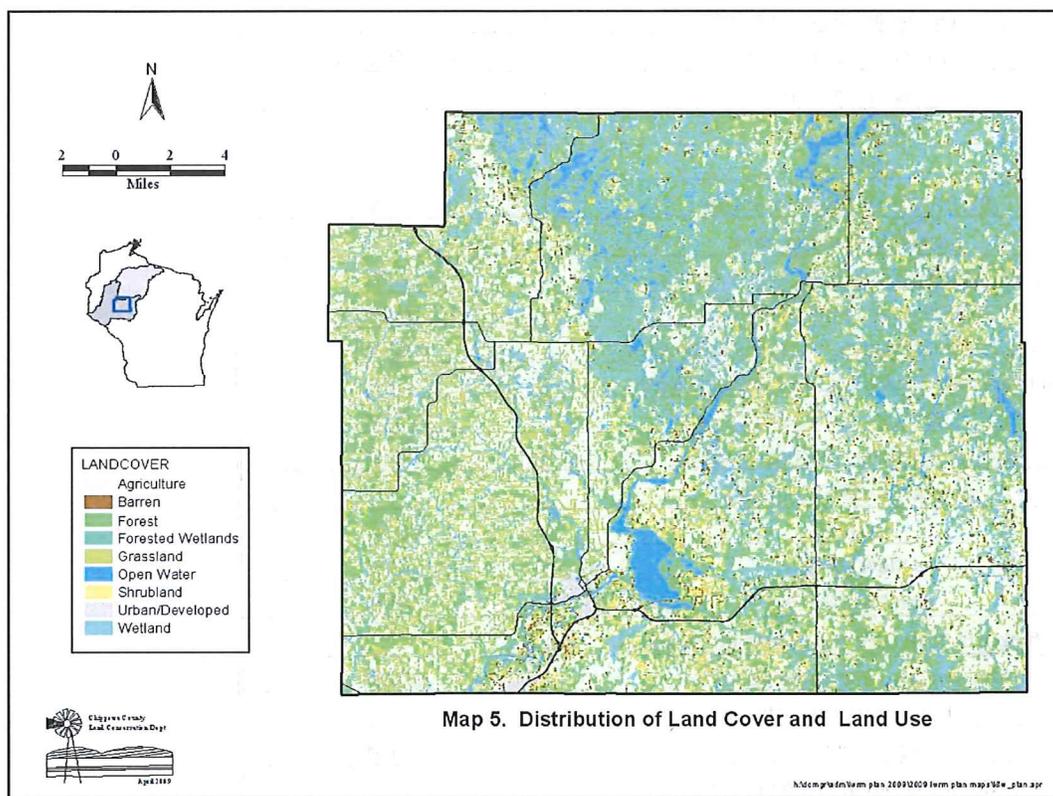
Table 2

A PARTIAL LISTING OF DYNAMIC GIS-BASED RESOURCE INVENTORIES AND DATA SETS MAINTAINED BY CHIPPEWA COUNTY

Dynamic GIS Layers	Maintenance Responsibility
Ownership Management Units	
Tax parcel boundaries	Land Records
Aerial Imagery	
1995 Landsat	
1998 Irsic	
02, 04, 05, 06, 08 Aerial Image	USDA
Farmland Management	
Farmland Preservation tracts and parcels	LCFM
USDA field and tract boundaries	USDA
Animal Waste Ordinance - manure storage sites	LCFM
Animal Waste Ordinance - nutrient mgt. fields	LCFM
NR151 Standard - evaluated parcels	LCFM
Erosion monitoring - individual fields	LCFM
Conservation Easements	
CREP	LCFM
Stewardship	LCFM
Non Point Source	LCFM
Chippewa County Groundwater Inventory	
New well and replacement permits	LCFM
Private well chemistry	LCFM
Private well geology	LCFM
County Ordinance Monitoring	
NR135 non-metallic mines	LCFM
CF urban area storm water mgt - BMP's	LCFM
Stormwater plan reviews	LCFM
Wetlands	
WDNR wetlands	WDNR
NRCS wetlands	USDA
Forestry Land Use	
County Forest Land Forest Management Units	LCFM
Natural Resource Features	
Perennial and intermittent streams	WGNHS
Drainageways	USDA
Lakes	WGNHS
Soils	USDA
Geology	WGNHS
Surface contours	WGNHS
Groundwater contours	WGNHS
Bedrock	WGNHS
Land cover	WDNR

5.11 Assessment of Land Cover and Land Use

The type and extent of current land cover and land use in the county has been established through satellite-based remote sensing techniques (1993 State LANDSAT, 1995 Chippewa County Land Use Project; 1998 WISCLAND). Land use changes are monitored through time using USDA aerial photography. The current distribution of land cover and land use is provided in Map 5.



Ongoing development trends in unincorporated areas of the county are currently determined by monitoring land sales and the location of new domestic well permits.

The location, distribution, and rate of new residential development in unincorporated areas of the county is provided in Map 6. Table 3 documents the number of agricultural land sales from 1996-2012 and the percent of those sales converted to non-agricultural use. Figure 1 shows the rate at which agricultural land in Chippewa County is being converted to nonagricultural use.

Results of this monitoring show a trend where land historically used to support agricultural production is being converted to rural residential, commercial, and other nonfarm use.

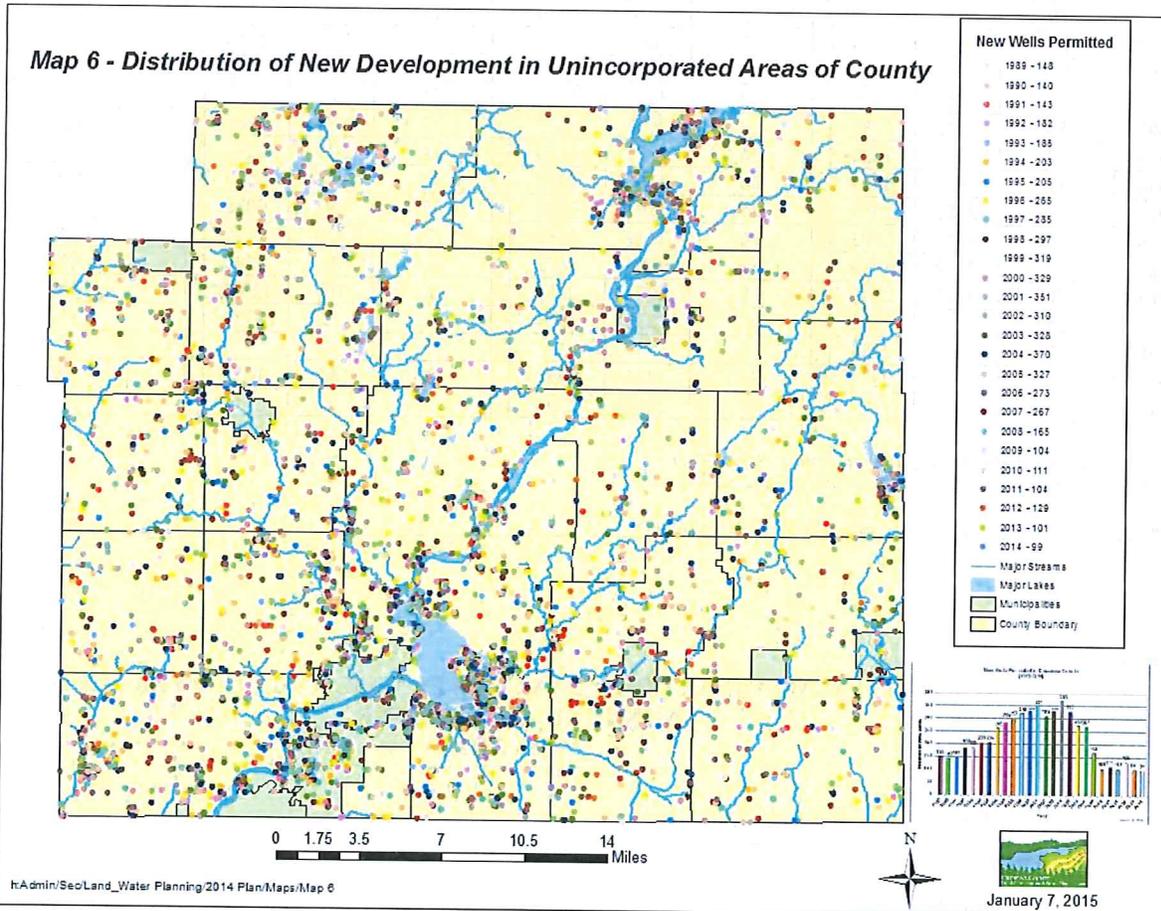


Table 3

A Summary of Chippewa County Land Sales
Total Number of Annual Agricultural Land Sales and Percent Converted to Nonagricultural Use

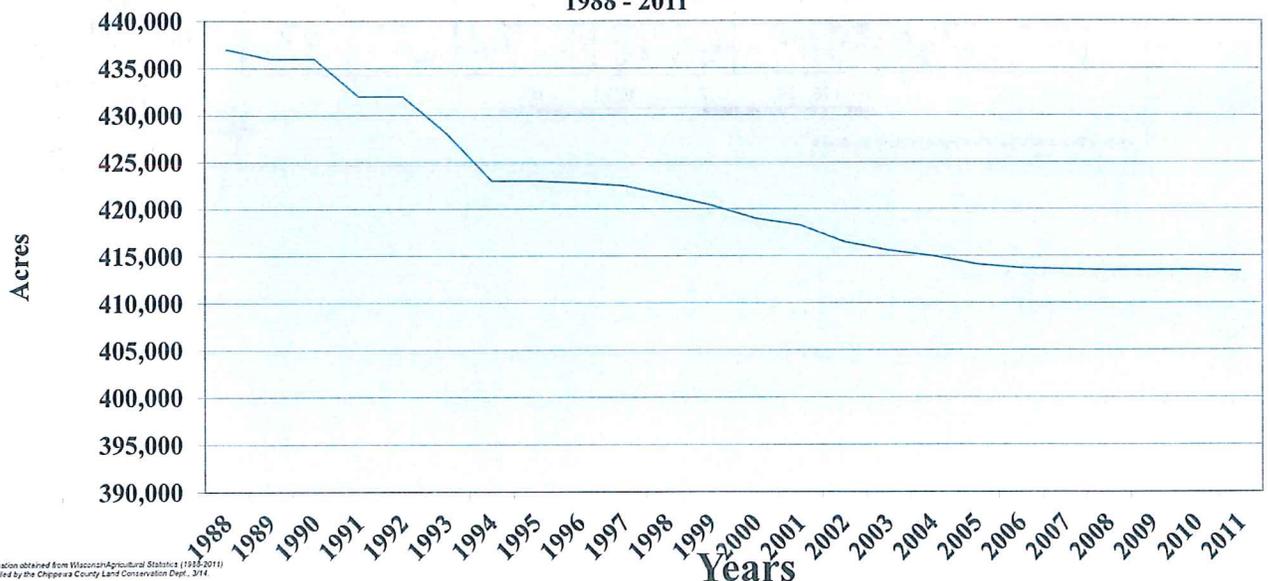
Year	Total of all agricultural land			Agricultural land continuing in agricultural use			Agricultural land being diverted to other uses			The percent of agricultural land sold and converted to nonagricultural use
	No. of transactions	Acres sold	Dollars per acre	No. of transactions	Acres sold	Dollars per acre	No. of transactions	Acres sold	Dollars per acre	
1996	38	1503	480	29	1300	487	9	203	433	14%
1997	39	1893	599	30	1615	539	9	278	946	15%
1998	89	5877	1067	68	4826	1030	21	1051	1235	18%
1999	86	5010	1274	62	3893	1138	24	1117	1748	22%
2000	100	6050	1297	66	4638	1226	34	1412	1533	23%
2001	74	3727	1398	50	3046	1307	24	681	1807	18%
2002	86	4446	1732	52	2676	1627	34	1770	1889	40%
2003	84	5492	1598	56	4573	1460	28	919	2284	17%
2004	81	4961	1854	60	4386	1886	21	575	1610	12%
2005	52	2687	2464	35	1794	2178	17	893	3038	33%
2006	33	2573	1983	26	2149	1838	7	424	2718	16%
2007	34	2297	1790	31	2204	1672	3	93	4590	4%
2008	30	2180	2738	28	2071	2283	2	109	11370	5%
2009	21	1247	2364	20	1235	2364	1	12	2353	1%
2010	57	3761	3214	*			*			
2011	34	2494	2334	32	2414	2357	2	80	1655	3%
2012	*			42	2401	2796	*			

Information obtained from Wisconsin Agricultural Statistics (1996-2013).
 Compiled by the Chippewa County Land Conservation Dept., 2/13/14

*Information not available through Wisconsin Agricultural Statistics (2011) or (2013)

Figure 1

ACRES OF FARMLAND IN CHIPPEWA COUNTY, WISCONSIN CONVERTED TO NONAGRICULTURAL USE
1988 - 2011



Information obtained from Wisconsin Agricultural Statistics (1988-2011).
 Compiled by the Chippewa County Land Conservation Dept., 2/14

The type and intensity of agricultural use in the county is monitored by tracking agricultural statistics. Results of these monitoring efforts indicates a trend in production agriculture whereby smaller-scale dairy operations are being replaced by cash grain operations and larger-scale livestock operations.

The trend toward more intensive agricultural use is substantiated through agricultural statistics that show an increase in row crop production, and a corresponding reduction in forage-based hay production. This trend is shown in Table 4 and Figure 2.

Table 4 ACRES PLANTED/HARVESTED FOR CROPS IN CHIPPEWA COUNTY, WISCONSIN

Year	Corn Harvested for Grain	Corn Harvested for Silage	Total Corn Harvested	Soybeans Planted	Oats Planted	Alfalfa Harvested as Dry Hay	Other Hay Harvested as Dry Hay	Specialty Crops Plants	Total Crops
1988	21,500	43,600	65,100	8,000	27,400	75,100	28,200	4,150	207,950
1989	49,300	21,900	71,200	7,250	26,300	82,000	20,900	3,770	211,420
1990	51,000	21,000	72,000	7,400	25,400	80,000	18,700	2,550	206,050
1991	54,400	17,400	71,800	9,600	20,900	81,000	13,800	3,050	200,150
1992	45,200	25,800	71,000	13,300	21,600	62,200	22,500	3,100	193,700
1993	37,700	26,800	64,500	9,900	20,800	60,000	25,500	3,100	183,800
1994	63,900	17,200	81,100	15,400	19,400	62,000	16,200	3,000	197,100
1995	61,800	15,900	77,700	12,700	18,300	62,200	16,400	3,100	190,400
1996	64,500	24,200	88,700	12,700	13,100	59,400	16,400	*1,900	192,200
1997	67,700	21,000	88,700	13,700	16,900	55,900	18,400	*1,600	195,200
1998	66,400	21,400	87,800	14,000	11,400	55,800	17,900	*2,000	188,900
1999	63,400	20,700	84,100	15,300	12,800	62,400	20,500	*2,200	197,300
2000	56,500	20,600	77,100	20,200	10,800	54,100	9,700	*1,900	173,800
2001	54,000	21,000	75,000	22,800	7,700	50,700	9,400	*1,300	166,900
2002	62,200	19,500	81,700	23,100	11,800	48,100	13,100	*1,700	179,500
2003	65,500	22,700	88,200	30,100	10,700	41,000	16,400	*1,400	187,800
2004	65,800	21,700	87,500	32,200	10,800	40,100	14,600	*1,800	187,000
2005	63,000	22,500	85,500	32,800	11,200	39,800	15,600	*1,600	186,500
2006	63,900	22,300	86,200	33,600	10,200	42,000	15,500	*2,100	189,600
2007	76,400	18,100	96,000	27,300	8,300	42,300	11,500	*1,700	187,100
2008	66,500	23,100	89,600	34,400	7,700	51,700	11,500	*1,900	196,800
2009	91,000	22,500	113,500	37,400	8,000	41,500	10,400	1,900	212,700
2010	92,000	18,200	110,200	39,300	7,800	36,400	10,000	♦700	204,400
2011	86,800	12,800	99,600	41,700	4,700	31,100	10,000	700	187,800
2012	78,000	24,600	102,600	47,800	5,400	24,900	10,000	700	191,400
2013									

Specialty crops include barley, winter wheat, snap beans, green peas, and sweet corn.

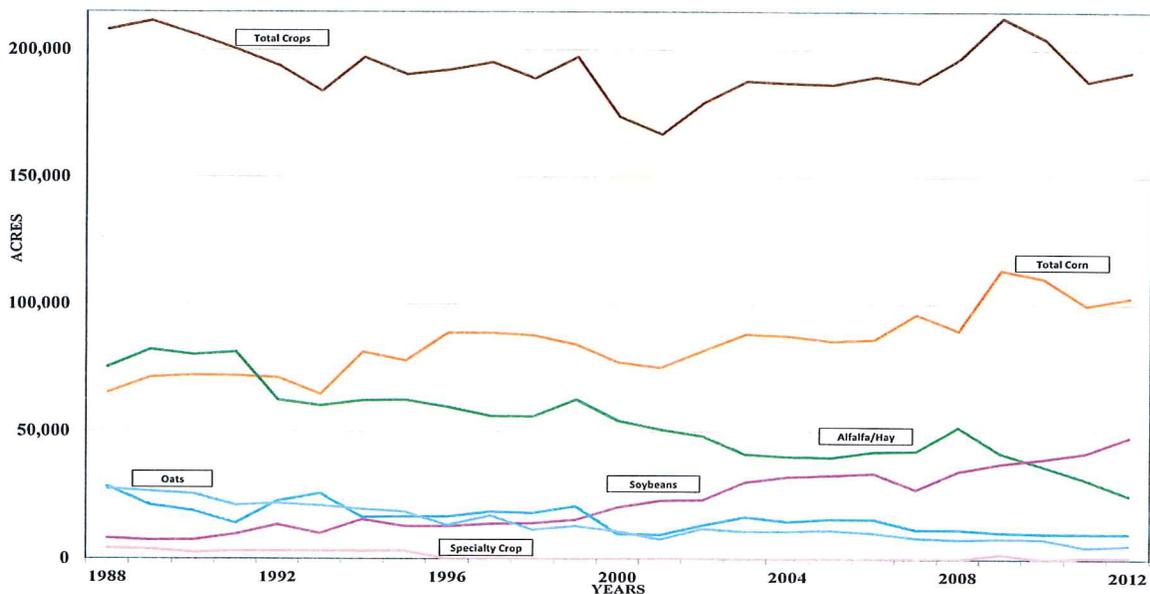
*Barley Only

♦Winter Wheat Only

Source: Wisconsin Agricultural Statistics, 1988 - 2013

Figure 2

ACRES PLANTED/HARVESTED FOR CROPS IN CHIPPEWA COUNTY, WISCONSIN



5.12 Assessment of Soil Condition

The Chippewa County Soil Survey (USDA, 1987) documents the distribution of soil types in Chippewa County. This soil survey provides a benchmark of soil conditions using measurements of soil depth, organic matter, and extent of topsoil loss.

The extent of soil erosion from nonagricultural sources has not been formally evaluated or qualified. Current land use trends and general observations suggest that there are accelerated rates of erosion on construction sites in urbanizing areas and accelerated rates of erosion associated with recreational use of county forest lands.

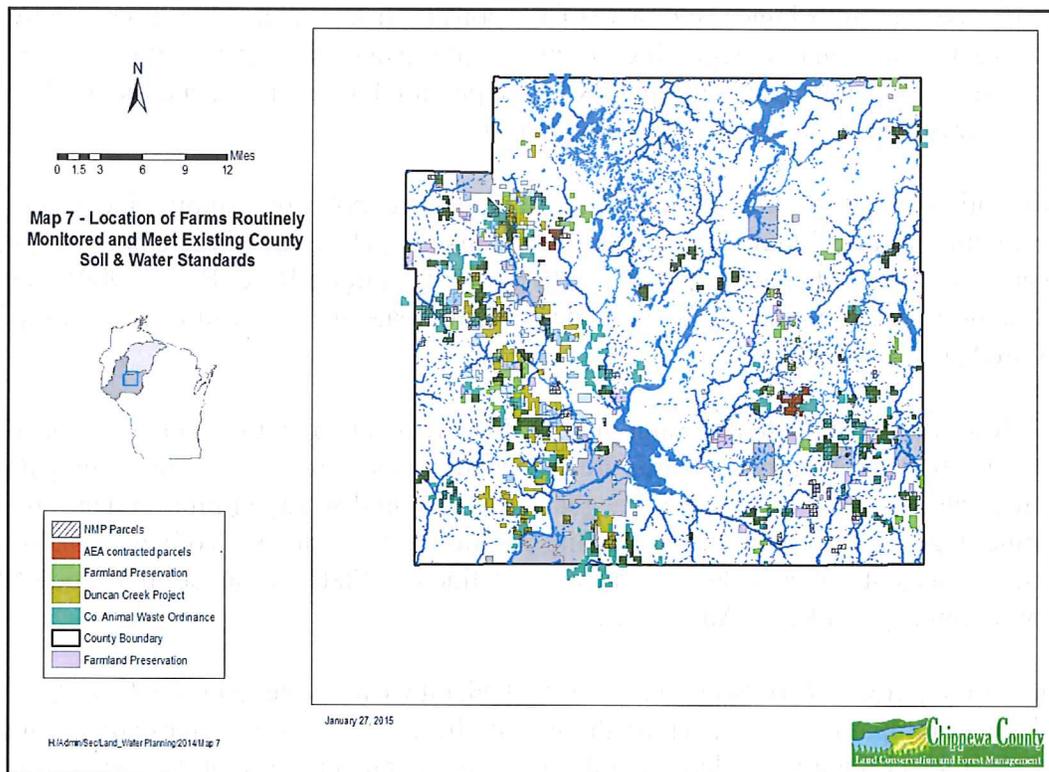
The current rate of agricultural soil erosion was first estimated in the Chippewa County Erosion Control Plan, (1985), based upon a representative sample of small watersheds and farm fields.

Efforts have since been made by the USDA Natural Resource Conservation Service to periodically monitor soil condition and erosion rates through use of a transect survey conducted as part of a nationwide Natural Resource Inventory (NRI). This survey was last conducted in 2002 to document cropping practices and land cover at predetermined sample locations.

Results of the year 1985 soil erosion inventory and the 2002 transect survey are similar and suggest that approximately 80% of farm fields are being managed within the erosion control standard for sustained production (T - value; USLE). The remaining 15% are farmed at a rate 1-2 times T-value, with 5% farmed at a rate greater than 2T. Results of these assessments indicate that higher rates of erosion occur on fields situated on sandstone uplands located in the western one-third of the county.

In 1987, the Chippewa County Land Conservation Committee instituted an annual crop reporting process to systematically monitor the management of farms subject to county soil and water conservation standards.

Map 7 shows the location of farm parcels that are now routinely monitored by the Land Conservation & Forest Management Department and are in compliance with county soil and water conservation standards. It also shows the location of farm parcels that have previously met county standards through state program contracts, that have since expired and are no longer monitored.



5.13 Assessment of Surface Water Resource Condition

As a result of location, geology, and land cover, there are many high value and high quality surface water resources in Chippewa County.

The location and physical characteristics of these water resources are documented in an extensive inventory titled: Surface Water Resources of Chippewa County, (Wis. Conservation Dept., 1963).

The condition of each lake, stream, and river in Chippewa County has been evaluated and characterized by the Wisconsin Department of Natural Resources (DNR) through use of a classification code assigned under the State of Wisconsin Surface Water Classification System. The code provides information regarding the current physical characteristics of the water resources, the degree and source of impairment, the potential optimal use, and the need for additional assessment, monitoring, and management.

This information has been compiled in a series of watershed tables that summarize water resource conditions, as contained in detailed basin reports. (The State of the Upper Chippewa River Basin, WDNR, 1996; and The State of the Lower Chippewa River Basin, DNR, 2002). An explanation of these tables and information available for watersheds in Chippewa County is provided in Appendix 2, Figure 2.1.

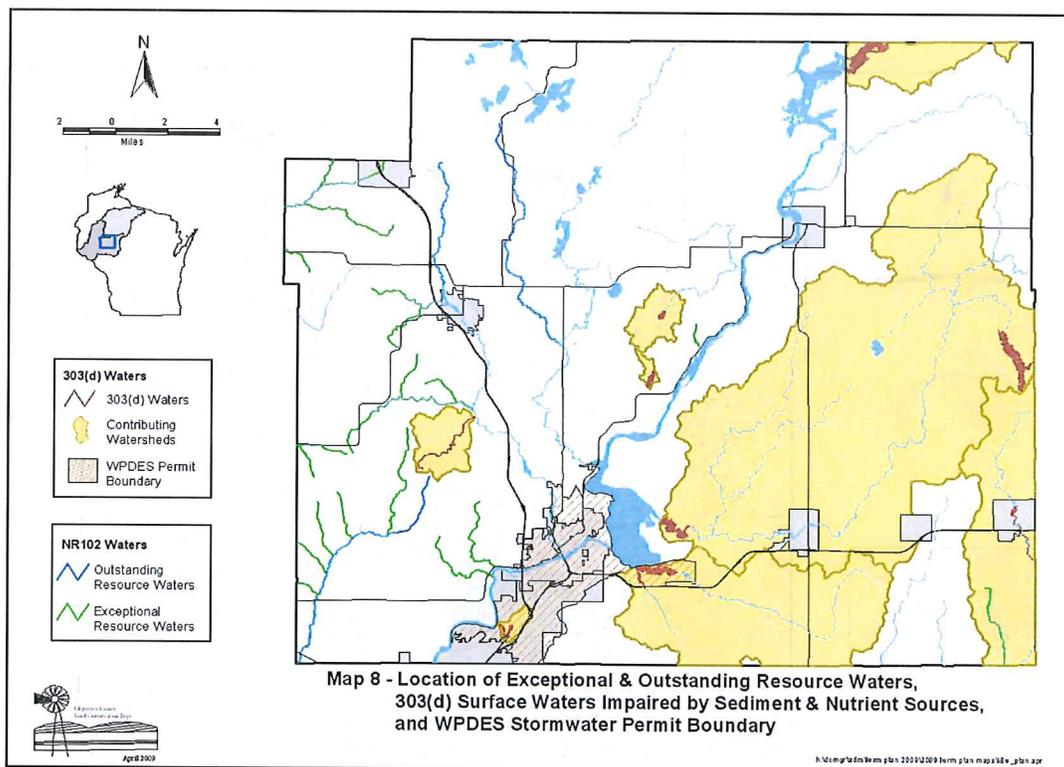
The DNR has established instream water quality standards that apply to select classes of water resources. These water quality standards are subsequently used by the DNR to develop and implement strategies to meet water quality goals, set effluent discharge limits, and as a basis for making other regulatory, permitting, or funding decisions. The categories of water quality standards, which exist for each class of water, are defined by State Administrative Code NR102. This information is provided in Appendix 2, 2.2.

In response to requirements of Section 303 of the Federal Clean Water Act, the DNR has prepared a list of impaired waters. Through this list, the state identifies water bodies that do not currently meet water quality standards and those where the potential use of the water body is restricted by pollution or physical degradation. The DNR has placed a number of water bodies in Chippewa County on the 303(d) list.

The DNR Bureau of Watershed Management is responsible for Wisconsin's 303(d) Impaired Waters Program and for the development of a Total Maximum Daily Load (TMDL) strategy to improve the condition of impaired waters. As part of current state program efforts, the DNR West Central Region has initiated the resource monitoring, data collection, and modeling phase of the TMDL planning process for three (3) impaired water bodies in the Lower Chippewa River Basin located in Chippewa County: Otter Lake, Little Lake Wissota and Moon Bay of Lake Wissota. Results of that effort have been summarized in a report titled: Phosphorus Loading and Trophic Status of Lakes in the Yellow River Watershed, West-Central Wisconsin, (February 2004).

The DNR West Central Region has now completed the TMDL planning process for Little Lake Wissota and has completed results in a report titled: Total Maximum Daily Load (TMDL) for the Little Lake Wissota Embayment of Lake Wissota Chippewa County, Wisconsin, (DNR Draft Report, 1/22/09).

Map 8 shows the location of exceptional and outstanding resource waters, the location of impaired surface waters included on the 303(d) list as a result of sediment or nutrients, and the location of urban storm water management areas subject to WPDES permit. Rivers and streams with 303(d) designation include those located in the Yellow River and Paint Creek Watersheds, as contributing to Otter Lake, Moon Bay of Lake Wissota, and Little Lake Wissota.



5.14 Assessment of Groundwater Condition

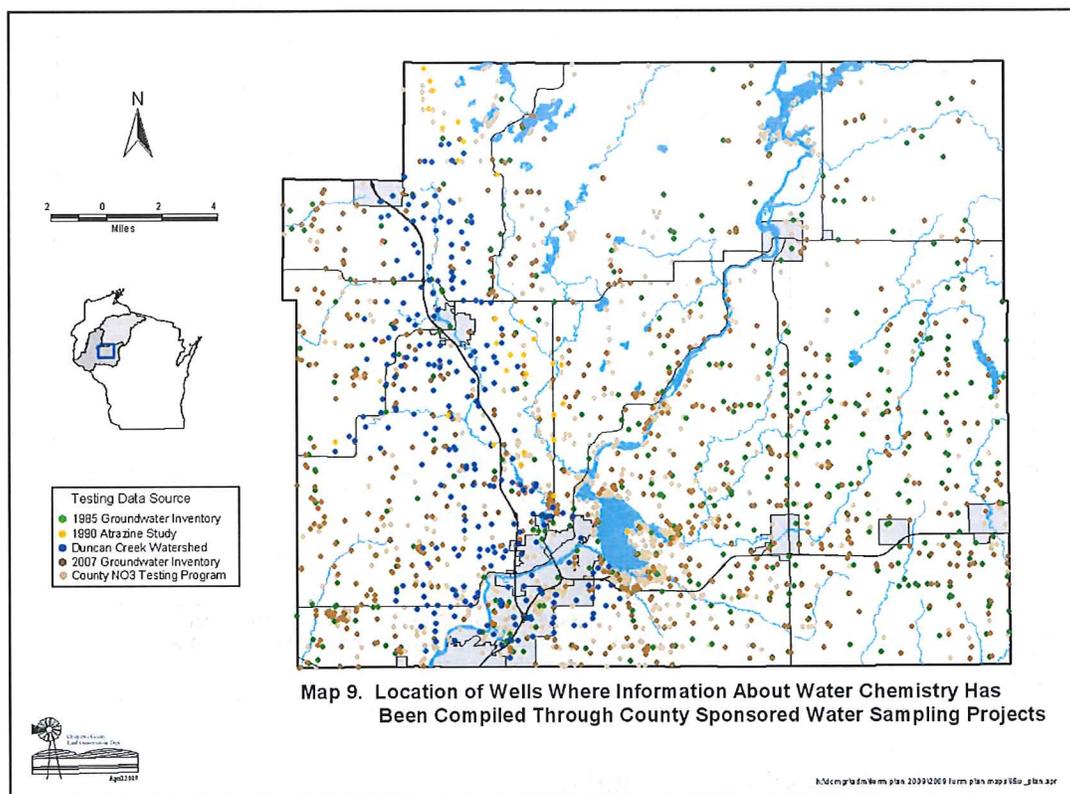
The condition of the groundwater resource in Chippewa County was initially established through the Chippewa County Groundwater Inventory, (WGNHS, 1985). The inventory was based upon information compiled from approximately 3,000 recorded well locations and documented aquifer characteristics, groundwater elevation, and groundwater chemistry throughout the county.

This groundwater inventory has been systematically expanded and is routinely maintained by the Dept. of Land Conservation & Forest Management and Planning & Zoning Department through the Chippewa County Groundwater Inventory and well permitting program.

The Chippewa County Groundwater Inventory was updated in 2007 through an extensive groundwater sampling effort to document current groundwater chemistry and the condition of the rural water supply. Results of this effort are documented in a report titled: 2007 Chippewa County Groundwater Inventory; A Benchmark Report of Groundwater Chemistry, (2008, LCD).

Chippewa County, through its rural well drinking water program, provides a $\text{NO}_3\text{-N}$ sampling service.

Map 9 shows the location of wells where information about rural water chemistry has been compiled since 1985 through the state and county drinking water programs.



Results of the combined groundwater inventories show that in the uncultivated and forested areas of the county, nitrate and chloride levels are at background concentrations.

Nitrate and chloride concentrations in agricultural production areas are elevated above background levels. In these areas, fifty percent (50%) of the wells tested had concentrations of nitrate-nitrogen ($\text{NO}_3\text{-N}$) that reflected cultural influences, ranging from 3-9 mg/l. Approximately 25% of the wells tested in agricultural areas approached or exceeded the safe drinking standard of 10 mg/l, with 12% exceeding the standards. Areas of highest concentration occur in a band of coarse textured soils associated with glacial outwash deposits.

5.15 Assessment of Wetland Condition

The type, size, and location of wetlands in the county have been documented in the Chippewa County Wetland Inventory, (WDNR, 1983, 1996). A second, more detailed inventory of agricultural areas has documented the location of wetlands, farmed wetlands, and converted wetlands (NRCS, 1987, 1996).

As a result of the location, glacial geology, and land cover, there is a wide range of wetland hydrologic types and associated wetland plant communities.

The condition of these wetlands vary greatly based upon their location, extent of disturbance, and surrounding land use.

Results of recent biological surveys suggest that there are many diverse and high-quality wetland sites in undisturbed areas throughout the county. Surveys also suggest that there are many drained or highly degraded wetland sites that could be readily restored.

Activities that contribute to wetland degradation include agricultural drainage and drainage system maintenance, wetland fills associated with urban development, changes in wetland hydrology from increased urban runoff, and sediment from urban and agricultural sources.

5.2 Land and Water Issues of Priority Concern

Land and water issues of priority concern have been identified using planning methods described in Sec. 3.0, and the information about current resource condition and use, as described in Sec. 5.12. They are as follows:

Issue 1

There is a global trend toward climate change that will have direct impacts on the growing season, weather events, and the land, water, and natural resource base.

Greenhouse gas emissions contribute to global climate change and affect seasonal weather patterns and climate events.

The impacts of climate change, as modeled for Wisconsin, suggest that the state will become drier overall, have higher seasonal temperatures, and experience more extreme storm and runoff events.

If realized, these changes will directly affect the duration of the growing season, the hydrology of surface and groundwater systems, and all associated aspects of the natural ecology and environment.

Issue 2

There is a trend toward renewable energy production that will use biomass produced from forested and agricultural land. This will place a greater demand on the land, water and natural resource base.

Energy production from fossil fuels contribute to greenhouse gas emissions.

In response to concerns over climate change, renewable energy sources are now being developed to replace fossil fuels.

These renewable energy sources will include electricity and biofuels generated from biomass and waste stream products, produced through agricultural and forestry operations.

This renewable energy production will place a greater demand on land and water resources in Chippewa County.

To meet the long-term demand for food, fiber, and renewable energy production, the land and water base must be conserved and sustainable cropping systems must be implemented.

Issue 3

There is a land use trend in Chippewa County where most new development is occurring in unsewered subdivisions located in the Chippewa Falls urban area, shoreland areas, and rural areas historically used for agricultural production.

If not properly planned and managed, unsewered subdivisions in metropolitan areas will increase storm water runoff and nonpoint pollution. These changes can, in turn, affect the quality and quantity on surface water and groundwater.

If not properly planned and managed, residential and commercial development in shoreland corridors will increase storm water runoff and nonpoint pollution, causing direct impacts to lakes and streams.

If not limited or properly managed, nonfarm development in agricultural areas will have a negative effect on the viability of ongoing agricultural operations. Nonfarm development in agricultural areas causes land values to escalate, removes land from production, and increases the potential for conflict between farm and nonfarm residents.

Issue 4

There is an ongoing trend in production agriculture where small-scale dairy operations are being replaced by cash grain operations, or larger-scale dairy, hog, or poultry operations.

If not properly managed, the change from a forage livestock-based cropping system to a cash grain cropping system will reduce the diversity of crops grown and may result in higher rates of soil erosion, the depletion of soil organic matter, and higher rates of commercial fertilizer and pesticide use.

The change from small dairy operations to large-scale livestock operations will result in higher concentrations of animals and animal waste at select locations. If not properly managed, these higher concentrations at select locations increase the potential for point and nonpoint source air and water pollution.

In conjunction with unlimited residential development in unincorporated areas, this trend toward more intensive agricultural use will increase the potential for rural land use conflict between agricultural producers and rural nonfarm residents.

Issue 5

As a result of anticipated land use and land development trends, there will be less natural diversity, a loss of undisturbed areas, and an increase in exotic and invasive species.

If not properly managed, there will be greater fragmentation and more intensive use of undisturbed forested tracts, upland woodlots, drainage corridors, and shoreland areas.

This fragmentation and more intensive use will result in the loss and degradation of native plant communities and animal species, both upland and aquatic.

Issue 6

In response to current energy concerns and ongoing urban development trends, there is an ongoing need for minerals available from finite deposits, located in select locations in the landscape.

Commercial grade sand and gravel deposits in Chippewa County are generally located in proximity to lakes, streams, and rivers. Commercial grade sandstone deposits in the county occur at or near the surface at select locations in the landscape.

These commercial grade mining deposits occur at sites that are also highly sought for residential development, and agricultural and forest production.

If left undisturbed, these sites have an inherent environmental value and contribute to the natural ecology of the area.

If not properly planned, managed, and restored, nonmetallic mining operations may cause land use conflicts, create runoff and nonpoint pollution, and degrade the value and productivity of the land base.

Issue 7

In response to ongoing growth and current development trends in the Eau Claire/Chippewa Falls urban area, there is a greater demand for outdoor-based recreational activities.

This recreational interest has increased pressure on the public and private land base.

As recreational use intensifies, there is the potential for conflicts among user groups, direct impact on the resource base, and a diminished experience for the recreational user.

5.3 Resource Management Objectives

General goals and management objectives for land and natural resource management in Chippewa County have been outlined in a series of previous planning efforts conducted by the Wisconsin Dept. of Natural Resources and Chippewa County (Chippewa County, the Present and the Future, 1971; Chippewa County Farmland Preservation Plan, 1985; Chippewa County Erosion Control Plan, 1987; Duncan Creek Clean Water Plan, 1991, and Chippewa County Land and Water Resource Management Plan, 2004).

5.31 Land Management Objectives

Public goals and policies for agricultural land preservation, growth management, and environmental preservation have been previously adopted through the Chippewa County Farmland Preservation Plan, 1985.

To meet the planning requirements of Wisconsin Stats., Chapter 91 and 92, the resource management objectives for land conservation, agriculture, and natural resource management are as follows:

Objective 1

Maintain the physical condition, biodiversity, ecology, and environmental functions of the landscape, including its capacity for flood storage, groundwater recharge, water filtration, plant growth, ecological diversity, wildlife habitat, and carbon sequestration.

Objective 2

Maintain the capacity of the land to support productive forests and agricultural working lands to sustain food, fiber, and renewable energy production.

- Manage soil quality to maintain the land's capacity to support sustained production.
 - Measure and monitor soil quality using soil organic matter, carbon content, moisture holding capacity, fertility, and current erosion rates.

- Identify and preserve designated blocks of working lands to maintain an adequate landmass to support agricultural and forestry operations that are production-oriented and that contribute to the county's economy.
 - Identify the location, size, and boundaries of working land conservation areas through use of town or county-based planning processes, and landowner registries.

- Limit the fragmentation and urban development of productive forests and agricultural working lands.

- Manage the extent of fragmentation and urban development through the adoption and use of rural density standards and land division ordinances, as established by towns in cooperation with the county.

- Manage the type and location of new development in unincorporated areas through the adoption and use of voluntary land conservation agreements developed with interested landowners; and zoning districts and structural setbacks, as established by towns in cooperation with the county.

- As a priority, seek to protect those productive forest and agricultural lands identified as prime agricultural land, Land Capability Classes I-III.

Objective 3

Encourage future urban development to occur within incorporated municipalities; or in designated urban service areas where development and associated public services have been planned by a responsible municipality (Note: altered from Chippewa County Farmland Preservation Plan, 1983).

- Identify the location, size, and boundaries of urban service areas through the use of public planning processes initiated by the towns, cities, or villages.

Objective 4

Protect areas of special environmental, natural resource, or open space significance, (Wisconsin Stats. 91.57).

- As a priority, seek to conserve:

- Land located in a planned conservation or land management area, formally designated and adopted by a public agency or municipality.

- Land located immediately adjacent publicly owned forest, park, or recreational land.

- Undisturbed stream corridors, undeveloped lakes, and areas where threatened or endangered species have been inventoried and documented.

- Inventory, monitor, and control terrestrial invasive species to protect and maintain the ecological value of high-value plant communities and natural resource areas.

Objective 5

Restore the condition, environmental functions, and productive capacity of abandoned or degraded lands.

- Reclaim and revegetate abandoned farmland, surface mined lands, and brownfields to:

- Produce biomass for energy production.

- Reestablish native plant communities through planting or natural progression.

5.32 Surface Water Management Objectives

General management objectives for surface waters located in Chippewa County have been established in a report published by the Wisconsin Department of Natural Resources, titled The State of the Lower Chippewa River Basin Plan, (2001). These state objectives are recognized by Chippewa County as a foundational element of interagency efforts to manage water resources.

For the purpose of this plan, the resource management objectives for surface water in Chippewa County are as follows:

Objective 1

Manage storm runoff to limit flood peaks and maintain current stream base-flow conditions and lake elevations.

- Accelerate the use of best management practices (BMP's) to increase soil moisture holding capacity, landscape depressional storage, and groundwater infiltration and recharge.

Objective 2

Reduce sediment and nutrient loading to surface waters from nonpoint sources to levels necessary to meet:

- The potential use classification for the waterbody, as designated in the Wisconsin Surface Water Classification System, or
- The planned water resource management objective, or the prescribed Total Maximum Daily Load Limits (TMDLs), as developed through a formal watershed planning process, or
- Instream water quality standards as established for individual lakes, streams, or stream reaches.

Objective 3

Maintain, improve, and restore the natural condition of the shoreland corridor, littoral zone, and instream habitat of streams and lakes.

Objective 4

Inventory, monitor, and control aquatic invasive species (plant and animal).

5.33 Groundwater Management Objectives

For the purpose of this plan, the resource management objectives for groundwater in Chippewa County are established as follows:

Objective 1

Maintain historic groundwater levels and limit impacts to surface waters, wetlands, and well water supplies by managing the depletion of groundwater resources from high and low volume consumptive uses:

- Monitor the groundwater elevations in aquifers that are used to support municipal water supplies, as measured by the extent of permanent drawdown in wellhead protection zones.
- Monitor the groundwater elevations in rural subdivisions and high density developments, as measured by the extent of drawdown in the affected private wells.
- Institute urban and rural water conservation programs to conserve groundwater supplies.

Objective 2

Manage concentrations of contaminants in groundwater aquifers to pursue Preventative Action Limits (PAL), as established in Wisconsin Admin. Code NR140.

Objective 3

Manage concentrations of groundwater contaminants in the zone of influence of municipal water supplies, to within prescribed standards for public and municipal water supplies, as defined in NR140.10 and NR140.12.

5.34 Wetland Management Objectives

For the purpose of this plan, the resource management objectives for wetlands in Chippewa County are established as follows:

Objective 1

Seek to achieve a net gain of wetland acres through wetland restoration and creation, as measured through program tracking and wetland inventory monitoring.

Objective 2

Avoid the destruction of existing wetlands, and maintain the environmental functions that these sites provide by seeking development alternatives that will not impact the wetland site.

When destruction cannot be avoided, minimize the degradation of wetland sites and the loss of environmental functions by incorporating principals of engineering into site design.

When site avoidance and minimization through engineering design are not feasible, compensate for the loss of wetlands through onsite mitigation conducted to reestablish the natural functions, hydrologic values, and plant communities in the immediate watershed of wetland loss.

When inkind, onsite mitigation is not feasible, compensate for wetland losses using the concept of a wetland mitigation bank.

5.4 Program Goals and Objectives

Program goals and objectives have been developed to describe how the county will address land and water issues and pursue resource management objectives.

Broad goals have been established for the following program areas: energy conservation and waste reduction, land conservation and sustainability, water conservation, nonpoint source pollution control, and planning and environmental regulation.

Program objectives are provided for each goal. These program objectives are outcome-based, measurable, and are intended to be accomplished over a period of years. A series of actions are provided that will be used to pursue each program objective.

5.41 Energy Conservation and Waste Reduction

Goal 1

Develop, support, and advance county initiatives that conserve energy, reduce waste, and serve as a catalyst for broader community efforts to conserve energy, limit carbon emissions, and increase renewable energy production.

Objective 1

Develop and implement a county energy conservation program for county operations.

Action 1

Consider and adopt a county energy conservation plan.

Action 2

Apply the plan to systematically record and monitor energy use and to identify, select, and implement energy conservation projects.

Action 3

Establish energy conservation education and outreach program to inform the public and other municipalities of energy conservation savings and opportunities.

Objective 2

Encourage alternative energy production that uses wind, waste stream bi-products, or biomass generated from agricultural or forestry operations.

Action 1

Design and implement a pilot project to determine the feasibility of using local biomass as a fuel source for local heat, fuel, or electrical energy production.

Action 2

Design and implement a pilot project to determine the feasibility of producing renewable electrical energy from distributed sources, including manure digesters and small-scale farmstead-based wind generators.

- Assess interest by local electrical utilities and farm organizations to explore and evaluate this technology.
- Prepare a project proposal that includes funding and site selection.
- Assist interested operator(s) to plan, implement, monitor, and evaluate a renewable energy project.

Objective 3

Develop and administer recycling and solid waste management programs that reduce, reuse, and ensure the proper disposal of waste materials.

Action 1

Maintain role as Responsible Unit Coordinator for municipalities.

Action 2

Conduct a benchmark study to evaluate the effectiveness of current household and institutional recycling programs, and to evaluate the cost efficiency of existing Materials Recovery Facilities (MRF's) in Chippewa County.

- Research and compile information on existing facilities.
- Prepare a cost/benefit analysis on the feasibility of maintaining and expanding municipal-owned MRF's.

Action 3

Design and implement a project to collect and market office paper from all public and county-owned facilities.

Action 4

Systematically enforce the Chippewa County Recycling Ordinance to assure compliance at all public facilities, including public parks, campgrounds, ball fields, and facilities.

5.42 Land Conservation and Sustainability

Goal 2

Develop and administer conservation programs that preserve the land, support sustainable production, provide biodiversity, and protect the natural ecology.

Objective 1

Support the efforts of individual landowners, private nonprofit conservation organizations, and local municipalities to preserve productive “working lands”.

Action 1

Actively administer and support landowner participation in the Wisconsin Farmland Preservation Program.

- Conduct NR 151 farm evaluations and provide technical services to all new and existing program participants.
- Conduct annual reporting and certification process to verify landowner compliance.

Action 2

Develop and implement a “working lands” pilot project to evaluate and advance county options for farmland protection.

- Prepare a project proposal through the Wisconsin Working Lands Initiative to define the scope, purpose, and means to evaluate a pilot project.
- Incorporate a voluntary public access option to provide opportunities for controlled public hunting, fishing, and outdoor recreation.
- Prepare and enter 66.03 municipal agreements and MOU’s with participating municipalities and public agencies.
- Prepare and submit project budget and grant proposals.

Action 3

Revise and update the Chippewa County Farmland Plan in association with state efforts to update Wisconsin Stats. 91 and the State Farmland Preservation Program.

- Identify the location, size, and boundaries of working land conservation areas through use of town or county-based planning processes, and landowner registries.

Objective 2

Support the efforts of individual landowners, private nonprofit conservation organizations, and municipalities to preserve unique lands with high public value, or those that contain threatened or endangered species.

Action 1

Actively administer and maintain the Chippewa County Stewardship Program to support the acquisition of land and/or conservation easements by municipalities or nonprofit organizations for conservation purposes.

Action 2

Develop and enter working agreements between the county and nonprofit conservation organizations to clarify appropriate roles and responsibilities with regard to land and easement acquisition and ongoing custodial management.

Action 3

With private, nonprofit conservation organizations, define the location of high priority conservation areas having significant public value or unique ecological significance.

Action 4

In cooperation with nonprofit conservation organizations, maintain a wild lakes registry for undeveloped lakes as a companion to the Wisconsin Scientific and Natural Areas Program.

Objective 3

Encourage biodiversity and sustainable agriculture, forest, and biomass production on private lands by providing technical assistance and conservation program services to landowners.

Action 1

Support the efforts of major farm and forestry organizations to compile, market, and monitor carbon credits as part of sustainable operations.

Action 2

Administer educational services, technical services, and financial incentives to agricultural producers through state/federal agricultural conservation and nonpoint pollution control programs.

Action 3

Administer educational services, technical services, and financial incentives to woodland producers through local producer networks, woodland management organizations, and state/federal forestry programs.

Action 4

Provide technical services to the owners and operators of non-metallic mine sites, abandoned mines, and brown fields to reclaim disturbed sites and achieve end land uses that are productive and sustainable.

Action 5

Administer the Wisconsin Conservation Reserve Enhancement Program (CREP) to establish stream and wetland buffers.

Note: The CREP Program will be managed in 2009-10 as the county's highest priority for implementation of state and federal conservation programs. As a priority, county services will be directed to assist landowners to participate in a permanent buffer (easement) program option.

Objective 4

Encourage biodiversity and sustainable forest and biomass production on public lands by supporting the efforts of the custodial agencies responsible for developing and administering property management plans.

Action 1

On county forest lands managed by Chippewa County, identify areas of unique ecological significances and apply the County Forest Plan to manage and monitor these areas.

Action 2

On public lands managed by state agencies, actively participate in the public participation process used to develop and periodically revise property management plans.

Objective 5

Protect and buffer the existing public land base by pursuing conservation easements or fee title purchase options on select parcels located within and immediately adjacent the designated blocking boundaries of public forests, parks, or conservation management areas.

Action 1

Implement a project to identify select parcels of high environmental or ecologic value located within or adjacent public land management areas.

Action 2

Contact landowners to explain options for permanent resource protection through use of conservation easements or fee title sale.

Objective 6

Support efforts by public agencies and nonprofit conservation organizations to inventory and control invasive species (upland and aquatic).

Action 1

Participate in information exchange and networking opportunities to raise public awareness and monitor invasive species populations.

5.43 Water Conservation

Goal 3

Develop, support, and implement water conservation programs to maintain current aquifer volumes and to protect the county's drinking water supply.

Objective 1

Develop and implement conservation programs that protect wetlands, restore natural hydrology and drainage, and improve storm water storage capacity, soil infiltration, and groundwater recharge.

Action 1

Develop a project proposal to restore natural hydrology and create depressions for groundwater recharge.

- Identify areas or compile existing locations of groundwater recharge.
- Develop project outline and budget to restore or enhance natural hydrology; include permanent protection options.
- Restore or enhance natural hydrology sites, as outlined in project proposal.

Action 2

Develop and support project proposals to protect, restore, and enhance wetlands.

Objective 2

Establish a groundwater and baseflow monitoring program to monitor and record groundwater elevations and associated stream baseflow conditions at representative locations throughout the county.

Action 1

Compile existing information of record to document historic groundwater elevations and fluctuations in local aquifers.

Action 2

Develop a project design and grant proposal to install and maintain a monitoring network.

Objective 3

Actively encourage and support the development of water conservation programs to maintain public and private water supplies.

Action 1

Support the efforts of municipalities that implement wellhead protection planning projects and programs.

Action 2

Develop a project design and grant proposal to develop a model municipal water conservation plan that could be readily applied to other municipalities.

- Solicit interest from cities and villages that provide municipal water.
- Prepare project proposal that includes timeline and budget.
- Work with select municipality on implementation of pilot project.

Objective 4

Improve the county's capacity to monitor changes in groundwater chemistry using existing well testing programs.

Action 1

Maintain the existing Chippewa County rural groundwater inventory and monitoring program.

Action 2

For public water supply wells, routinely sampled by the county, create a GIS database that matches well locations to existing water quality records; GPS the location of wells currently sampled; maintain the record as part of the Chippewa County groundwater inventory.

Action 3

Develop a project design for a long-term groundwater monitoring project using a subset of 1985 and 2007 inventory sample points to access current and long-range trends as they affect the rural water supply.

5.44 Nonpoint Source Water Pollution Control

Goal 4

Develop and administer nonpoint sources of water pollution control programs to pursue state and local water quality objectives.

Objective 1

Administer the NR 151 agricultural nonpoint source pollution control performance standards on a county-wide basis, using authority of Wisconsin Stats. 59, 92, 281, and Administrative Rules NR 115, NR 243, NR 151, and ATCP 50.

Action 1

Assess interest on behalf of the major farm organizations to implement an educational outreach project to inform agricultural producers, rural landowners, and the general public about the performance standards and the county's program to administer them.

Action 2

Administer a voluntary farm evaluation and certification program following the practices and management approach established in this plan.

Action 3

Implement a well-defined county regulatory framework to enforce the NR 151 standards.

- Evaluate and update the DNR/County MOU that clarifies the local/state regulatory framework, and the role of the county and state under NR 243 permitting and enforcement authorities.

Action 4

Actively participate in the Wisconsin WPDES Permitting Processes administered by DNR under NR 243 or NR 151.

Objective 2

Administer the nonagricultural nonpoint pollution control performance standards on a county-wide basis using the authority of Wisconsin Stats. 92, 281, and Administrative Rules NR 103, NR 115, and NR 216.

Action 1

Review and revise the existing working agreement between Chippewa County and DNR as it applies to storm water plan review in unincorporated areas, subject to NR216 storm water permit requirements.

Objective 3

Administer a joint storm water management program, that meets EPA and NR 216 storm water permit requirements, with affected municipalities in the Chippewa Falls Urban Area to meet requirements of WPDES Permit #WI-S050121-1.

Action 1

Administer components of the joint program following process and commitments defined in the Chippewa Falls Urban Area Storm Water Plan and Chapter 66.03 agreement between Chippewa County, the Village of Lake Hallie, and the Towns of Eagle Point and Lafayette.

Objective 4

Support state efforts to pursue water quality objectives through the development and implementation of Total Maximum Daily Load (TMDL) limits in designated EPA 319 watersheds.

Action 1

Participate in a DNR sponsored effort to implement TMDL's that have been developed for the Little Lake Wissota Watershed.

- Develop a TMDL watershed implementation plan to establish a project timeframe, roles and responsibilities, anticipated costs, funding commitments, and measures of performance.
- Develop and enter formal working agreements and service contracts with participating municipalities and funding agencies.

Action 2

Participate in a DNR sponsored TMDL planning process to develop TMDL's for Moon Bay of Lake Wissota and Otter Lake.

5.45 Planning and Environmental Regulation

Goal 5

Facilitate community-based land use planning, and develop and administer local ordinances that address local needs and augment the community's voluntary conservation efforts.

Objective 1

Track the location and rate of new development in unincorporated areas using approved subdivision plats, certified survey maps, and new well permits.

Action 1

Maintain current Chippewa County well permitting and Chippewa County groundwater inventory GIS database.

Action 2

Establish and implement a land division mapping and tracking procedure to monitor the location and rate of development in unincorporated areas of the County.

Objective 2

Provide opportunities for greater communication and cooperation in land use planning and land use regulation between the county, towns, cities, and villages.

Action 1

Sponsor periodic land use educational conferences to encourage communication and provide information of value to town and county officials.

Objective 3

Provide ongoing planning, administrative, and enforcement services to towns that participate in County Comprehensive Zoning, and to towns or other municipalities that have entered agreements or contracts for specified services.

Action 1

Provide information and educational support to towns regarding procedures to develop and implement town-based comprehensive plans and ordinances.

Action 2

Provide information, educational support, and consultation to towns that have adopted comprehensive plans to assist them to develop, administer, and enforce local ordinances.

Objective 4

Systematically review and update selected county land use and environmental ordinances to be consistent with the County Comprehensive Plan and State Administrative Rule changes.

Action 1

Initiate a comprehensive revision to the County Comprehensive Zoning Ordinance.

- Set schedule; formally notify all towns of revision process (WI Stats. 59.69(5)).
- Finalize pallet of standardized zoning districts; seek town comment.
- Assist towns to select districts to be applied within its jurisdiction. If necessary, customize the selected districts for each town to create a unique pallet for the town.
- Assist towns to develop and submit a revised town zoning map which will define which districts are proposed for which locations.
- Hold public hearings.
- From those now participating in County Comprehensive Zoning, accept town request for adoption or dismissal within the statutory review period.

Action 2

Develop a Storm Water Management and Construction Site Erosion Control Ordinance to meet the requirements of the Chippewa Falls Urban Area Permit, #WI-S050121-1. (LCD)

Action 3

Evaluate and revise the Chippewa County Recycling Ordinance and Litter Ordinance.

Action 4

Evaluate and revise the Chippewa County Non-Metallic Mining Reclamation Ordinance.

Action 5

Evaluate and revise the Chippewa County Animal Waste Management Ordinance to reflect changes in State Administrative Rule NR 151, ATCP 50. (LCD/Zoning)

Action 6

Develop a revised Shoreland Zoning Ordinance to meet local needs and to reflect changes in State Administrative Rule NR 115. (Zoning)

6.0 PLAN IMPLEMENTATION

Chippewa County has developed this plan to identify issues of local environmental concern and to define the county's local natural resource management objectives.

Chippewa County will apply this plan to deliver programs and conduct activities that will be directed to meet local needs. The actual extent of program support and service levels allocated by the county will be determined by the county through the annual budget process.

To encourage structured communication between the county and state and federal agencies, the Land Conservation & Forest Management Committee will, on an annual basis, convene a work group and sponsor an interagency planning process, as outlined in the Chippewa County Operational Agreement. County departments will be encouraged to use this process to evaluate progress toward plan implementation and to develop grant requests, budget proposals, and individual staffing plans to advance program objectives.

Chippewa County will use this interagency planning process to review this plan on an annual basis. The plan will be formally reviewed according to a five (5) year schedule but may be amended if warranted before that time following procedures established in ATCP 50.12.

6.1 Responsibilities to Address Issues of Priority Concern

Chippewa County has prepared this plan to guide its operations, and document local issues of environmental concern so that they might be considered by other municipalities, public agencies, and cooperating nonprofit conservation organizations as they allocate staff and funding.

The public agencies that now implement land conservation related programs and regulations in Chippewa County are the Farm Service Agency (FSA), the Natural Resource Conservation Service (NRCS), the U.S. Fish and Wildlife Service (USFWS), the U.S. Army Corps of Engineers (USACE), the Wisconsin Dept. of Natural Resources (DNR), the Wisconsin Dept. of Commerce (DOC), the University of Wisconsin-Extension (UWEX), and the Wisconsin Dept. of Agriculture, Trade, and Consumer Protection (DATCP).

Private nonprofit conservation organizations that now implement important conservation related services and programs in Chippewa County include the West Wisconsin Land Trust, the Chippewa County Land Conservancy, the Chippewa County Outdoor Resource Alliance, local chapters of Pheasants Forever, the Turkey Federation, Trout Unlimited, Musky, Inc., and numerous local sportsman's organizations.

In Chippewa County, several standing committees have a shared responsibility to implement the contributing components of a coordinated conservation program. The standing committees of county government with well defined responsibility in land use, agriculture, forestry, and land management include: the Agricultural Extension Committee, the Chippewa County Planning & Zoning Committee, and the Chippewa County Land Conservation & Forest Management Committee.

The lead responsibility for advancing and implementing the program activities, outlined in this plan, will be that of the committee and department with the assigned program and ordinance authority to implement the activity.

6.2 Land Conservation & Forest Management Committee Program Support and Service Levels

Efforts will be made to maintain core conservation program services, historically funded through the current county tax levy.

The county's commitment to extend services beyond that core levy commitment will be based upon its ability to secure funds through outside grant sources, including revenue generated through local service fees or agency and municipal service contracts. Priorities for plan implementation and associated service levels will be set based upon the availability of this combination of revenue sources.

At present, the demand for conservation related program services exceeds the county's capacity to deliver those services. Given current economic concerns, it is anticipated that the level of state funding support, administered through DATCP and DNR grant programs, will remain constant and may likely be reduced under the 2009-2010 and 2011-2012 budget processes.

To address anticipated shortfalls, additional sources of revenue will be sought to maintain core conservation services. These sources will include federal service contracts, direct service fees charged to those receiving conservation services and short-term project-based bridge grants that may be available through public agencies, private corporations, and nonprofit conservation organizations.

In anticipation of unstable revenue sources, a contingency plan will be developed to assist in the adjustment of services and staffing levels in the event that revenue from outside sources cannot be maintained.

6.21 County Conservation Program Priorities

To pursue natural resource management objectives established in Section 5.3, and meet requirements of Wis. Stats. 92.06, the county has established local priorities for conservation program implementation.

To establish these priorities, the Land Conservation Committee conducted a formal program review in April of 2009, in association with the county's strategic planning process. Through this review, program services administered through the Land Conservation Committee were defined, a fiscal and staffing analysis was conducted, and service areas were ranked for both mandated and non-mandated programs.

The results of this program review and prioritization are provided in Table 5. The Chippewa County Land Conservation & Forest Management Committee will routinely review, evaluate, and if necessary, adjust these priorities as part of the county's annual work planning and budget process.

Table 5

COUNTY PRIORITY FOR SERVICING LOCAL PROGRAMS

PRIORITY	PROGRAM	EXTENT OF COUNTY SUPPORT OR SERVICE
High		
	Land Conservation Program & Policy Implementation	Technical and administrative support
	Farmland Preservation & Working Lands Conservation	Technical and conservation planning
	Unique Land Conservation\County Stewardship Program	Conservation planning and local match grants
	Stream Corridor & Wetland Buffer Conservation Programs	Conservation planning and state grant distribution
	Coordinated Municipal Recycling Program (RU & Ord)	Technical assistance and state grant distribution
	Water Conservation & Pollution Control Services (reg)	Technical assistance and conservation planning
Medium		
	County Sponsored Recycling Collection Programs	Administrative assistance and local levy
	Chippewa Falls Urban Area Stormwater Program	Technical and administrative services
	Disturbed Land Reclamation Programs	Technical and administrative services
Low		
	Water Conservation & Pollution Control Services (vol)	Technical and planning services
	Community Outreach & Support for Water Access &	
	Parks Improvement	Technical, planning and I/E services
	City of Chippewa Falls Recycling Program	Technical and administrative services
	highlighted = mandated program	

6.3 Community Outreach and Public Information

Historically, community outreach efforts to support conservation programs in Chippewa County have been developed and administered independently by each agency to meet the program objectives of individual agencies.

The University of Wisconsin-Extension and the Wisconsin Department of Natural Resources Basin Educator Program now provides outreach services to support conservation program efforts. These services are administered on a regional basis and are, therefore, limited.

The Chippewa County Cooperative Extension Office now provides direct educational support with a focus on youth education, dairy livestock management, crops and nutrient management, and energy conservation.

A detailed information and education program has been developed to explain the agricultural nonpoint pollution control standards and the local delivery system that will be used to administer the standards. This plan (on file) defines target audiences, informational messages and delivery mechanisms, and outlines state agency and county responsibilities to implement the program.

To date, the state and local resources have not been available to systematically deliver that outreach program. To address this shortfall, the county will work on a regional basis through local farm organizations and the basin educator network to deliver core educational messages.

A detailed community outreach and education program has been developed to meet the urban storm water permit requirements of municipalities in the Chippewa Falls/Eau Claire Urban Area. Chippewa County will work through the Chippewa Valley Storm Water Forum to deliver this program.

The specific community outreach and educational programming support necessary to advance identified program objectives will be the responsibility of the county department pursuing the objective. The cooperating agencies and departments will be encouraged to work collectively through the county's annual work planning process to identify common educational needs and to seek educational program support, if available, through the Chippewa County Cooperative Extension Office or other educational service providers.

6.4 Overview of Land Conservation Approach to Preserve Unique Parcels and Working Lands

The county will work cooperatively with individual landowners, local municipalities, state and federal agencies, and nonprofit conservation organizations to conserve and permanently protect the land base.

In doing so, the county will provide educational, technical, and administrative services that will assist the landowner to determine and select the site specific development and conservation options that meet the landowner's management objectives.

6.41 Cooperating Municipalities and Agencies

In administering its land conservation programs, the county will work cooperatively with the local municipalities that choose to plan and manage land use within their respective jurisdictions.

Similarly, the county will work cooperatively with the state and federal agencies that have historically administered a broad range of incentive-based programs to encourage conservation on private lands. These programs include nonpoint pollution control and farmland protection programs administered by the U.S. Dept. of Agriculture, the WI Dept. of Agriculture, Trade, and Consumer Protection, and the WI Dept. of Natural Resources, and programs intended to preserve natural ecology on private lands, administered through the U.S. Fish and Wildlife Service, the U.S. Dept. of Agriculture, and the WI Dept. of Natural Resources.

In conjunction with these public efforts, the county will work cooperatively with individual volunteers and private nonprofit conservation organizations to pursue land conservation objectives.

In Chippewa County, local sportsman's organizations have a long history of working directly with landowners to sponsor conservation and habitat improvement projects on private and publically held land.

In recent years, these efforts have been augmented by local land trusts and other nonprofit conservation organizations, including the Chippewa County Land Conservancy, Inc., the West Wisconsin Land Trust, and the Chippewa County Outdoor Resource Alliance, who offer options for permanent resource protection through use of conservation easements or fee title purchase.

6.42 Use of Chippewa County Stewardship Fund

Chippewa County has established the Chippewa County Stewardship Fund and will administer this program to support the voluntary land conservation efforts of individual landowners working in cooperation with the county, nonprofit conservation organizations, and public agencies.

The program provides the policy and administrative framework that enables the county to accept gifts of land or conservation easements from the public, and to receive and distribute matching grants to municipalities and nonprofit conservation organizations for permanent resource protection. The policy for administration of this program is titled: Chippewa County Stewardship Fund Policy and Procedures for Program Administration, (LCD 12/7/99), and is provided as Appendix 3.

Chippewa County will use this framework to support ongoing efforts to permanently preserve select working lands and areas of high environmental and public value.

6.5 Overview of Approach to Control Agricultural Nonpoint Source Pollution Using NR 151 Agricultural Nonpoint Performance Standards

In 2004, given the limits of state funding, the county changed its water resource management approach, from an effort to improve water quality in select watersheds, to an effort to maintain water quality throughout the county, by controlling runoff from urban development and from new and expanding agricultural operations. In circumstances where the state initiates a targeted watershed planning effort, the county will assist and cooperate in that effort within the limits of accelerated state funding.

As a basis for its efforts to control nonpoint pollution from agricultural sources, the county will implement a voluntary farm evaluation and certification program. Participation in the farm evaluation process will be a prerequisite and eligibility requirement for the allocation of technical services or state cost-share funds administered by the county.

The county will seek to work cooperatively with the USDA Farm Service Agency and Natural Resource Conservation Service to develop and optimize voluntary opportunities which will enable producers to use USDA conservation programs to meet state performance standards.

The process that will be used to administer the standards is that outlined in state planning guidance titled: Implementation Strategy for NR151, Agricultural Performance Standards and Prohibitions, (April 2002, Appendix E, Land and Water Resource Management Guidelines).

The specific roles and responsibilities of Chippewa County and state agencies in implementing these standards have been outlined in a Memorandum of Understanding (MOU) between the county and the Wisconsin Department of Natural Resources. This agreement will be used to assure compliance with the agricultural nonpoint performance standards. A copy of the MOU is provided as Appendix 4.

Under this program approach, onsite evaluations will be systematically scheduled and conducted to introduce and explain the agricultural nonpoint performance standards.

In conducting evaluations, the county will pursue a comprehensive approach toward parcel evaluation. In conducting the evaluation, the county will determine which of the state standards apply to parcels being evaluated and determine the extent of compliance for each of the applicable standards.

Upon completion of the evaluation, the county will review the results with the landowner and provide the opportunity for review, comment, and appeal. In circumstances where full compliance has not yet been achieved, the county will work with the landowner to secure technical assistance and cost-share funding available to pursue compliance.

The voluntary component will be augmented by a regulatory option. Farms subject to direct regulation will be limited to:

1. Operations which require permits under the Chippewa County Animal Waste Storage Ordinance to install or alter manure storage facilities.
2. Livestock operations which are new or expanding, and which require zoning or conditional use permits for livestock expansion through the Chippewa County Comprehensive Zoning Ordinance.
3. Operations which are subject to state jurisdiction under Wisconsin Stats. 281 and Wisconsin Administrative Rules NR 243 or NR 151 that are found to be out of compliance with the NR 151 agricultural standards, as determined by a site evaluation conducted as part of routine permit monitoring or in response to a public complaint.

In responding to public complaints, priority will be assigned to livestock facilities and cropping operations located in water quality management areas and shoreland corridors.

Copies of current ordinances are on file as public record with the Chippewa County Clerk.

6.51 Fiscal Policy

To encourage participation in the voluntary farm evaluation and certification program, and to optimize the use of available cost-share funds, the county will attempt to dovetail state funds with federal funds to increase the public cost-share rate for operations that seek to meet the state's agricultural performance standards and prohibitions.

To accomplish this, the county will request that USDA agencies allocate a portion of federal conservation cost-share funds for landowners that participate in the county's voluntary farm evaluation and certification program. The county will attempt to negotiate with the USDA for reimbursement of technical services provided.

In circumstances where cost-share funding is required to support non-voluntary enforcement action, the county will attempt to secure state grant funding available through state programs.

6.52 Priority for Servicing Farms

Public requests for administrative, technical, and regulatory services, administered through the Land Conservation & Forest Management Committee, currently exceed the capability of the county to provide these services.

It is anticipated that the cost of fully servicing state conservation programs, administered under ATCP 50, NR 151, and NR 216, will exceed the state staffing grant allocations offered under ATCP 50.30(3).

In establishing its service priorities, the county will require that landowners that request services or funds allocated by the Land Conservation & Forest Management Committee to provide information about past and ongoing field and crop management practices, participate in a voluntary farm evaluation process (Section 4.54), and commit to meet the Chippewa County Soil and Water Conservation Standards. These standards are provided as Appendix 5.

In allocating its resources, the county will recognize legal requirements imposed by ATCP 50.16, and attempt to meet those requirements within the limits of state staffing grant funding. In administering the agricultural performance standards and prohibitions, the county will allocate its staff and financial resources to farm operations according to the following priorities:

Priority 1

- New and expanding livestock operations, subject to regulation under the Wisconsin WPDES permit system or the Chippewa County Manure Storage Ordinance.
- Existing agricultural operations subject to public complaint or state enforcement action under NR 243 or NR 151.

Priority 2

- New and expanding livestock operations, and existing agricultural operations that participate in the Chippewa County Voluntary Farm Evaluation and Certification Program.
- New and expanding cropping operation using agricultural irrigation.

Priority 3

- Existing operations that participate in the Wisconsin Conservation Reserve Enhancement Program (CREP).

6.53 Priority for Public Cost-Share Allocations

The agricultural performance standards and prohibitions, established in NR 151, have been adopted to control nonpoint pollution. Public funds available from state and federal sources are expected to be limited.

To most cost effectively pursue water resource management objectives, the county will pursue a comprehensive full farm, all standards approach toward farm evaluations. In administering this approach, the county will assign cost-share funding priority to those farms agreeing to pursue full compliance.

In circumstances where public cost-share funds are limited, the agricultural standards and prohibitions

have been prioritized so that they may be implemented through a phased approach. These priorities have been established based upon the source of nonpoint pollution and the environmental cost effectiveness of implementing each performance standard.

The priority for implementing the standards, when conducted through other than a fully funded whole farm, all standards approach, is outlined in Table 6. It is the intent of the county that the local system of priorities be considered by state and federal agencies as local strategies are developed and decisions are made regarding public cost-share allocations.

Table 6

**Local Priorities for Implementing Agricultural Nonpoint Standards
In Chippewa County
Based Upon Need, Type, and Location of Practice**

RELATIVE PRIORITY	AGRICULTURAL STANDARD OR PROHIBITION
Highest Level	
	<input type="checkbox"/> Installation of stream and wetland buffers meeting FSA CREP buffer standards.
High Level	
	<input type="checkbox"/> NR151.08 - Manure Management Prohibitions -No unlimited livestock access to streams. -No overflow of manure storage facilities. -No unconfined manure pile in Water Quality Management Areas (WQMA) -No direct runoff from feedlot or stored manure. <input type="checkbox"/> NR151.05 - Manure Storage Facilities -New facilities to meet 313 siting and design standards. -New facilities operators to meet 590 nutrient management standards. -Closure of abandoned structures. <input type="checkbox"/> NR151.06 - Clean Water Diversions in Water Quality Management Areas -Runoff to be diverted from feedlots.
Medium Level	
	<input type="checkbox"/> NR151.05 - Manure Storage Facilities -Repair or replacement of failing and leaking facilities. <input type="checkbox"/> NR151.02 - Sheet, Rill and Wind Erosion -Control within water quality management areas. <input type="checkbox"/> NR151.07 - Nutrient Management -Operators using agricultural irrigation.
Low Level	
	<input type="checkbox"/> NR151.02 - Sheet, Rill and Wind Erosion -Control outside of water quality management areas. <input type="checkbox"/> NR151.07 - Nutrient Management -Operators not associated with storage, or WPDES permits, or irrigation

In circumstances where watershed studies have been completed, this priority schedule will be

considered and may be amended for the purpose of developing a watershed-based implementation strategy that would meet the management needs of the water resource and of the water pollution control objectives that have been established for the watershed.

6.6 Overview of Approach to Control Urban Nonpoint Source Pollution Using NR 216 and NR 151 Urban Runoff Performance Standards

To control nonpoint pollution from nonagricultural sources, the county will work cooperatively with local municipalities and state agencies to implement performance standards for storm water runoff, as established in NR 151.10.

The extent of the county's commitment and service level will be determined by its legal obligation to meet EPA urban storm water permit requirements, as established in WPDES Permit #S050121-1, as it applies to the City of Chippewa Falls urban storm water area and its ongoing capacity to allocate staff support and technical services outside of the Chippewa Falls urban area.

6.61 Storm Water Services Within the Chippewa Falls Urban Area

As a basis for its efforts, the county will work with affected municipalities in the Chippewa Falls urban area to develop and implement a storm water management program under the EPA MS4/DNR WPDES permitting process. To accomplish this, the county has worked with the affected municipalities to develop the Chippewa Falls Urban Area Storm Water Management Plan, (2007).

6.62 Storm Water Services Outside of the Chippewa Falls Urban Area.

To augment this core effort, the county will work cooperatively with DNR to provide storm water plan review and post-construction plan verification of all land divisions resulting in disturbances of one (1) or more acres. These storm water management services will be provided within the limits of available funding and staff resources in accordance with a storm water services MOU between Chippewa County and DNR, dated 3/6/02. This MOU is provided as Appendix 6.

To further augment this effort, the Chippewa County Highway Department and DNR will work cooperatively with the towns and municipalities to meet standards for roads and transportation related facilities, as established in NR 151.20.

Explanatory Note: Under subchapter III of NR 216, Wisconsin Adm. Code, a notice of intent shall be filed with the DNR by any landowner who disturbs one or more acres of land. This disturbance can create a point source discharge of storm water from the construction site to waters of the state and is, therefore, regulated by DNR Agriculture is exempt from this requirement for activities such as planting, growing, cultivating and harvesting crops for human or livestock consumption, and pasturing or yarding of livestock as well as sod farms and tree nurseries. Agriculture is not exempt from the requirement to submit a notice of intent for one of more acres storage facilities, or barnyard runoff control systems. (See s. NR 216.442(2), Wisconsin Adm. Code). Furthermore, construction of an agricultural building or facility must follow an erosion and sediment control plan consistent with s. NR 216.46, Wisconsin Adm. Code, and meet the performance standards of s. NR 151.11, Wisconsin Adm. Code. An agricultural building or facility is not required to meet the post-construction performance standards of NR 151.12, Wisconsin Admin. Code.

6.7 Application of Nonpoint Performance Standards and Best Management Practices to Pursue Land and Water Resource Objectives

Wisconsin Stats., Chapter 92.07 authorizes the Land Conservation & Forest Management Committee to develop and adopt standards and specifications for management practices to control erosion, sedimentation, and nonpoint source water pollution.

Wisconsin Stats., Chapter 281 requires the Wisconsin Department of Natural Resources (DNR) to develop performance standards to control nonpoint source water pollution from agricultural and nonagricultural sources. These performance standards have now been established in Administrative Rule NR 151. Wisconsin Stats. 92.10(6)(4) requires that this plan identify the applicable standards that will be used to control nonpoint source pollution.

6.71 State and County Standards

In Chippewa County, the performance standards to be applied to control agricultural and non-agricultural sources of nonpoint pollution will be those established in WI Administrative Rules NR151.

Through the 2004 land and water planning process, the existing county soil and water standards were revised to incorporate the NR151 standards, reference RUSLE II and establish a requirement to prevent ephemeral and gully erosion in areas of concentrated flow, and remove the size limit for wetland management to be consistent with state and federal policy.

The Chippewa County Soil and Water Conservation Standards that were adopted and are now being administered are provided in Appendix 5.

With the adoption of the 2004 Chippewa County Land and Water Resource Management Plan, the county clarified its intent to:

1. Retain the previously adopted county non-metallic mining siting reclamation standards.
2. Retain the previously adopted Chippewa County storm water standards for use in select applications where storm water quantity and flood control are identified as management issues of local concern.
3. Retain the previously adopted minimum management standards, for the Duncan Creek Clean Water Project, (May, 1994).

Explanatory Note 1: It is the intent of the county to apply state storm water quality standards, established in NR151 and NR216, as a requirement in all circumstances where these standards apply.

In conducting storm water plan reviews, the county will recognize and administer other, more restrictive, water quality or water quantity-based standards, but only in circumstances where these local standards have been adopted or are administered by a municipality through local ordinance.

The existing county storm water standards will be retained as a voluntary reference for use in local zoning and subdivision applications, at the discretion of local municipalities.

Explanatory Note 2: It is the intent of the county to retain the 2004 Soil and Water Conservation Standards and apply them to existing Farmland Preservation agreements subject to those standards through the term of each agreement.

Explanatory Note 3: It is the intent of the county to retain the Duncan Creek Clean Water Project performance standards and apply them to existing watershed contracts until the operation and maintenance period of each contract expires.

In circumstances where it is deemed necessary to develop or apply more restrictive performance standards to control nonpoint pollution, the county will follow administrative processes for State review and approval, as established in WI Stats., Chapter 92 and 281.

In the event that the legislature changes the state standards or alters the scope of their application to state administrative programs, the county will apply the new standards, as established by law.

6.72 Best Management Practices

The best management practices, which will be used to control nonpoint source pollution from agriculture, forestry, and urban sources, will be those established in the following guides:

- Wisconsin Adaptation of the USDA, NRCS Technical Guide.
- The Wisconsin Handbook of Forestry Best Management Practices.
- Wisconsin Construction Site Erosion Handbook.
- Wisconsin Standards Oversight Council (S.O.C.) Standards.

In circumstances where public cost-share is provided, producers are obligated, under State and Federal administrative rules, to install conservation practices. The conservation practices are established in ATCP 50.61 - 50.98, in accordance with prescribed technical standards. Examples of these practices include structural measures such as surface water diversions, barnyards, sediment basins, manure storage structures, and non-structural practices such as field layout, crop rotations, crop residue management, and stream buffers.

As an alternative to cost-shared practices, Chippewa County will actively encourage agricultural producers to meet performance standards through the use of innovative management techniques, which may not be contained in the State's technical standards or best management practice handbooks. These innovative techniques may include structural or non-structural measures which enable the landowner to demonstrate that a performance standard has been achieved and can be maintained on a continuous and ongoing basis.

6.73 Use of Computer Models for Planning, Permitting, and Compliance Monitoring

In cases where an administrative rule or local ordinance requires the use of a specified computer model to simulate an environmental process or to administer a prescribed standard, the model will be evaluated and will be calibrated for local conditions.

The model will be evaluated by reviewing published documentation to verify its development history, validity, limitations, and potential applications. The model will be calibrated using data sets collected through environmental monitoring, or through direct comparison with a previously accepted model, using a common data set.

In order to accurately apply environmental models, onsite verification will be conducted to confirm or measure the physical features and conditions of the landscape being modeled. This onsite verification will be conducted in all cases where models are used by public agencies, agency service providers, or consultants to estimate rates of soil erosion, sediment, phosphorous, or pesticide runoff, storm water infiltration, or groundwater leaching.

In applying models to local conditions, input variables will be selected to reflect or account for the most limiting environmental feature within the area being modeled.

If input variables cannot be physically measured, assumed values may be used. When used, assumed values will be explicitly identified in the documentation of model inputs along with the basis for the assumption.

For purposes of farm evaluation, farm planning, and State grant administration, summary tables of model outputs, developed for common site conditions and management systems, may be used by the county in lieu of physically running the prescribed computer model.

Summary tables of model outputs will be accepted for purposes of compliance screening and site specific planning conducted by the county only in circumstances where:

1. The responsible technical and regulatory authorities within the county have reviewed and pre-authorized the use of the summary model application, and
2. Input variables have been measured, documented, and field verified, and
3. Tabulated model outputs indicate that proposed management system is within 70% of, and clearly meets, the prescribed management standards.

Summary tables of model output will not be applied or be considered acceptable in circumstances involving regulatory permitting or compliance enforcement. When applying models or considering model output for permit compliance or enforcement, full documentation of model inputs and outputs must be provided. Documentation will be sufficient to allow the administrative authority to verify site conditions and replicate the model outputs.

Explanatory Note: With reference to the RUSLE II soil erosion model, Chippewa County has adopted the model and has defined conditions of its application through the Chippewa County Soil and Water Conservation Standards (Appendix 5).

The county will follow policy directives for RUSLE II transition and delivery as outlined in DATCP and agency correspondence to counties, dated May 20, 2004, and April 15, 2004.

7.0 PERFORMANCE MEASURES, TRACKING AND PUBLIC ACCOUNTABILITY

7.1 Resource Based Monitoring

Progress toward achieving the natural resource objectives established in Sec. 5.3 will be measured through direct environmental monitoring. These efforts will be augmented through the selected use of environmental models.

7.11 Land Based Monitoring

A series of land-based resource inventories will be systematically maintained by the county to monitor ongoing land use and existing land cover. These inventories will be reviewed annually as part of the interagency planning process to track land use trends. The inventories that will be used in this monitoring, include current satellite imagery and GIS map compilations.

Chippewa County has designed and implemented a land-based tracking system to systematically record and monitor the location of farm operations and tax parcels where farm evaluations have been conducted and where state (NR 151) nonpoint pollution control standards have been met. This system is managed as a data base and associated map layer on the Chippewa County Geographic Information System (GIS).

The farm operations tracked through this system provide annual cropping and nutrient management information. This information is, in turn, applied to model current erosion rates and to monitor soil phosphorus concentrations and potential nutrient and sediment loads.

7.12 Water Quality Monitoring

Surface water quality monitoring will be conducted by DNR following a monitoring plan that will be applied to meet state and local priorities. The monitoring approach will address a variety of natural resource information needs, as required to support ongoing management decisions.

Statewide baseline monitoring using standardized sampling protocols will be used to identify broad trends affecting aquatic resources.

Regional lakes monitoring will focus on larger public access lakes (.100 acres); and some smaller lakes on a reduced scale. In Chippewa County, Axehandle, Round, Long and Hallie Lakes are sampled for water quality parameters.

In 2009, the Yellow River at CTH XX in Chippewa County will be monitored monthly for water chemistry following the statewide watershed rotation protocol. The river will also be surveyed at CTH XX for habitat, fish and macroinvertebrates. Sites on Elk Creek (35th St.) and Big Elk Creek (CTH M) were selected in 2009 as part of the statewide stream reference site monitoring program.

Data from these sites along with others selected statewide will be used to develop expectations for different aquatic stream communities. Data collected from these sites include: fishery and habitat surveys, continuous temperature monitoring, one time growing season water chemistry sampling and macroinvertebrate sampling. The stream reference site monitoring program will likely conclude in 2009 and new monitoring strategies are currently being developed for future years.

Where environmental problems are identified locally, more intensive sampling can occur under targeted evaluation monitoring to determine the cause and extent of the problem. This site-specific monitoring of targeted areas can be used to develop management plans for corrective action.

7.2 Administrative Tracking

Progress toward achieving the program goals and objectives established in Sec. 5.4 will be measured through administrative tracking.

Under this approach, the plan will be reviewed on an annual basis as a part of the county's work planning and budgeting process. Scheduled activities will be recognized as benchmarks and will be applied to monitor progress toward long-term program goals.

To measure performance and account for accomplishments, an annual activities report will be prepared to document the status and outcome of the activities planned under Sec. 8.0.

8.0 YEAR 2015-2019 ACTIVITY SCHEDULE

This plan will be systematically implemented using an annual work plan to pursue the program objectives and actions established in Sec. 5.4.

Table 7 is a five (5) year schedule of activities, as planned to advance program objectives during the years 2015-2019. Those activities identified as a priority for consideration in the development of annual work plans and budgets during that period are highlighted. Table 8 lists these priority activities and the performance-based benchmarks that will be applied to measure progress toward plan and program implementation.

Table 9 is a program budget for the same time period. The budget shows the amount of projected local property and sales tax that has historically been allocated by the county by major program area, and the amount of state grant funding that is now anticipated based upon historic state budget allocations to implement the planned program activities.

This activity schedule and budget will be systematically evaluated and updated using an annual interagency working planning process, conducted in conjunction with the county's annual budget process.

SCHEDULE OF ACTIVITIES TO IMPLEMENT LWRM PLAN

ENERGY CONSERVATION & WASTE REDUCTION

Activity	2015				2016				2017				2018				2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
<p>Goal 1 - Develop, support and advance county initiatives that conserve energy & reduce waste, and serve as a catalyst for broader community efforts to conserve energy, limit carbon emissions, and increase renewable energy production.</p>																				
<p>Objective 1 - Develop and implement a county energy conservation program for county operations.</p> <ul style="list-style-type: none"> • Consider and adopt county energy conservation plan. • Apply the plan to systematically record and monitor energy use and to identify, select and implement energy conservation projects. • Establish energy conservation education and outreach program to inform the public and other municipalities of energy conservation savings and opportunities. 	⊗				⊗				⊗				⊗							
<p>Objective 2 - Encourage alternative energy production that uses wind, waste stream bi-products, or biomass generated from agricultural or forestry operations.</p> <ul style="list-style-type: none"> • Design and implement pilot project to determine the feasibility of using local bio-mass as a fuel source for local heat, fuel, or electrical energy production. • *Design and implement a pilot project to evaluate the production and use of perennial grasses and/or woody biomass as sustainable sources of biomass for the production of cellulosic ethanol and other derived products. <ul style="list-style-type: none"> -Assess interest by local energy companies, farm organizations, and Agricultural Enterprise Areas (AEA's) to evaluate and secure feedstocks from local forest and agricultural sources. • Design and implement pilot project to determine the feasibility of producing renewable electrical energy from distributed sources, including manure digesters and small-scale farmstead-based wind generators. <ul style="list-style-type: none"> -Assess interest by local electrical utilities and farm organizations to explore and evaluate technology. -Prepare a project proposal that includes funding and site selection. 			X					X					X							
<p>Objective 3 - Develop and administer recycling and solid waste management programs that reduce, reuse, and ensure the proper disposal of waste materials.</p> <ul style="list-style-type: none"> • Maintain role as Responsible Unit Coordinator for municipalities. • Conduct a benchmark study to evaluate the effectiveness of current household and institutional recycling programs; and to evaluate the cost efficiency of existing Materials Recovery Facilities (MRF's) in Chippewa County. <ul style="list-style-type: none"> -Research and compile information on existing facilities. -Develop RFP to prepare a cost/benefit analysis on the feasibility of maintaining and expanding municipal-owned MRF's. • Design and implement a project to collect and market office paper from all public and county-owned facilities. • Systematically enforce the Chippewa County Recycling Ordinance to assure compliance at all public facilities including public parks, campgrounds, ball fields and facilities. 																				

NONPOINT SOURCE WATER POLLUTION CONTROL

Goal 4. Develop and administer nonpoint sources of water pollution control programs to pursue State and local water quality objectives.	2015				2016				2017				2018				2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
<p>Objective 1. Administer the NR151 agricultural nonpoint source pollution control performance standards on a county-wide basis, using authority of WI Stats. 59, 92, 281 & Administrative Rules NR115, NR243, NR151 AND ATCP 50.</p> <ul style="list-style-type: none"> Assess interest on behalf of the major farm organizations to implement an educational outreach, project to inform ag producers, rural landowners and the general public about the performance standards and the county's program to administer them. Administer a voluntary farm evaluation and certification program following the practices and management approach established in this plan. Implement a well-defined county regulatory framework to enforce the NR151 standards. <ul style="list-style-type: none"> -Evaluate and update the DNR/County MOU that clarifies the local/state regulatory framework, and the role of the county and state under NR243 permitting and enforcement authorities. *Evaluate and update Chippewa Co. Animal Waste Storage Ordinance to reference current State Administrative Rule & technical standards, clarify reporting requirements, and better define enforcement authority & procedures. 																				
<ul style="list-style-type: none"> Actively participate in the Wisconsin WPDES Permitting Processes administered by DNR. 																				
<p>Objective 2. Administer the nonagricultural nonpoint pollution control performance standards on a county-wide basis using the authority of WI Stats. 92, 281 and Administrative Rules NR103, NR115 and NR 216.</p> <ul style="list-style-type: none"> Review and revise the existing working agreement between Chippewa County and DNR as it applies to stormwater plan review in unincorporated areas, subject to NR216 permit requirements. 																				
<p>Objective 3. Administer a joint stormwater management program that meets EPA and NR216 stormwater permit requirements, with affected municipalities in the Chippewa Falls Urban Area to meet requirements of WPDES Permit #WI-WO50121-1.</p> <ul style="list-style-type: none"> Administer components of the joint program following process and commitments defined in the stormwater plan and Chapter 66.03 agreement between Chippewa County, the Village of Lake Hallie, and the Towns of Eagle Point and Lafayette. 																				

Table 8. BENCHMARK MEASURES FOR HIGH PRIORITY ACTIVITIES TO TRACK PROGRESS TOWARD LWRM PLAN

ENERGY CONSERVATION & WASTE REDUCTION	Benchmark Products
<p>Goal 1 - Develop, support and advance county initiatives that conserve energy & reduce waste, and serve as a catalyst for broader community efforts to conserve energy, limit carbon emissions, and increase renewable energy production.</p> <p>Objective 1 - Develop and implement a county energy conservation program for county operations.</p> <ul style="list-style-type: none"> • Consider and adopt county energy conservation plan. • Apply the plan to systematically record and monitor energy use and to identify, select and implement energy conservation projects. • Establish energy conservation education and outreach program to inform the public and other municipalities of energy conservation savings and opportunities. 	
<p>Objective 2 - Encourage alternative energy production that uses wind, waste stream bi-products, or biomass generated from agricultural or forestry operations.</p> <ul style="list-style-type: none"> • Design and implement pilot project to determine the feasibility of using local bio-mass as a fuel source for local heat, fuel, or electrical energy production. • *Design and implement a pilot project to evaluate the production and use of perennial grasses and/or woody biomass as sustainable sources of biomass for the production of cellulosic ethanol and other derived products. <ul style="list-style-type: none"> -Assess interest by local energy companies, farm organizations, and Agricultural Enterprise Areas (AEA's) to evaluate and secure feedstocks from local forest and agricultural sources. • Design and implement pilot project to determine the feasibility of producing renewable electrical energy from distributed sources, including manure digesters and small-scale farmstead-based wind generators. <ul style="list-style-type: none"> -Assess interest by local electrical utilities and farm organizations to explore and evaluate technology. -Prepare a project proposal that includes funding and site selection. 	<ul style="list-style-type: none"> • Written pilot project proposal. • Written pilot project proposal.
<p>Objective 3 - Develop and administer recycling and solid waste management programs that reduce, reuse, and ensure the proper disposal of waste materials.</p> <ul style="list-style-type: none"> • Maintain role as Responsible Unit Coordinator for municipalities. • Conduct a benchmark study to evaluate the effectiveness of current household and institutional recycling programs; and to evaluate the cost efficiency of existing Materials Recovery Facilities (MRF's) in Chippewa County. <ul style="list-style-type: none"> -Research and compile information on existing facilities. -Develop RFP to prepare a cost/benefit analysis on the feasibility of maintaining and expanding municipal-owned MRF's. • Design and implement a project to collect and market office paper from all public and county-owned facilities. • Systematically enforce the Chippewa County Recycling Ordinance to assure compliance at all public facilities including public parks, campgrounds, ball fields and facilities. 	<ul style="list-style-type: none"> • Written request for proposals (RFP) with summary of results and draft contract for services.

LAND CONSERVATION AND SUSTAINABILITY

	Benchmark Products
<p>Goal 2. Develop and administer conservation programs that preserve the land, support sustainable production, provide biodiversity, and protect the natural ecology.</p> <p><u>Objective 1.</u> Support the efforts of individual landowners, private nonprofit conservation organizations, and local municipalities to preserve productive "working lands".</p> <ul style="list-style-type: none"> • Actively administer and support landowner participation in the WI Farmland Preservation Prog. <ul style="list-style-type: none"> -Conduct NR151 evaluations and provide technical services to all new and existing program participants. -Conduct annual reporting and certification process to verify landowner compliance. • Develop and implement a "working lands" pilot project to evaluate and advance County options for farmland protection and economic development. <ul style="list-style-type: none"> -Prepare a project proposal through the Wis. Working Lands Initiative to define the scope, purpose, and means to evaluate a pilot project. -Prepare and enter 66.03 municipal agreements and M.O.U.'s with participating municipalities and public agencies. -Prepare and submit project budget and grant proposals. • Revise and update the Chippewa County Farmland Plan in association with State efforts to update WI Stats. 91 and the State Farmland Preservation Program. <ul style="list-style-type: none"> -Identify the location, size and boundaries of working land conservation areas through use of Town or county-based planning processes, and landowner registries. 	<ul style="list-style-type: none"> • 10 new NR151 operational evaluations and completed NR151 compliance status reports per year • 125-150 NR151 certifications including 590 annual updates per year • Written project proposal and grant application to advance economic development in an existing AEA. • Revised Chippewa County Farmland Preservation Plan.
<p><u>Objective 2.</u> Support the efforts of individual landowners, private nonprofit conservation organizations, and municipalities to preserve unique lands with high public value, or those that contain threatened or endangered species.</p> <ul style="list-style-type: none"> • Actively administer and maintain the Chippewa County Stewardship Program to support the acquisition of land and/or conservation easements by municipalities or nonprofit organizations for conservation purposes. • *Actively administer and maintain the Chippewa County Forest Land Acquisition Program to support the direct purchase of land located in and adjacent the County Forestry blocking boundary for forest production, resource conservation, and public use. • Develop and enter working agreements between the county and nonprofit conservation org. to clarify appropriate roles and responsibilities with regard to land and easement acquisition and ongoing custodial management. • With private, nonprofit conservation organizations, define the location of high priority conservation areas having significant public value or unique ecological significance. • In cooperation with nonprofit conservation organizations, maintain a wild lakes registry for undeveloped lakes as a companion to the Wisconsin Scientific and Natural Areas Program. 	<ul style="list-style-type: none"> • Completed project application for committee consideration; assume (2) applications per year • Completed Resolution authorizing land acquisition for committee consideration; assume (1) acquisition per year

LAND CONSERVATION AND SUSTAINABILITY

Goal 2. Develop and administer conservation programs that preserve the land, support sustainable production, provide biodiversity, and protect the natural ecology, cont..

Benchmark Products

Objective 3. Encourage biodiversity and sustainable agriculture, forestry, and biomass production on private lands by providing technical assistance and conservation program services to landowners.

- Support the efforts of major farm and forestry organizations to compile, market, and monitor carbon credits as part of sustainable operations.
- Administer educational services, technical services, and financial incentives to agricultural producers through State/Federal agricultural conservation and nonpoint pollution control programs.
 - With Chippewa Co. Extension, design and implement an educational outreach project, directed to agricultural producers who irrigate.
 - With Chippewa Co. Extension and NRCS, design and implement an educational outreach project, including test plot trials, directed to evaluate and accelerate the use of cover crops.
- Administer educational services, technical services, & financial incentives to woodland producers through local producer networks, woodland management organizations, and State/Federal forestry programs.
- Provide technical services to the owners and operators of non-metallic mines, abandoned mines, and brown fields to reclaim disturbed sites and achieve end land uses that are productive and sustainable.
 - *Implement and evaluate a five (5) year pilot project with UWRF & cooperating mining co.'s to demonstrate & evaluate non-metallic mine reclamation using reclamation test plot trials.
- Administer the Wisconsin Conservation Reserve Enhancement Program (CREP) to establish stream and wetland buffers.

- Written education outreach proposal.
- Written education outreach proposal.

- Annual project update.
- 5 new CREP contracts with emphasis on attainment of conservation easements per year.
- 125-150 CREP & other land conservation easements monitored per year with 50% checked annually in the field.
- Map showing location of signed contracts and locations of CREP buffers and wetland restorations installed & monitored.

Objective 4. Encourage biodiversity & sustainable forest and biomass production on public lands by supporting the efforts of the custodial agencies responsible for developing and administering property management plans.

- On county forest lands managed by Chippewa County, identify areas of unique ecological significance and apply the County Forest Plan to manage and monitor these areas.
- On public lands managed by State agencies, actively participate in the public participation process used to develop and revise management plans.

Objective 5. Protect and buffer the existing public land base by pursuing conservation easements, or fee title purchase options on select parcels located within and immediately adjacent the designated blocking boundaries of public forests, parks, or conservation management areas.

- Develop and implement a project to identify select parcels of high environmental or ecologic value located within or adjacent public land management areas.
 - Contact landowners to explain options for permanent resource protection through use of conservation easements or fee title sale.

- Written project proposal with methods and list of landowners contacted.

LAND CONSERVATION AND SUSTAINABILITY

Goal 2. Develop and administer conservation programs that preserve the land, support sustainable production, provide biodiversity, and protect the natural ecology, cont.

Benchmark Products

Objective 6. Support efforts by public agencies and nonprofit conservation organizations to inventory and control invasive species (upland and aquatic), and pursue land & stream management objectives.

- Participate in information exchange and networking opportunities to raise public awareness and monitor invasive species populations.
- *Design and implement a project to inventory, monitor, and control invasive species (aquatic & terrestrial) on parcels (public & private) located within and adjacent the Chippewa Co. Forest blocking boundary, and on publically owned parcels managed as part of the Co. Forest system or County Parks system.
- *Establish a network of representative lakes to monitor lake water quality, vegetation, and biologic condition.

*Assess interest by DNR & Lake Associations to develop project framework & agreements for data collection & monitoring.

•Written project proposal.

•Questionnaire & summary of assessment sent to DNR & lake associations.

Objective 7. *Develop communication networks & institutional capacity to better facilitate resource management & conservation decision making by municipalities and community orgs.

- *Design & implement a standing educational program to provide ongoing conservation awareness and leadership training to farm, lake, and non-profit conservation organizations.

-With stakeholder representation, assess needs and develop pilot project design.

•Written pilot project design & service contract.

WATER CONSERVATION

Goal 3. Develop, support, and implement water conservation programs to maintain current aquifer volumes and to protect the county's drinking water supply.

Benchmark Products

Objective 1. Develop and implement conservation programs that protect wetlands, restore natural hydrology and drainage, and improve store water storage capacity, soil infiltration and groundwater recharge.

- *Implement and evaluate a five (5) year research project with WGNHS, USGS, and cooperating mining companies and irrigators to evaluate the impacts of expanded non-metallic mining and irrigation in western Chippewa County.
- Administer and support programs to protect, restore, and enhance wetlands.
- Develop a project proposal to restore natural hydrology and create depressions for groundwater recharge.
 - Identify areas or compile existing locations of groundwater recharge.
 - Develop project outline and budget to restore or enhance natural hydrology; include permanent protection options.
- Develop a project proposal to explore the costs and benefits of establishing a county-based wetland mitigation bank.

•Written progress annual report.

Objective 2. Establish a groundwater, lake, and stream base flow monitoring program to record & monitor groundwater & associated surface water elevations at representative locations throughout the county to support local needs.

- *Design and implement a project to establish permanent benchmark monitoring sites that augments existing state and federal monitoring networks using local measurements and/or remote sensing.

•Written project design and annual progress report including elevation monitoring data.

Objective 3. Actively encourage and support the development of water conservation programs to maintain public and private water supplies.

- Support the efforts of municipalities that implement wellhead protection planning projects and programs.
- Develop a project design & grant proposal to develop a model municipal water conservation plan that could be readily applied to other municipalities.
 - Solicit interest from cities and villages that provide municipal water.
 - Prepare project proposal that includes timeline and budget.
 - Work with select municipality on implementation of pilot project.

WATER CONSERVATION

Goal 3. Develop, support, and implement water conservation programs to maintain current aquifer volumes and to protect the county's drinking water supply, cont..

Benchmark Products

Objective 4. Improve the county's capacity to monitor changes in groundwater quantity and groundwater chemistry using existing well permitting and drinking water testing programs.

- Maintain the existing Chippewa County Groundwater Inventory and Monitoring program.

- *Document and codify into County Ordinance the existing administrative procedures and processes used to maintain the Chippewa Co. Groundwater Inventory & Well Permitting Program.

- Develop & implement a project design for a county-wide groundwater sampling project using a subset of 1985 & 2007 inventory sample points, to assess current and long-range trends as they affect the rural water supply.

- For public water supply wells routinely sampled by the county, create a GIS data base that matches well locations to existing water quality records; GPS the location of wells currently sampled; maintain the record as part of the Chippewa Co. groundwater inventory.

- Revised County ordinance.

- Written project design, budget and service contract.

- Map showing well locations linked to existing water quality records.

NONPOINT SOURCE WATER POLLUTION CONTROL

	Benchmark Products
<p>Goal 4. Develop and administer nonpoint sources of water pollution control programs to pursue State and local water quality objectives.</p> <p>Objective 1. Administer the NR151 agricultural nonpoint source pollution control performance standards on a county-wide basis, using authority of WI Stats. 59, 92, 281 & Administrative Rules NR115, NR243, NR151 AND ATCP 50.</p> <ul style="list-style-type: none"> • Assess interest on behalf of the major farm organizations to implement an educational outreach, project to inform ag producers, rural landowners and the general public about the performance standards and the county's program to administer them. • Administer a voluntary farm evaluation and certification program following the practices and management approach established in this plan. • Implement a well-defined county regulatory framework to enforce the NR151 standards. <ul style="list-style-type: none"> - Evaluate and update the DNR/County MOU that clarifies the local/state regulatory framework, and the role of the county and state under NR243 permitting and enforcement authorities. - *Evaluate and update Chippewa Co. Animal Waste Storage Ordinance to reference current State Administrative Rule & technical standards, clarify reporting requirements, and better define enforcement authority & procedures. <p>• Actively participate in the Wisconsin WPDES Permitting Processes administered by DNR.</p>	<ul style="list-style-type: none"> • Letter of interest to farm organizations. • Map showing farms that have had NR151 evaluation. • 10 new NR243-NR151 investigation reports in response to public complaints • Updated ordinance.
<p>Objective 2. Administer the nonagricultural nonpoint pollution control performance standards on a county-wide basis using the authority of WI Stats. 92, 281 and Administrative Rules NR103, NR115 and NR 216.</p> <ul style="list-style-type: none"> • Review and revise the existing working agreement between Chippewa County and DNR as it applies to stormwater plan review in unincorporated areas, subject to NR216 permit requirements. 	<ul style="list-style-type: none"> • Revised MOU.
<p>Objective 3. Administer a joint stormwater management program that meets EPA and NR216 stormwater permit requirements, with affected municipalities in the Chippewa Falls Urban Area to meet requirements of WPDES Permit #WI-WO50121-1.</p> <ul style="list-style-type: none"> • Administer components of the joint program following process and commitments defined in the stormwater plan and Chapter 66.03 agreement between Chippewa County, the Village of Lake Hallie, and the Towns of Eagle Point and Lafayette. 	<ul style="list-style-type: none"> • Annual report.

NONPOINT SOURCE WATER POLLUTION CONTROL

Goal 4. Develop and administer nonpoint sources of water pollution control programs to pursue State and local water quality objectives, cont..

Benchmark Products

Objective 4. Support State efforts to pursue water quality objectives through the development and implementation of TMDL limits in designated EPA 319 watersheds.

- Participate in a DNR sponsored effort to implement TMDL's that have been developed for the Little Lake Wisconsin Watershed.
 - *With Jacob Leinenkugel Brewing Co., extend and further implement the Little Lake Wisconsin Stewardship Project as a bridge to a full TMDL implementation project.
 - Develop a TMDL watershed implementation plan to establish a project time frame, roles and responsibilities, anticipated costs, funding commitments and measures of performance.
 - Develop and enter formal working agreements and service contracts with participating municipalities and funding agencies.

- Participate in a DNR sponsored TMDL planning process to develop TMDL's for Moon Bay of Lake Wisconsin and Otter Lake.

- Cooperative Agreement defining roles & resp. of the project, co-sponsors, funding sources & duration of proj. commitment.
- Letter of interest to DNR.
- Working agreements.

Table 9.

ANTICIPATED BUDGET BY PROGRAM AREA TO IMPLEMENT LWRM PLAN

ENERGY CONSERVATION & WASTE REDUCTION	2014			2015			2017			2019		
	County Levy	State Program Asst.	State Cost Share	County Levy	State Program Asst.	State Cost Share	County Levy	State Program Asst.	State Cost Share	County Levy	State Program Asst.	State Cost Share
Goal 1 - Develop and advance county initiatives that conserve energy & reduce waste, and serve as a catalyst for broader community efforts to conserve energy, limit carbon emissions, and increase renewable energy production.												
Obj. 1 - Develop and implement an energy conservation program for County operations.												
Obj. 2 - Encourage alternative energy production that uses wind, waste stream bi-products, or biomass generated from agricultural or forestry operations.												
Obj. 3 - Develop and administer recycling and solid waste management programs that reduce, reuse, and ensure the proper disposal of waste materials.												

LAND CONSERVATION AND SUSTAINABILITY	2015		2016		2017		2018		2019	
	County Levy	State Program Asst. State Cost Share	County Levy	State Program Asst. State Cost Share	County Levy	State Program Asst. State Cost Share	County Levy	State Program Asst. State Cost Share	County Levy	State Program Asst. State Cost Share
<p>Goal 2. Develop and administer conservation programs that preserve the land, support sustainable production, provide biodiversity, and protect the natural ecology.</p> <p><u>Obj. 1.</u> Support the efforts of individual landowners, private nonprofit conservation organizations, and local municipalities to preserve productive "working lands".</p> <p><u>Obj. 2.</u> Support the efforts of individual landowners, private nonprofit conservation organizations, and municipalities to preserve unique lands with high public value, or those that contain threatened or endangered species.</p> <p><u>Obj. 3.</u> Encourage biodiversity and sustainable agriculture, forestry, and biomass production on private lands by providing tech. assistance and conservation program services to landowners.</p> <p><u>Obj. 4.</u> Encourage biodiversity and sustainable forest and biomass production on public lands by supporting the efforts of the custodial agencies responsible for developing and administering property management plans.</p> <p><u>Obj. 5.</u> Protect and buffer the existing public land base by pursuing conservation easements, or fee title purchase options on select parcels located within and immediately adjacent the designated blocking boundaries of public forests, parks, or conservation management areas.</p> <p><u>Obj. 6.</u> Support efforts by public agencies and nonprofit conservation organizations to inventory and control invasive species (upland and aquatic).</p>										

	2015			2016			2017			2018			2019		
	County Levy	State Program Asst.	State Cost Share	County Levy	State Program Asst.	State Cost Share	County Levy	State Program Asst.	State Cost Share	County Levy	State Program Asst.	State Cost Share	County Levy	State Program Asst.	State Cost Share
<p>WATER CONSERVATION</p> <p>Goal 3. Develop, support, and implement water conservation programs to maintain current aquifer volumes and to protect the County's drinking water supply.</p> <p>Obj.1. Develop and implement conservation programs that protect wetlands, restore natural hydrology and drainage, and improve stormwater storage capacity, soil infiltration, and groundwater recharge.</p> <p>Obj.2. Establish a groundwater and baseflow monitoring program to monitor and record groundwater elevations and associated stream baseflow conditions at representative locations throughout the County.</p> <p>Obj.3. Actively encourage and support the development of water conservation programs to maintain public and private water supplies.</p> <p>Obj.4. Improve the county's capacity to monitor changes in groundwater chemistry using existing well testing programs.</p>															

PLANNING AND ENVIRONMENTAL REGULATION

Goal 5. Facilitate community-based land use planning, and develop and administer local ordinances that address local needs and augment the community's voluntary conservation efforts.

Obj. 1. Track the location and rate of new development in unincorporated areas using approved subdivision plats, certified survey maps, and new well permits.

Obj. 2. Provide opportunities for greater communication and cooperation in land use planning and land use regulation between the County, towns, cities, and villages.

Obj. 3. Provide ongoing planning, administrative, and enforcement services to towns that participate in County Comprehensive Zoning, and to towns or other municipalities that have entered agreements or contracts for specified services.

Obj. 4. Systematically review and update selected County land use and environmental ordinances to be consistent with the County Comprehensive Plan and State Administrative Rule changes.

	2015			2016			2017			2018			2019		
	County Levy	State Program Asst.	State Cost Share	County Levy	State Program Asst.	State Cost Share	County Levy	State Program Asst.	State Cost Share	County Levy	State Program Asst.	State Cost Share	County Levy	State Program Asst.	State Cost Share