



## Rapid Watershed Assessment Lake du Bay Watershed

Rapid watershed assessments provide initial estimates of where conservation investments would best address the concerns of landowners, conservation districts, and other community organizations and stakeholders. These assessments help landowners and local leaders set priorities and determine the best actions to achieve their goals.

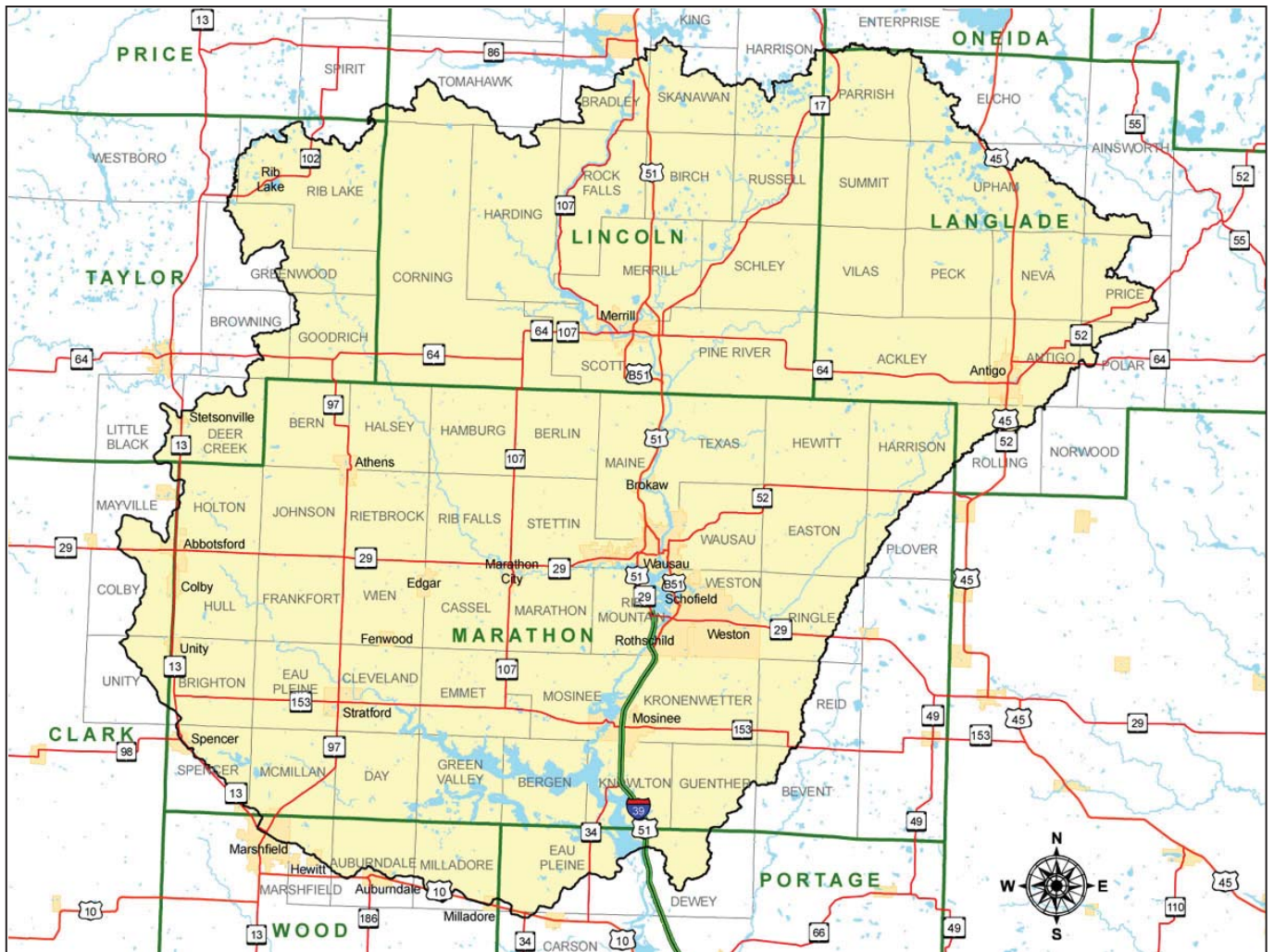
## CONTENTS

INTRODUCTION	1
COMMON RESOURCE AREA DESCRIPTION	2
PHYSICAL DESCRIPTION	3
ASSESSMENT OF WATERS	5
SOILS	8
DRAINAGE CLASSIFICATION	9
FARMLAND CLASSIFICATION	10
HYDRIC SOILS	11
LAND CAPABILITY CLASSIFICATION	12
RESOURCE CONCERNS	13
WATERSHED PROJECTS, STUDIES, MONITORING	14
ECOLOGICAL LANDSCAPES	14
PRS AND OTHER DATA	15
CENSUS AND SOCIAL DATA (RELEVANT)	16
PARTNER GROUPS	17
FOOTNOTES/BIBLIOGRAPHY	18



## INTRODUCTION <sup>1</sup>

The large Lake DuBay Watershed is located in central to north central Wisconsin. Farms account for approximately 39.2% of the 1.72 million acre watershed. Dairy and beef production with some cash grain are the primary agricultural enterprises, with Marathon County being one of the top dairy counties in Wisconsin. Some of the largest livestock operations in the state are found here as well as a high concentration of intensive grazing dairy operations. Corn for silage and grain, alfalfa and soybeans are the predominant crops. Ginseng is a local specialty crop. There is moderate development pressure, particularly near Wausau, the watershed's largest city. Lake DuBay itself is a 6,700 acre impoundment fed by several rivers with the Wisconsin River being the largest.



ACREAGE IN THE LAKE DU BU BAY WATERSHED



County	County Total Acres	County Acres in HUC	% of HUC not in County	% of County in HUC
Marathon	1,009,193	860,400	50	85
Lincoln	580,477	400,794	23	69
Langlade	568,150	262,357	15	46
Taylor	630,683	111,261	6	18
Wood	518,279	39,366	2	8
Portage	526,828	34,657	2	7
Clark	780,768	20,799	1	3
Price	818,735	681	0	0
Oneida	791,438	351	0	0

COMMON RESOURCE AREAS

Common Resource Area delineations are defined as a geographical areas where resource concerns, problems and treatment needs are similar. Common Resource areas are a subdivision of an existing Major Land Resource Area (MLRA). Landscape conditions, soil, climate and human considerations are used to determine the boundary of Common Resource Areas.

**90B.WI1. Dense Till Ground Moraine**

Nearly level and gently sloping moderately well and somewhat poorly drained loamy soils underlain by dense loamy glacial till, residuum and bedrock. Mostly cropland and grazing land, with areas of mixed deciduous and coniferous forest, wetlands, and a few lakes. Dairy and beef production with some cash grain are the primary agricultural enterprises. Moderate development pressure. Primary resource concerns include nutrient management, cropland and forestland soil erosion, surface water quality, grazing land productivity, upland wildlife habitat management, and forestry management.



MAJOR LAND RESOURCE AREAS 2.

**90A.WI1 Loamy Till Ground Moraines and Drumlins**

Nearly level to moderately steep, loamy, sandy, and organic soils. Mixed deciduous and coniferous forest is the primary land use with some glacial lakes and wetlands. Scattered cropland and grazing land are present. Cropland productivity is limited by the short length of the growing season. Primary resource concerns are timber management, wildlife habitat, recreation and agricultural forage production. Surface water quality is a localized concern.

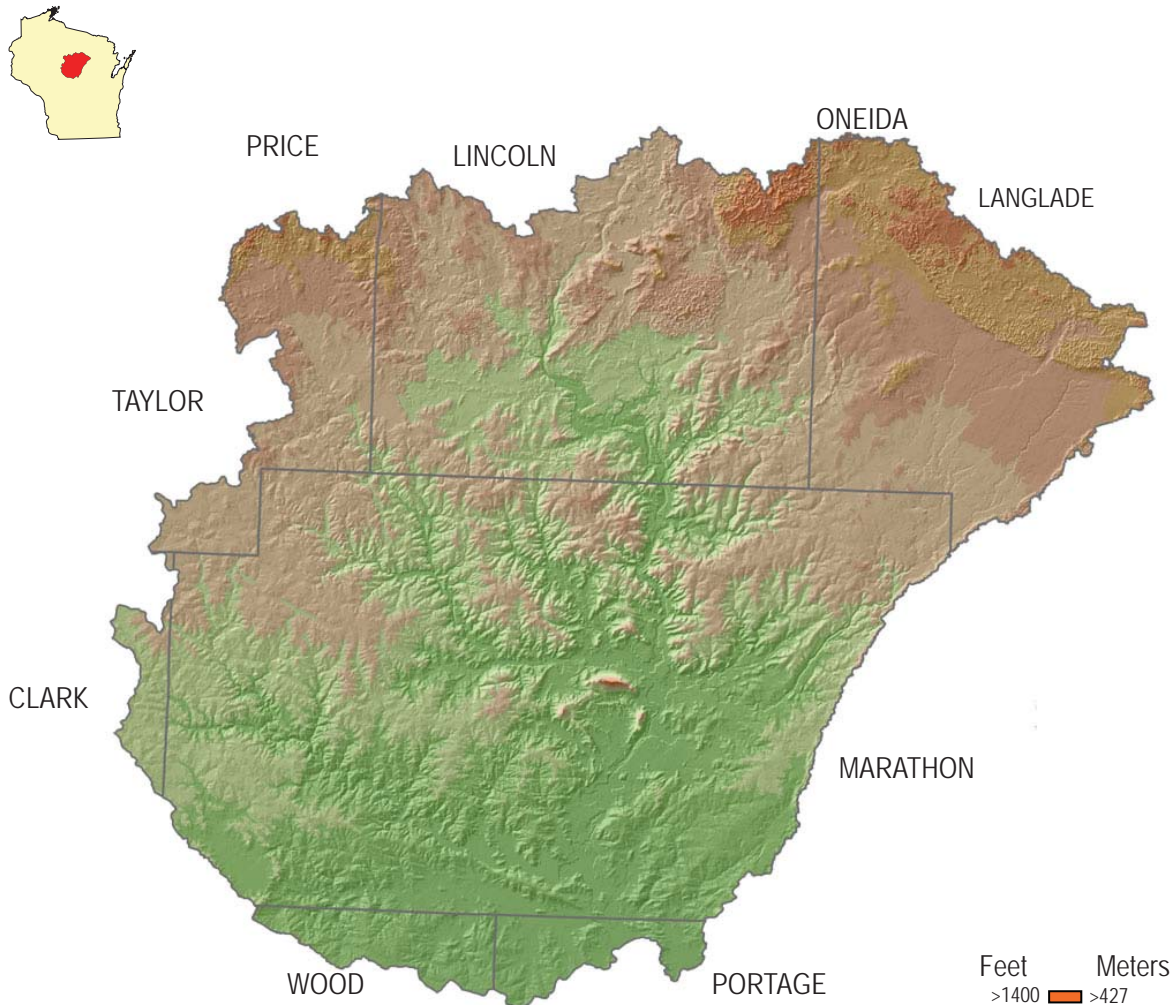
**94D.WI1 Northern Highlands Pitted Outwash**

Gently sloping to moderately steep well drained sandy and loamy soils with poorly drained organic soils in depressions. Mostly deciduous and coniferous forest with scattered cropland and grazing land, with many lakes and wetlands. Primary resource concerns are forestland productivity, soil erosion during timber harvest, road and dwelling construction, upland wildlife habitat management, and recreation. In specific areas, water quality due to agriculture is a concern

**PHYSICAL DESCRIPTION**

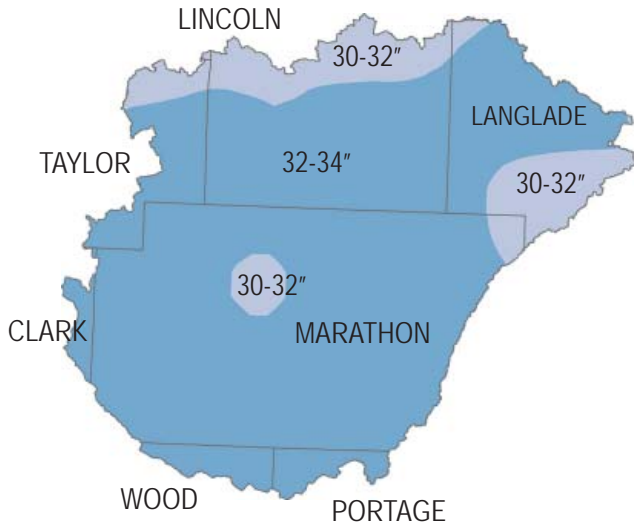
The majority of the watershed is nearly level and gently sloping with moderately well and somewhat poorly drained loamy soils underlain by dense loamy glacial till, residuum and bedrock. Land use is mostly cropland and grazing land, with areas of mixed deciduous and coniferous forest, wetlands, and a few lakes.

Northern areas of the watershed are nearly level to moderately steep with loamy, sandy, and organic soils. Mixed deciduous and coniferous forest is the primary land use with some glacial lakes and wetlands. Scattered cropland and grazing land are present. Cropland productivity here is limited by the short length of the growing season

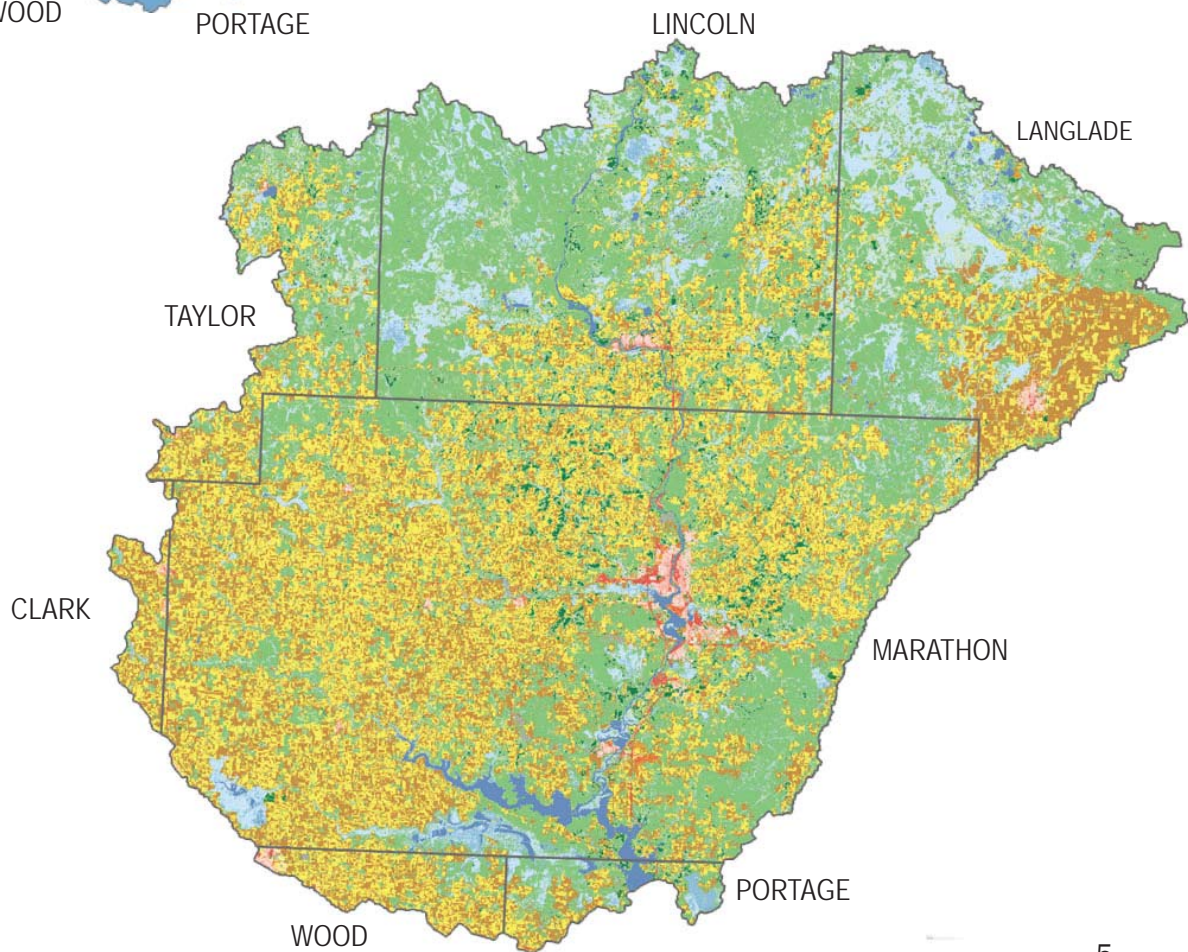


Elevation Map <sup>3</sup>.

Feet	Meters
>1400	>427
1300-1399	397-427
1200-1299	367-396
1100-1199	336-366
1000-1099	306-335
900-999	275-305
800-899	245-274
700-799	214-244
601-699	183-213
<600	<183



Average Annual<sup>4</sup> Precipitation Map (inches)



LAND USE/ LAND COVER MAP<sup>5</sup>

	Acres	Percent		Acres	Percent
Pasture Hay	382,550	22.0	Low Intensity Residential	9,293	1.0
Deciduous Forest	578,664	33.0	High Intensity Residential	4,000	0
Row Crops	358,091	21	Evergreen Forest	54,337	3.0
Open Water	31,656	2.0	Mixed Forest	123,956	7.0
Woody Wetlands	146,359	8.0	Urban / Recreational Grasses	3,994	0
Emergent Herbaceous Wetlands	20,133	1.0	Quarries / Strip Mines, Gravel Pits	989	0
Commercial/Industrial / Transport	10,944	1.0			
Grasslands / Herbaceous	5,563	0			
			<b>Total Acres</b>	<b>1,731,720</b>	

ASSESSMENT OF WATERS

Section 303(d) of the Clean Water Act states that water bodies that are not meeting their designated uses (fishing, swimming), due to pollutants, must be placed on this list. The 303(d) impaired Waters List is updated every two years. Wisconsin is required to develop TMDLs, Total Maximum Daily Loads, for water bodies on this list. Exceptional Resource Waters (ERW) provide valuable fisheries, hydrologically or geologically unique features, outstanding recreational opportunities, unique environmental settings, and which are not significantly impacted by human activities may be classified as exceptional resource waters. Outstanding Resource waters (ORW) and ERW differ in that ORW do not have an associated point source discharge, where ERWs do.



For information on specific subwatersheds, 303(d) or Exceptional/Outstanding Resource Waters (ERW/ORW):  
<http://dnr.wi.gov/org/water/wm/wqs/303d/faqs.html> and <http://dnr.wi.gov/org/gmu/gps/gbasin/>



303(d) Waters	Sediment Oxygen Demand	Dissolved Oxygen	Aquatic Toxicity	Mercury	Metals other than Mercury	Phosphorous	PCBs	Toxic Substances
Big Eau Pleine Flowage (3)		X		X		X		
Big Eau Pleine River		X				X		
Big Rib River (from Marathon City to Hwy N)				X				
Clear Lake				X				
Deep Wood Lake				X				
Greater Bass Lake				X				
Lower Bass Lake				X				
Pesabic Lake				X				
Seven Island Lake				X				
Springbrook Creek		X	X		X			
Summit Lake				X				
Wisconsin River (Seg A)	X	X		X				
Wisconsin River (Merrill Dam & downstream)				X			X	
Wisconsin River (Merrill)			X					X
<b>Exceptional Resource Waters</b>								
Big Cain Creek (Lincoln/Marathon)								
Big Rib River (Taylor)								
Black Alder Creek (Lincoln)								
Cain Creek (Lincoln/Marathon)								
Camp 26 Creek (Lincoln)								
Creek 1-7b T32N R11E (Langlade)								
Creek 1-7c T32N R11E (Langlade)								
Creek 11-2a T32N R11E (Langlade)								
Creek 11-2b T32N R11E (Langlade)								
Creek 11-2c T32N R11E (Langlade)								
Creek 16-1 T32N R7E (Lincoln)								
Creek 16-2 T32N R7E (Lincoln)								
Creek 16-3 T34N R9E (Langlade)								
Creek 16-4b T32N R7E (Lincoln)								
Creek 16-4d T32N R7E (Lincoln)								
Creek 17-7 T32N R7E (Lincoln)								
Creek 19-11 T34N R9E (Langlade)								
Creek 2-12 T31N R5E (Lincoln)								
Creek 2-13 T29N R4E (Marathon)								
Creek 2-14 T29N R4E (Marathon)								
Creek 2-16a T32N R11E (Langlade)								
Creek 2-16c T32N R11E (Langlade)								
Creek 2-5 T33N R7E (Lincoln)								
Creek 20-5 T34N R10E (Langlade)								
Creek 21-14 T30N R3E (Marathon)								
Creek 24-1 T33N R9E Langlade)								
Creek 25-11 T30N R3E (Marathon)								



Exceptional Resource Waters								
Creek 27-9 T31N R10E (Langlade)								
Creek 31-15 T33N R10E (Langlade)								
Creek 35-4 T32N R10E (Langlade)								
E. Branch Eau Claire River (Langlade)								
E. Fork New Wood Creek (Lincoln)								
Fourmile Creek (Marathon)								
Grass Creek (Marathon)								
Joe Snow Creek (Lincoln)								
Kippenberg Creek (Lincoln)								
Krueger Creek (Lincoln)								
Little Cain Creek (Lincoln/Marathon)								
Little Oxbo Creek (Lincoln)								
Little Trappe River (Lincoln/Marathon)								
Manacke Creek (Lincoln)								
McCloud Creek (Langlade)								
Mole Brook (Marathon)								
Noisy Creek (Marathon)								
N. Branch Prairie River (Lincoln)								
Oldens Creek (Langlade)								
Oxbo Creek (Lincoln)								
Prairie River (Langlade)								
Prairie River - below Dudly (Lincoln)								
Prast Creek (Lincoln)								
Rajek Creek (Lincoln)								
Ripley Creek (Lincoln)								
Shea Creek (Lincoln)								
Silver Creek (Langlade)								
Springbrook Creek - Above Antigo (Langlade)								
Springbrook Creek - S from Hwy Y (Langlade/Marathon)								
Spring Creek T35N R7E S10 (Lincoln)								
Spring Creek T32N R7E S21 (Lincoln)								
Stevens Creek (Langlade)								
Wedlers Creek (Lincoln)								
Wolf Creek (Lincoln)								
Outstanding Resource Waters								
Center Fork New Wood Creek (Lincoln)								
Clearwater Creek (Langlade)								
Little Pine Creek (Lincoln)								
Prairie River - above Dudley (Lincoln)								

## SOILS <sup>7</sup>

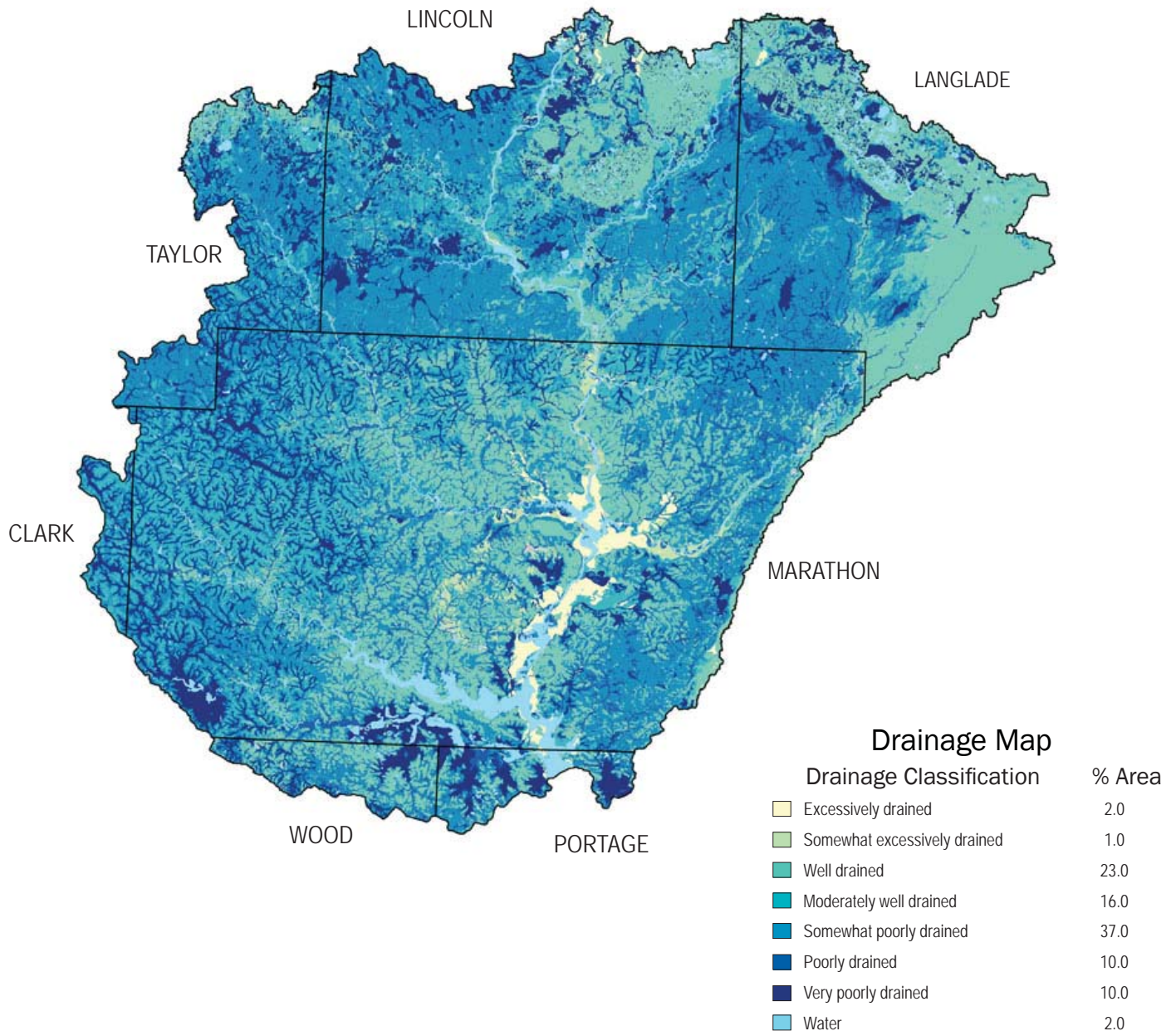
The soils in this watershed have formed primarily in wind blown silts overlying glacial deposits. These glacial deposits formed landscape features such as plains or moraines, hills called drumlins, terraces, sand and gravel deposits called kames or eskers, and depressions called bogs. The dominate soils in the watershed contain wind blown silts overlying reddish brown, loamy glacial deposits occurring on ground moraines. Other major areas have wind blown silts overlying dark brown loamy glacial deposits all overlain by glacial sands and gravels. Along stream terraces soils often contain brown loams, with sands with gravels. In depressions, peat and muck soils occur.

The initial Soil Survey of Wisconsin was completed in May of 2006. Soil Survey work in Wisconsin began in the early 1900s shortly after the inception of the National Cooperative Soil Survey. Early soil surveys produced were a joint effort between federal and state agencies. During the 1960s, 1970s, and 1980s, soil surveys depended on county cost-share monies and completed work projects varied around the state. Because of this partnership approach and because soil survey methods and concepts have improved over time, incompatibilities exist between counties.

The next phase of the Wisconsin Soil Survey will work to resolve inconsistencies brought on by the county based soil survey approach by implementing the Major Land Resource Area soil survey approach. By typifying soil series and mapunit concepts across similar geographic areas instead of by political boundaries, the inconsistencies between counties that exist now will be resolved. Updated soil survey information will be continually made available and can be obtained through the Web Soil Survey at <http://websoilsurvey.nrcs.usda.gov> for official and current USDA soil information as viewable maps and tables. Visit the Soil Data Mart at <http://soildatamart.usda.gov> to download SSURGO certified soil tabular and spatial data.

## DRAINAGE CLASSIFICATION

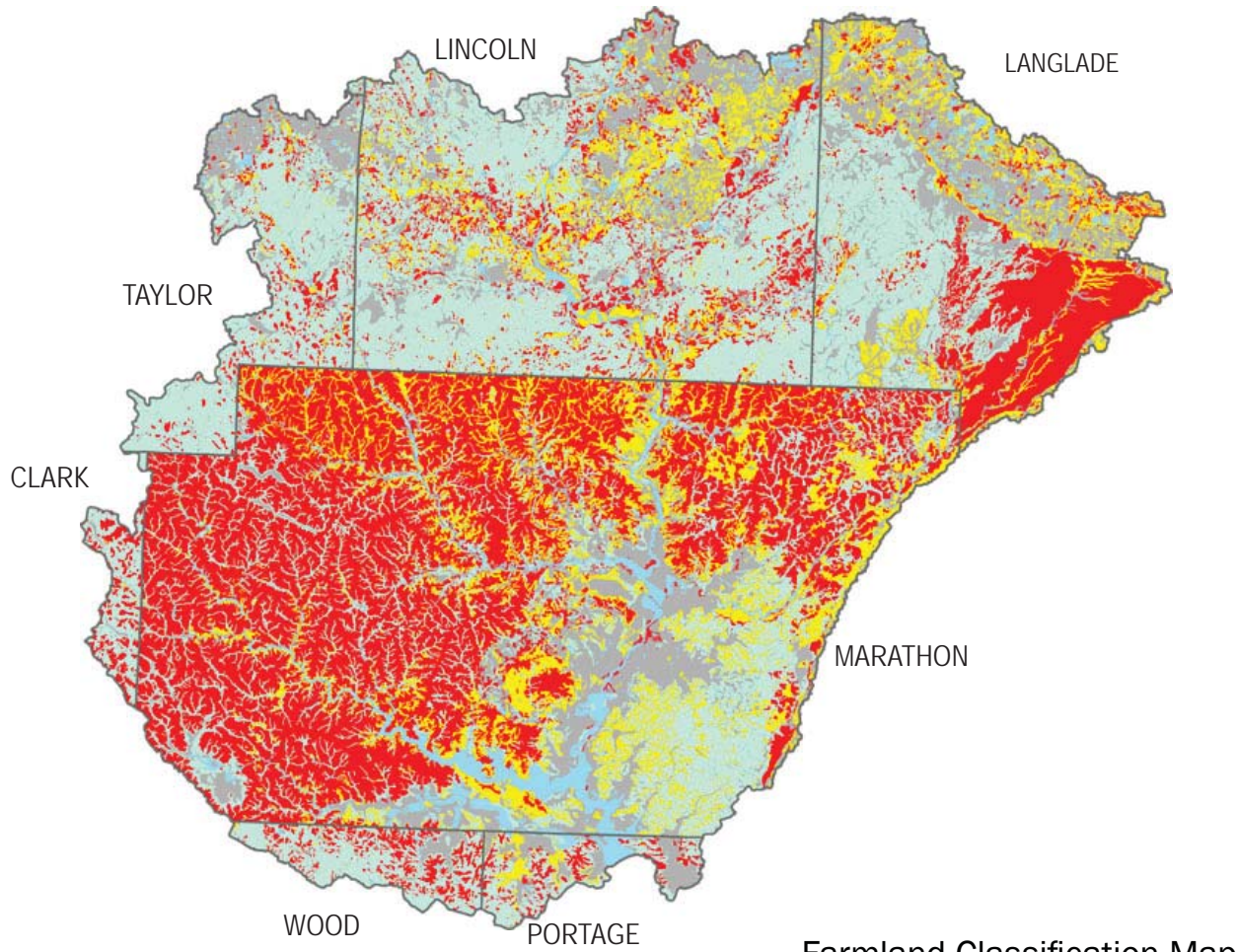
Drainage class (natural) refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized—excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained, and very poorly drained. These classes are defined in the “Soil Survey Manual.”








Visit the online Web Soil Survey at
   
<http://websoilsurvey.nrcs.usda.gov> for official and current USDA soil information as viewable maps and tables.
   
 Visit the Soil Data Mart at
   
<http://soildatamart.usda.gov> to download SSURGO certified soil tabular and spatial data.

### FARMLAND CLASSIFICATION

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. Farmland classification identifies the location and extent of the most suitable land for producing food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the Federal Register, Vol. 43, No 21, January 31, 1978.



**Farmland Classification Map**

	Acres	Percent
 All areas are prime farmland	602,120	35
 Farmland of statewide importance	243,899	14
 Prime farmland if drained	519,301	30
 Not Prime farmland	365,346	21
 Water		

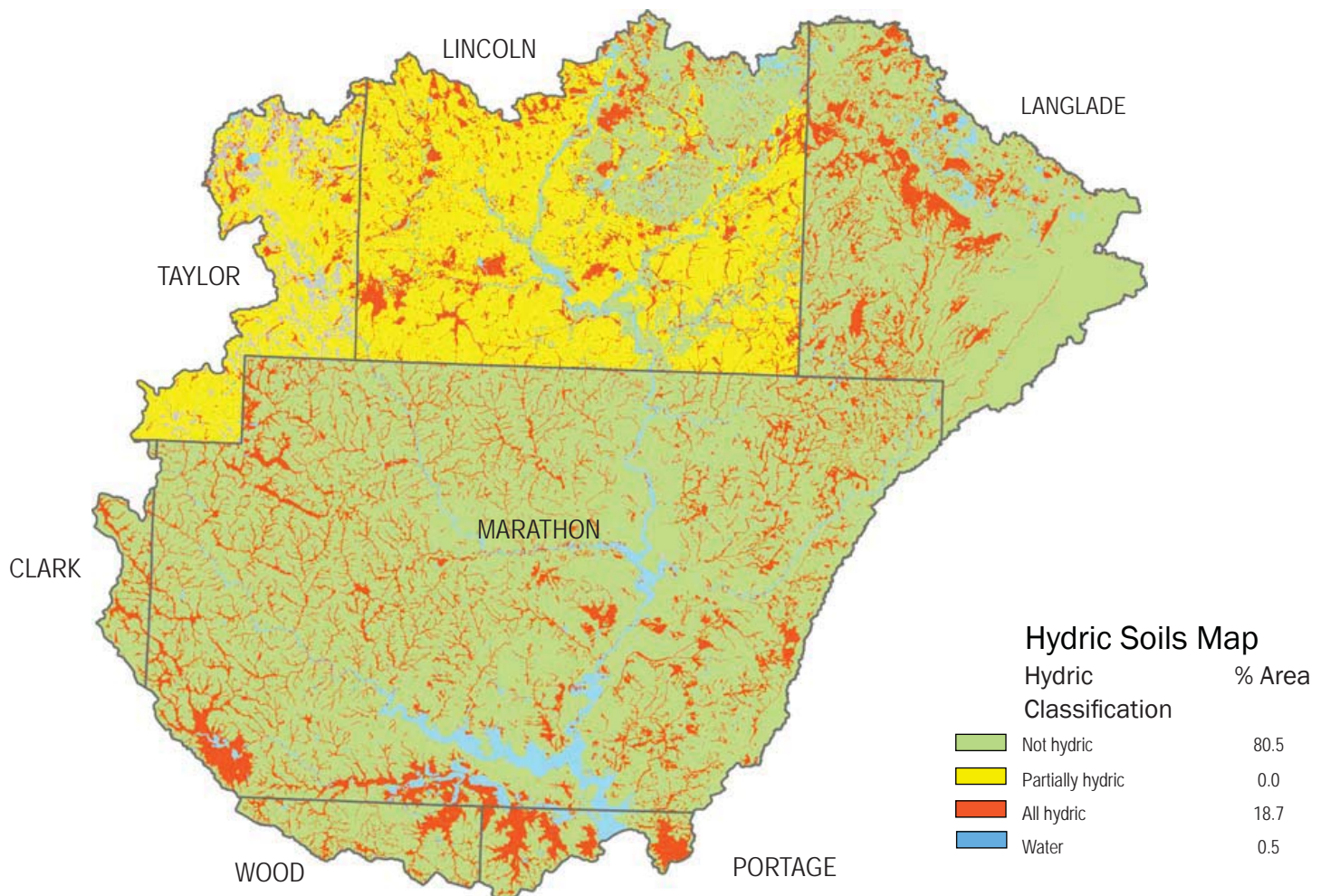
Some inconsistencies occur at county lines. This is a result of the county oriented soil survey approach. The Wisconsin NRCS Soil Survey is continually improving upon the initial Soil Survey and current official Soil Survey information can be found at Soil Data Mart and Web Soil Survey..

Visit the online Web Soil Survey at <http://websoilsurvey.nrcs.usda.gov> for official and current USDA soil information as viewable maps and tables.
   
 Visit the Soil Data Mart at <http://soildatamart.usda.gov> to download SSURGO certified soil tabular and spatial data.

## HYDRIC SOILS

This rating provides an indication of the proportion of the map unit that meets criteria for hydric soils. Map units that are dominantly made up of hydric soils may have small areas, or inclusions of non-hydric soils in the higher positions on the landform, and map units dominantly made up of non-hydric soils may have inclusions of hydric soils in the lower positions on the landform.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register 1994). These soils, under natural conditions, are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation. If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make on site determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and others, 2002).



Some inconsistencies occur at county lines. This is a result of the county oriented soil survey approach. The Wisconsin NRCS Soil Survey is continually improving upon the initial Soil Survey and current official Soil Survey information can be found at Soil Data Mart and Web Soil Survey.

Visit the online Web Soil Survey at <http://websoilsurvey.nrcs.usda.gov> for official and current USDA soil information as viewable maps and tables.

Visit the Soil Data Mart at <http://soildatamart.usda.gov> to download SSURGO certified soil tabular and spatial data.

### LAND CAPABILITY CLASSIFICATION

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive land forming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for rangeland, for forestland, or for engineering purposes.



Some inconsistencies occur at county lines. This is a result of the county oriented soil survey approach. The Wisconsin NRCS Soil Survey is continually improving upon the initial Soil Survey and current official Soil Survey information can be found at Soil Data Mart and Web Soil Survey.

## RESOURCE CONCERNS

Primary resource concerns include nutrient management, cropland and forestland soil erosion, surface water quality, grazing land productivity, upland wildlife habitat management, and forestry management.

## WATERSHED PROJECTS, STUDIES, MONITORING, ETC

In the last two decades there have been three Wisconsin priority watersheds in the Lake DuBay watershed that provided cost-sharing and technical assistance for the implementation of best management practices. The priority watersheds included the Upper Big Eau Pleine River, the Lower Big Eau Pleine River and the Lower Rib River.

The Wisconsin Department of Natural Resources conducts ongoing, baseline water quality monitoring in many streams and lakes within the watershed each year.

## WATERSHED ASSESSMENT

To assess a watershed's agricultural nonpoint pollution potential, a model was used to generate a watershed assessment score relative to other 8-digit watersheds in Wisconsin. Factors used in the model include acres of cropland, acres of highly erodible land (HEL), and the number of animal units in the watershed. Scores ranged from 0.0 (lowest conservation need) to 24.2 (highest conservation need). The scores may be useful in determining funding allocations on a watershed basis for agricultural nonpoint pollution control initiatives. The model does not attempt to measure pollution levels and does not reflect pollution potential from point sources of pollution or other nonpoint pollution sources beyond the above criteria.

The watershed assessment score for the Lake duBay Watershed is 10.8.

## ECOLOGICAL LANDSCAPES



### GENERAL DESCRIPTION FOREST TRANSITION

The Forest Transition Ecological Landscape lies along the northern border of Wisconsin's Tension Zone, through the central and western part of the state, and supports both northern forests and agricultural areas. The central portion of the Forest Transition lies primarily on a glacial till plain deposited by glaciation between 25,000 and 790,000 years ago. The eastern and western portions are on moraines of the Wisconsin glaciation. The growing season in this part of the state is long enough that agriculture is viable, although climatic conditions are not as favorable as in southern Wisconsin. Soils are diverse, ranging from sandy loam to loam or shallow silt loam, and from poorly drained to well drained.

### GENERAL DESCRIPTION - NORTH CENTRAL FOREST

The North Central Forest Ecological Landscape occupies much of the northern third of Wisconsin. Its landforms are characterized by end and ground moraines with some pitted outwash and bedrock controlled areas. Kettle depressions and steep ridges are found in the northern portion. Two prominent areas in this Ecological Landscape are the Penoquee-Gogebic Iron Range in the north extending into Michigan, and Timm's Hill, the highest point in Wisconsin (1,951 feet) in the south. Soils consist of sandy loam, sand, and silts. The vegetation is mainly forest, with many wetlands and some agriculture, though the growing season is not as favorable as it is in southern Wisconsin. Lake Superior greatly influences the northern portion of the Ecological Landscape especially during the winter season, producing greater snowfall than in most areas in Wisconsin.

### GENERAL DESCRIPTION - NORTHERN HIGHLANDS

The Northern Highlands Ecological Landscape is located in northern central Wisconsin. It is known for its pitted outwash plains and kettle lakes mixed with extensive forests and large peatlands. Its landforms are characterized mainly by pitted outwash but also contain some coarse-textured moraines. Soils are acidic and relatively unproductive due to low moisture-holding capacity and lack of organic matter.



PRS AND OTHER DATA <sup>8</sup>

The following table is a product of the NRCS Performance Results System (PRS) and reflects progress made over the past several years on several key areas of conservation. The PRS provides support for reporting the development and delivery of conservation programs, analyzing and reporting progress, and management applications by NRCS and conservation partners. The public can generate additional reports by visiting the following link: <http://ias.sc.egov.usda.gov/prsreport2006/>

The three core counties in the watershed (Marathon, Lincoln and Langlade) implemented new nutrient management plans on 3811 acres. Surveys show approximately 14% of cropland acres in the north central region of Wisconsin have a nutrient management plan. On a 100 point scale developed at the national level, current conservation in this watershed scores 89.13.

PRS PERFORMANCE MEASURES

	FY99	FY00	FY01	FY02	FY03	FY04	FY05	TOTAL
TOTAL CONSERVATION SYSTEMS PLANNED (ACRES)	1,225	2,642	7,867	14,917	18,987	N/A	16,180	61,818
TOTAL CONSERVATION SYSTEMS APPLIED (ACRES)	983	748	6,179	14,917	15,279	N/A	14,984	53,090
<b>CONSERVATION PRACTICES</b>								
TOTAL WASTE MANAGEMENT (313) (NUMBERS)	0	0	6	3	1	1	0	11
RIPARIAN FOREST BUFFERS (391) (ACRES)	0	25	756	70	69	3	4	927
EROSION CONTROL TOTAL SOIL SAVED (TONS/YEAR)	123	0	5,262	46,638	135,997	N/A	N/A	188,020
TOTAL NUTRIENT MANAGEMENT (590) (ACRES)	2,555	23,014	18,761	45,316	18,208	2,962	5,193	116,009
PEST MANAGEMENT SYSTEMS APPLIED (595A) (ACRES)	0	0	737	2,063	1,373	0	294	4,467
PRESCRIBED GRAZING 528A (ACRES)	0	0	3,178	2,648	3,254	2,116	866	12,062
TREE & SHRUB ESTABLISHMENT (612) (ACRES)	0	174	473	129	211	276	93	1,356
RESIDUE MANAGEMENT (329A-C) (ACRES)	0	264	2,285	2,016	1,132	170	5,469	11,336
TOTAL WILDLIFE HABITAT (644 - 645) (ACRES)	6	42	985	1,227	1,777	0	451	4,488
TOTAL WETLANDS CREATED, RESTORED, OR ENHANCED (ACRES)	0	7	78	14	82	11	9	201
<b>ACRES ENROLLED IN FARMBILL PROGRAMS</b>								
CONSERVATION RESERVE PROGRAM	0	117	642	619	1,365	N/A	23	2,766
WETLANDS RESERVE PROGRAM	0	0	78	56	45	N/A	0	179
ENVIRONMENTAL QUALITY INCENTIVES PROGRAM	200	516	1,590	1,308	2,281	N/A	9,796	15,691
WILDLIFE HABITAT INCENTIVE PROGRAM	0	0	0	0	50	N/A	99	149
FARMLAND PROTECTION PROGRAM	0	0	0	0	0	N/A	0	0

### CENSUS AND SOCIAL DATA (RELEVANT) <sup>9</sup>

There are 3,539 farms in the watershed, that average 192 acres in size. The 2002 average gross farm income in three core watershed counties (Marathon, Lincoln and Langlade) was \$71,650, about 1.7% below the state average. It is estimated that less than 20% of farmers meet the limited resource producer criteria. Please refer to the tables below for more detailed information or visit the web site of the Wisconsin Office of the National Agricultural Statistics Service at: [http://www.nass.usda.gov/Statistics\\_by\\_State/Wisconsin/index.asp](http://www.nass.usda.gov/Statistics_by_State/Wisconsin/index.asp)

	2002 AG CENSUS DATA	CLARK	LANGLADE	LINCOLN	MARATHON	ONEIDA	PORTAGE	PRICE	TAYLOR	WOOD	TOTAL
	FARMS (NUMBER)	59	250	409	2,471	0	79	0	186	84	3,539
	LAND IN FARMS (ACRES)	12,272	65,154	67,785	452,955	20	19,221	83	45,360	17,332	680,182
	TOTAL CROPLAND (ACRES)	8,389	40,434	34,961	291,026	8	13,898	38	23,495	10,645	422,895
	IRRIGATED LAND (ACRES)	8	7,040	296	5,483	1	6,075	0	3	451	19,357
	PRINCIPAL OPERATOR BY PRIMARY OCCUPATION - FARMING (NUMBER)	43	156	249	1,555	0	44	0	121	55	2,223
FARMS BY SIZE	FARMS BY SIZE - 1 TO 10 ACRES	1	12	26	159	0	6	0	4	3	210
	FARMS BY SIZE - 11 TO 49 ACRES	7	43	85	480	0	16	0	28	19	679
	FARMS BY SIZE - 50 TO 179 ACRES	24	104	174	987	0	31	0	70	33	1,424
	FARMS BY SIZE - 180 TO 499 ACRES	22	62	104	699	0	18	0	68	22	997
	FARMS BY SIZE - 500 TO 999 ACRES	3	18	19	108	0	4	0	12	5	170
	FARMS BY SIZE - 1,000 ACRES OR MORE	1	10	2	38	0	3	0	4	2	60
LIVESTOCK AND POULTRY	LIVESTOCK AND POULTRY - CATTLE AND CALVES INVENTORY (FARMS)	43	107	188	1,341	0	39	0	116	52	1,885
	LIVESTOCK AND POULTRY - CATTLE AND CALVES INVENTORY - BEEF COWS (FARMS)	9	44	87	378	0	15	0	32	19	583
	LIVESTOCK AND POULTRY - CATTLE AND CALVES INVENTORY - MILK COWS (FARMS)	29	41	71	727	0	15	0	62	25	970
	LIVESTOCK AND POULTRY - HOGS AND PIGS INVENTORY (FARMS)	3	13	15	63	0	3	0	7	4	107
	LIVESTOCK AND POULTRY - SHEEP AND LAMBS INVENTORY (FARMS)	2	9	17	67	0	2	0	5	3	105
	LIVESTOCK AND POULTRY - LAYERS 20 WEEKS OLD AND OLDER INVENTORY (FARMS)	6	13	19	139	0	6	0	13	5	201
	LIVESTOCK AND POULTRY - BROILERS AND OTHER MEAT-TYPE CHICKENS SOLD (FARMS)	1	3	4	43	0	2	0	2	2	56
SELECTED CROPS HARVESTED	SELECTED CROPS HARVESTED - CORN FOR GRAIN (ACRES)	1,664	2,723	2,618	52,137	0	2,315	1	3,477	2,022	66,959
	SELECTED CROPS HARVESTED - CORN FOR SILAGE OR GREENCHOP (ACRES)	828	2,088	1,957	31,004	0	614	2	1,972	674	39,139
	SELECTED CROPS HARVESTED - WHEAT FOR GRAIN, ALL (ACRES)	27	1,192	80	1,988	0	22	0	13	32	3,354
	SELECTED CROPS HARVESTED - WHEAT FOR GRAIN, ALL - WINTER WHEAT FOR GRAIN (ACRES)	17	0	80	1,870	0	9	0	13	0	1,989
	SELECTED CROPS HARVESTED - WHEAT FOR GRAIN, ALL - SPRING WHEAT FOR GRAIN (ACRES)	10	0	0	119	0	13	0	0	0	141
	SELECTED CROPS HARVESTED - OATS FOR GRAIN (ACRES)	276	5,017	678	7,681	1	235	1	510	233	14,631
	SELECTED CROPS HARVESTED - BARLEY FOR GRAIN (ACRES)	104	329	556	2,332	0	22	0	143	48	3,534
	SELECTED CROPS HARVESTED - SOYBEANS FOR BEANS (ACRES)	718	2,498	1,140	22,584	0	631	0	1,923	832	30,326
	SELECTED CROPS HARVESTED - FORAGE - LAND USED FOR ALL HAY AND ALL HAYLAGE, GRASS SILAGE, AND GREENCHOP (SEE TEXT) (ACRES)	3,559	12,815	18,135	124,635	2	3,654	23	10,624	4,389	177,836
	SELECTED CROPS HARVESTED - VEGETABLES HARVESTED FOR SALE (SEE TEXT) (ACRES)	4	722	25	3,311	0	2,954	0	10	33	7,058
	SELECTED CROPS HARVESTED - LAND IN ORCHARDS (ACRES)	2	19	39	47	0	2	0	5	3	117

URBAN POPULATION <sup>11</sup>

	1990	2000	2004	Median Income*
Hewitt	595	670	682	53,295
Rothschild	3,310	4,970	5,096	50,543
Stratford	8,786	12,354	12,646	47,633
Milladore	314	268	258	46,458
Mosinee	3,820	4,063	3,996	46,109
Weston	n/a	12,079	12,921	46,063
Marathon City	1,606	1,640	1,529	44,063
Fenwood	214	174	165	44,000
Auburndale	665	738	728	41,103
Edgar	1,318	1,386	1,327	40,759
Spencer	1,757	1,932	1,833	40,665
Athens	951	1,095	1,045	39,286
Schofield	2,415	2,117	2,160	38,158
Marshfield	19,291	18,800	18,796	37,248
Abbotsford	1,916	1,956	1,901	36,949
Wausau	37,060	38,426	37,292	36,831
Colby	1,532	1,616	1,664	34,318
Merrill	9,860	10,146	10,145	33,098
Rib Lake	887	878	858	32,222
Stetsonville	511	563	542	32,045
Unity	452	368	351	31,458
Antigo	8,276	8,560	8,282	29,548
Brokaw	224	107	194	27,083

POPULATION ETHNICITY <sup>10</sup>

Total Population = 171,116  
 Urban population = 97,147  
 Rural Population = 73,980  
 White alone = 162,503  
 Hispanic or Latino = 1,403  
 Two or more races = 1,313  
 Black or African American alone = 471  
 Some other race alone = 535  
 American Indian and Alaska Native alone = 873  
 Asian Alone = 5,409  
 Native Hawaiian and Other Pacific Islander alone = 18

PARTNER GROUPS

- County Land Conservation Departments (Directory Link) [http://www.datcp.state.wi.us/arm/agriculture/land-water/conservation/pdf/ar-pub-119web\\_dec2005.pdf](http://www.datcp.state.wi.us/arm/agriculture/land-water/conservation/pdf/ar-pub-119web_dec2005.pdf) )
- River Alliance <http://www.wisconsinrivers.org/>
- USDA Farm Service Agency <http://www.fsa.usda.gov/wi/news/default.asp>
- US Fish and Wildlife Service <http://www.fws.gov/midwest/maps/wisconsin.htm>
- UW Cooperative Extension <http://www.uwex.edu/ces/> and <http://basineducation.uwex.edu/rockriver/>
- Wisconsin Department of Agriculture, Trade, and Consumer Protection <http://www.datcp.state.wi.us>
- Wisconsin Department of Natural Resources <http://dnr.wi.gov/>
- DuBay Property Owners Association, Wayne Gresl, President 1977 Graham Ln, Mosinee, WI 54455

## FOOTNOTES/BIBLIOGRAPHY

All data is provided “as is.” There are no warranties, express or implied, including the warranty of fitness for a particular purpose, accompanying this document. Use for general planning purposes only.

1. Introduction and the description of resource concerns of the Lake du Bay Watershed were derived from a report issued by the Wisconsin Department of Natural Resources titled “The State of the Basin Reports”, 4/12, WDNR.

2. Common Resource Area (CRA) Map delineations are defined as geographical areas where resource concerns, problems, or treatment needs are similar. It is considered a subdivision of an existing Major Land Resource Area (MLRA) map delineation or polygon. Landscape conditions, soil, climate, human considerations, and other natural resource information are used to determine the geographic boundaries of a Common Resource Area.

Online linkage: <http://soils.usda.gov/survey/geography/cra.html>.

3. The relief map was created using the National Elevation Dataset (NED) 1 arc second, approximately 30 meters, digital elevation model (DEM) raster product assembled by the U.S. Geological Survey (USGS). A hillshade grid was derived from the 30m DEM and draped over the DEM to symbolize the map and create a 3-D effect. The data was downloaded from the NRCS Geospatial Data Gateway <http://datagateway.nrcs.usda.gov/>.

For more information about NED visit <http://ned.usgs.gov/>.

4. Average Annual Precipitation data was originated by Chris Daly of Oregon State University and George Taylor of the Oregon Climate Service at Oregon State University and published by the Water and Climate Center of the Natural Resources Conservation Service in 1998. Annual precipitation data was derived from the climatological period of 1961-1990. Parameter-elevation Regressions on Independent Slopes Model (PRISM) derived raster data is the underlying data set from which the polygons and vectors were created. For more information about PRISM visit [http://www.ocs.orst.edu/prism/prism\\_new.html](http://www.ocs.orst.edu/prism/prism_new.html). Precipitation data was downloaded from the NRCS Geospatial Data Gateway <http://datagateway.nrcs.usda.gov/>.

5 The Land Use/Land Cover data was generated from the National Land Cover Dataset (NLCD) compiled from Landsat satellite TM imagery (circa 1992) with a spatial resolution of 30 meters and supplemented by various ancillary data (where available). The data was assembled by the USGS and published in June of 1999. The analysis and interpretation of the satellite imagery was conducted using very large, sometimes multi-state image mosaics. For more information about NLCD visit <http://edcwww.cr.usgs.gov/programs/lccp/nationallandcover.html>. The data was downloaded from the NRCS Geospatial Data Gateway <http://datagateway.nrcs.usda.gov/>.

6. 303(d) listed streams were derived from the Water Quality Standards Section of the Wisconsin Department of Natural Resources (WDNR) website: [http://dnr.wi.gov/org/water/wm/wqs/303d/Lists303d/Approved\\_2004\\_303\(d\)\\_list.pdf](http://dnr.wi.gov/org/water/wm/wqs/303d/Lists303d/Approved_2004_303(d)_list.pdf). For more information about the individual sub-watersheds visit <http://dnr.wi.gov/org/gmu/gpsp/gpbasin/index.htm>. For a list and explanation of Outstanding and Exceptional Resource Waters visit: <http://dnr.wi.gov/org/water/wm/wqs/orwerw/>.

7. Soil Survey Geographic Database (SSURGO) tabular and spatial data were downloaded for the following surveys:

- Clark Co., WI (WI019) Published 2006 10 20
- Langlade Co., WI (WI067) Published 2006 10 20
- Lincoln Co, WI (WI069) Published 2006 10 20
- Marathon Co., WI (WI073) Published 2006 10 19
- Oneida Co., WI (WI085) Published 2006 10 19
- Portage Co., WI (WI097) Published 2006 10 19
- Price Co., WI (WI099) Published 2006 09 21
- Taylor Co., WI (WI199) Published 2006 12 04
- Wood Co., WI (WI141) Published 2006 10 19

Metadata and SSURGO data for the aforementioned surveys were downloaded from the NRCS Soil Data Mart at <http://soildatamart.nrcs.usda.gov>. Component and layer tables from the tabular data were linked to the spatial data to derive the soil classifications found in this section. Visit the online Web Soil Survey at <http://websoilsurvey.nrcs.usda.gov> for official and current USDA soil information as viewable maps and tables.

8. Performance Results System (PRS) data was extracted from the PRS homepage by year, conservation systems and practices and Hydrologic Unit Code (HUC) level. HUC level reporting was not available where N/A is listed. For more information on these and other performance reports visit <http://ias.sc.egov.usda.gov/prshome/>.

9. Ag Census data were downloaded from the National Agricultural Statistics Service (NASS) Website and the data were adjusted by percent of HUC in the county. For more information on individual census queries visit the NASS website at <http://www.nass.usda.gov/>.

10. Population ethnicity data were extracted from the Census 2000 Summary File 3 compiled by the U.S. Census Bureau. The data were adjusted by Block Group percentage in the HUC. Population items were selected from the SF30001 table. For more information on census data and definitions visit <http://www.census.gov/Press-Release/www/2002/sumfile3.html>.

11. Urban population and median household income data were derived from the American FactFinder assembled by the U.S. Census Bureau. American FactFinder is a quick source for population, housing, income and geographic data. For other census items and trends visit [http://factfinder.census.gov/home/saff/main.html?\\_lan](http://factfinder.census.gov/home/saff/main.html?_lan)