



Rapid Watershed Assessment Coon-Yellow River Watershed

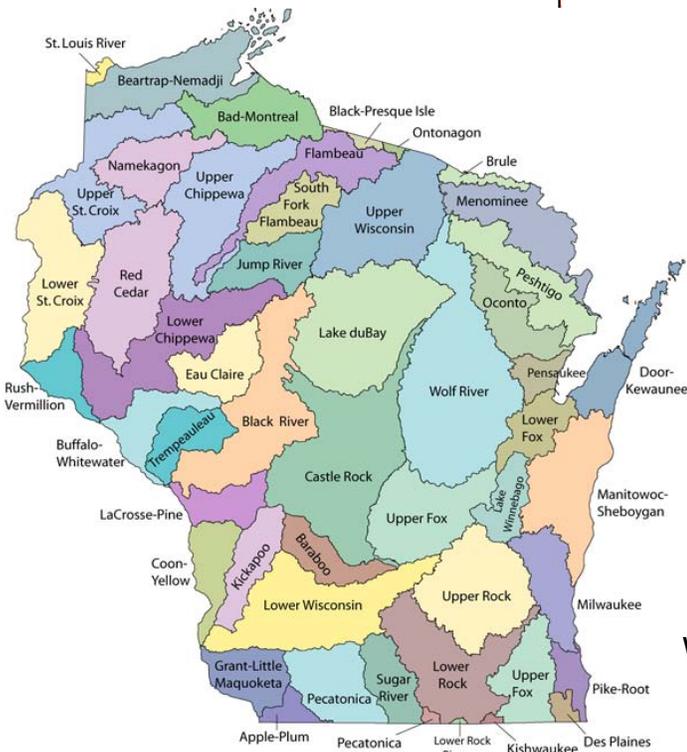
Rapid watershed assessments provide initial estimates of where conservation investments would best address the concerns of landowners, conservation districts, and other community organizations and stakeholders. These assessments help landowners and local leaders set priorities and determine the best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

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INTRODUCTION¹.

Coon Creek in southwest Wisconsin and the Yellow River in northeast Iowa are located in the unglaciated Driftless Area, referred to locally as the coulee region. Coon Creek begins in southern La Crosse County and southwestern Monroe County and flows southwest through Vernon County to the Mississippi River. Other major Wisconsin tributaries to the Mississippi in the watershed include the Bad Axe River and Rush Creek in Vernon and Crawford Counties. The Yellow River subwatershed is entirely within Iowa, flowing east to the Mississippi River. It begins in southeast Winneshiek County and runs through Allamakee County, draining a small area of northern Clayton County. Crooked Creek is located entirely within Houston County, MN and flows east to the Mississippi River. In addition, numerous other small streams in the watershed outlet directly to the Mississippi River.

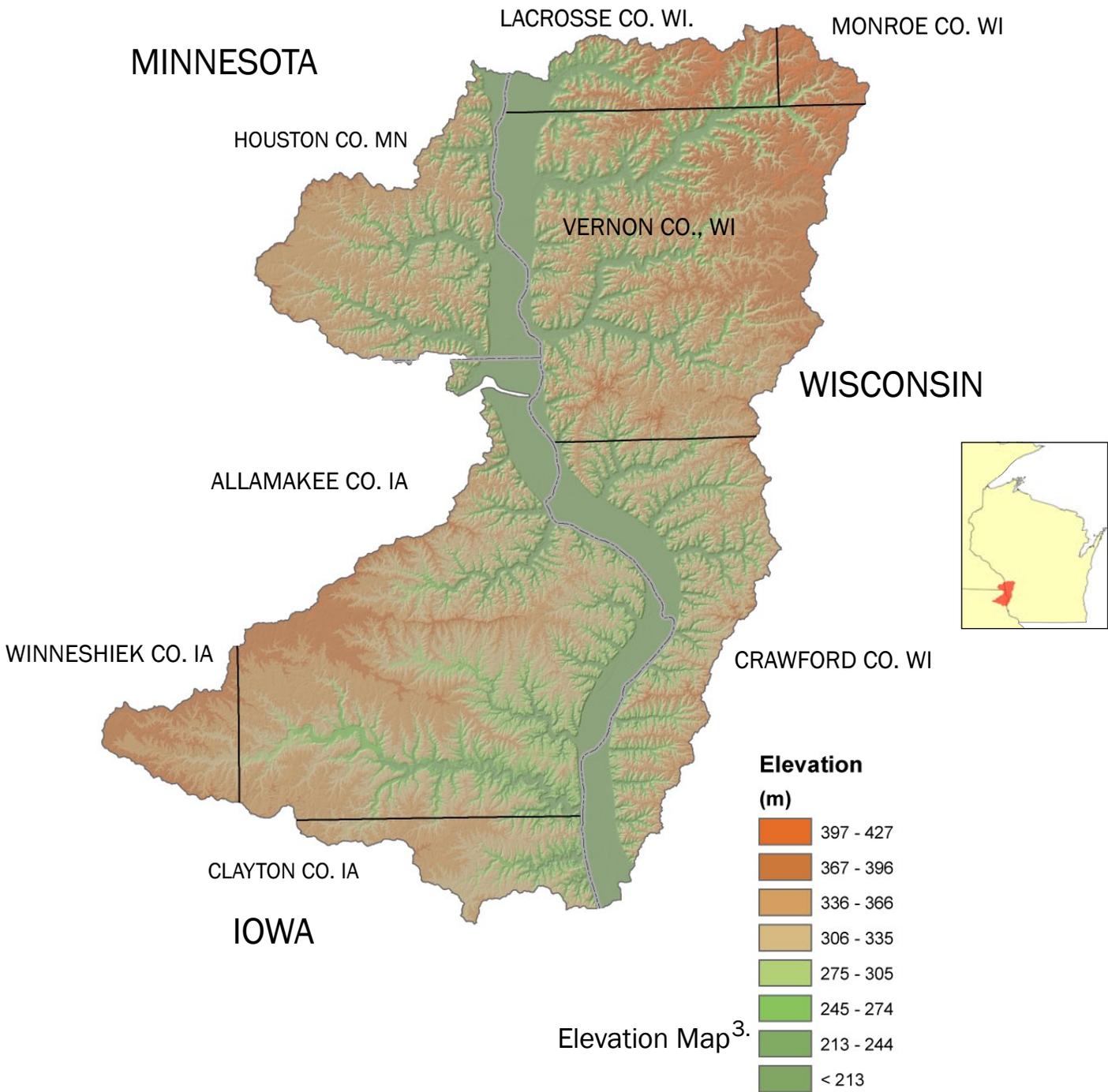


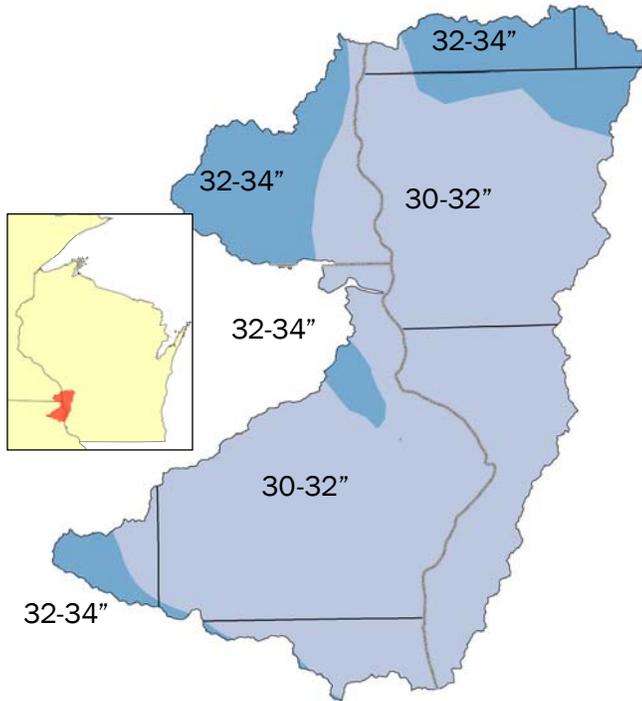
Location Map



Wisconsin Watershed Map

The area is characterized by a dendritic drainage pattern on a landscape composed of narrow to broad, cropped ridges and bluffs surrounded by steep, forested slopes leading to broad, cropped valleys. A mixture of livestock farms, mainly dairy, and cash grain operations account for a large portion of the land use, along with forestland. Corn, soybeans, and alfalfa are the primary crops. The vast majority of the land is privately owned. The major federal land areas are the Upper Mississippi River National Wildlife and Fish Refuge in the Mississippi River valley and the Effigy Mounds National Monument in Clayton County, IA. Large areas of state-owned lands include the Richard Dorer Memorial State Forest in Minnesota, the Yellow River State Forest in Iowa and the Rush Creek State Natural Area in Wisconsin. There are also numerous county parks throughout the watershed.





Spring-fed, coldwater trout streams are common and attract a large number of local and non-local anglers. Naturally-sustaining populations of native brook trout and introduced German brown trout can be found in many streams. As in the rest of the Driftless Area, there are very few natural lakes in the watershed.

The watershed is mainly rural, with a small area of the city of La Crosse, WI (pop. 50, 287) located in the north central part of the watershed. Prairie du Chien, WI (pop. 5,880) and Waukon, IA (pop. 4013) are the next largest cities completely within the watershed, with a portion of Viroqua, WI (pop. 4,424) just inside the eastern boundary of the watershed.

COMMON RESOURCE AREAS².

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.

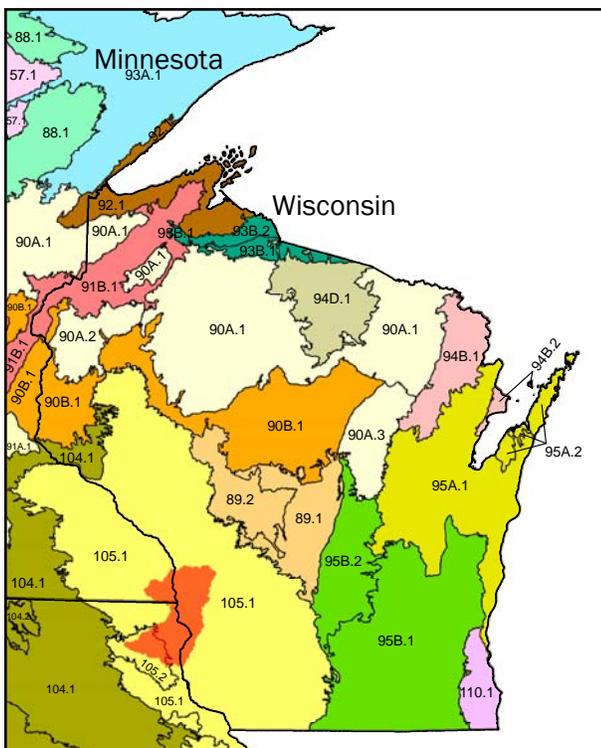
105.1. DRIFTLESS LOESS HILLS AND BEDROCK

Highly dissected hills and valleys, including several major river valleys. Well drained and moderately well drained silty soils over bedrock residuum. Predominantly cropland and grazing land on ridge tops and valley bottoms with a mix of dairy, beef and cash grain agricultural enterprises. Deciduous forest on steep side slopes. Moderate development pressure. Primary resource concerns are cropland soil erosion, surface water quality, grazing land and forestland productivity, stream bank erosion, and erosion during timber harvest.

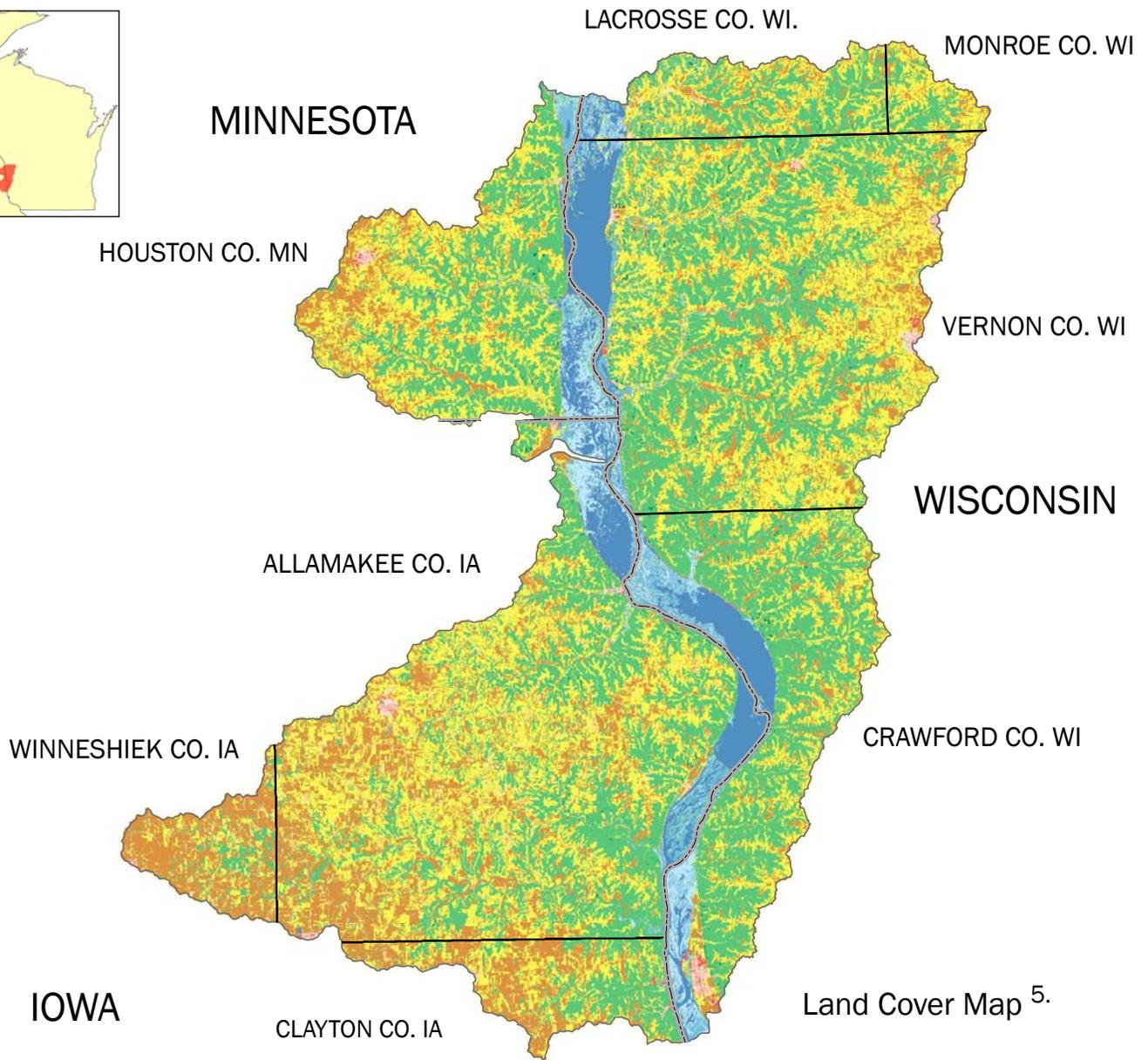
105.2 IOWA DRIFTLESS LOESS HILLS

This area consists of gently sloping to very steep soils on moderately broad to narrow ridges with highly dissected side slopes. Most of the soils formed in loess or colluvium from loess. Native vegetation was mostly deciduous forest. Deciduous forest dominates the steeper side slopes. Corn, soybeans, hay supporting cash crop and dairy and swine operations are dominate. Resource concerns are soil water erosion, soil quality, water quality and nutrient management.

Average Annual Precipitation Map (inches)⁴.



Common Resource Area Map



Land Cover Map ⁵.

	Acres	Percent		Acres	Percent
			 Low Intensity Residential	3,300	0.4
 Pasture Hay	303,201	33.3	 High Intensity Residential	1,457	0.2
 Deciduous Forest	332,678	36.5	 Evergreen Forest	2,514	0.3
 Row Crops	155,667	17.1	 Mixed Forest	4,750	0.5
 Open Water	52,465	5.8	 Transitional	175	0.0
 Woody Wetlands	20,680	2.3	 Urban / Recreational Grasses	463	0.1
 Small Grains	61	0	 Quarries / Strip Mines, Gravel Pits	227	0.0
 Emergent Herbaceous Wetlands	15,545	1.7	 Bare Rock / Sand / Clay	0	0.0
 Commercial/Industrial / Transport	6,790	0.7			
			Total Acres	911,189	100

ASSESSMENT OF WATERS ⁶.

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.



- Listed Waters
- 303(d) Listed
 - Exceptional Resource Waters
 - Outstanding Resource Waters
 - Sub Watersheds
 - Streams / Rivers



Listed Waters Map

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Exceptional Resource Waters List

- | | | |
|------------------------------|---------------------------|-----------------|
| Copper Creek | Coulee Creek | Creek 29 -16 |
| Creek 33 - 11 (Poplar Creek) | Creek 36 - 16 (Cox Creek) | Fish Back Creek |
| Hornby Creek | Rulland Coulee Creek | Sugar Creek |
| Timber Coulee Creek | | |

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/gpsp/gpbasin/>

303(d) Waters	Mercury	Bacteria	Habitat Alteration	PCBs	E. Coli	Unknown	Turbidity
Mississippi River - Wisconsin Portion	X			X			
Mississippi River - Lock and Dam #6 to Root River	X			X			
Mississippi River - Root River (MN) to Wisconsin River	X			X			
Mississippi River - Root River to MN/IA Border	X			X			X
Paint Creek						X	
Unnamed Creek						X	
Upper Iowa Creek					X		
Yellow River (Segment # 1)		X					
Yellow River (Segment # 2)			X			X	
Yellow River (Segment # 3)						X	

SOILS ^{7.}

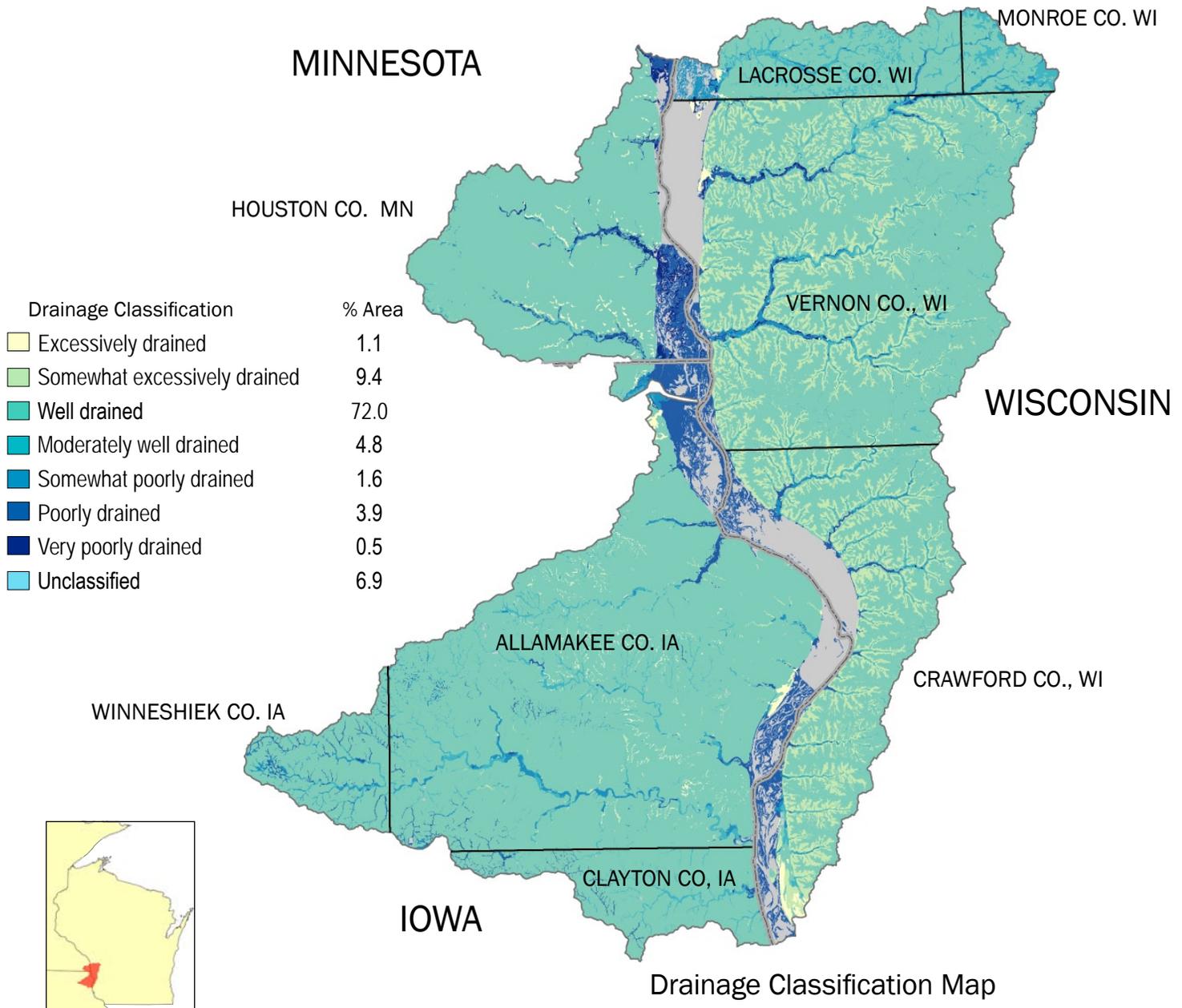
This watershed is dominantly characterized by an unglaciated ridge and valley landscape. The predominant bedrock type is the indurated Prairie du Chien dolostone with the Trempealeau and Tunnel City Cambrian sandstones exposed at the lower elevations. Soils on the stable hill summits formed dominantly in loess, overlying clayey pedis sediment and residuum from the Prairie du Chien dolostone. Moderately deep to very deep loess overlies the bedrock-controlled landscapes. Common surface texture is silt loam. These soils are generally well drained, have moderate to slow permeability, and moderate to very high available water capacity. Erosion is a major concern.

The valley parts of the landscape generally contain stream terraces and floodplains. The soils formed dominantly in silty alluvium. Drainage classes range from well to very poorly drained, permeability from moderate to slow, and available water capacity from moderate to very high. Erosion, flooding, and sedimentation are major concerns in these valleys.

This watershed is dissected by the Mississippi River which also forms the border between Wisconsin on the east and Minnesota and Iowa on the west. The Mississippi flows through a wide valley containing multiple levels and ages of terraces and floodplains made up of sandy, loamy and silty alluvial soils depending upon contributing sources. The terraces are often underlain by valuable gravel and cobble deposits. Wind forces across this wide valley from the south and west, deposited eolian sands that formed dunes in many places on the eastern side and a few small areas on the western side.

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.”

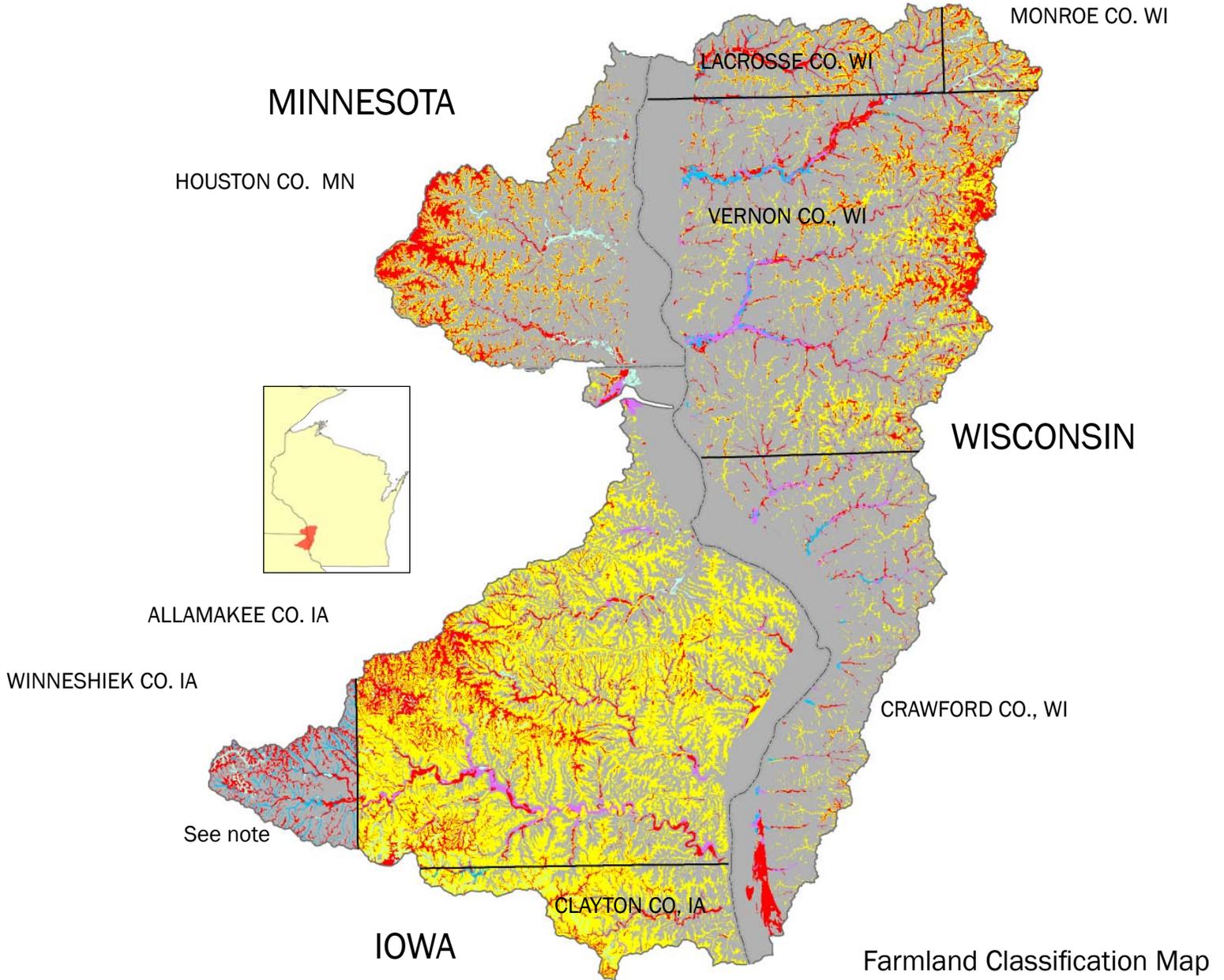


Visit the online Web Soil Survey at <http://websoilsurvey.nrcs.usda.gov> for official and current USDA soil information as viewable maps and tables.

 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	58,089	13.2
 Farmland of statewide importance	35,613	8.1
 Prime farmland if drained	10,911	2.5
 Not Prime farmland	328,912	74.9
 Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season	5,598	1.3

Note:
 The work to resolve inconsistencies brought on by the county based soil survey approach by implementing the Major Land Resource Area soil survey approach is currently underway. 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.

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.

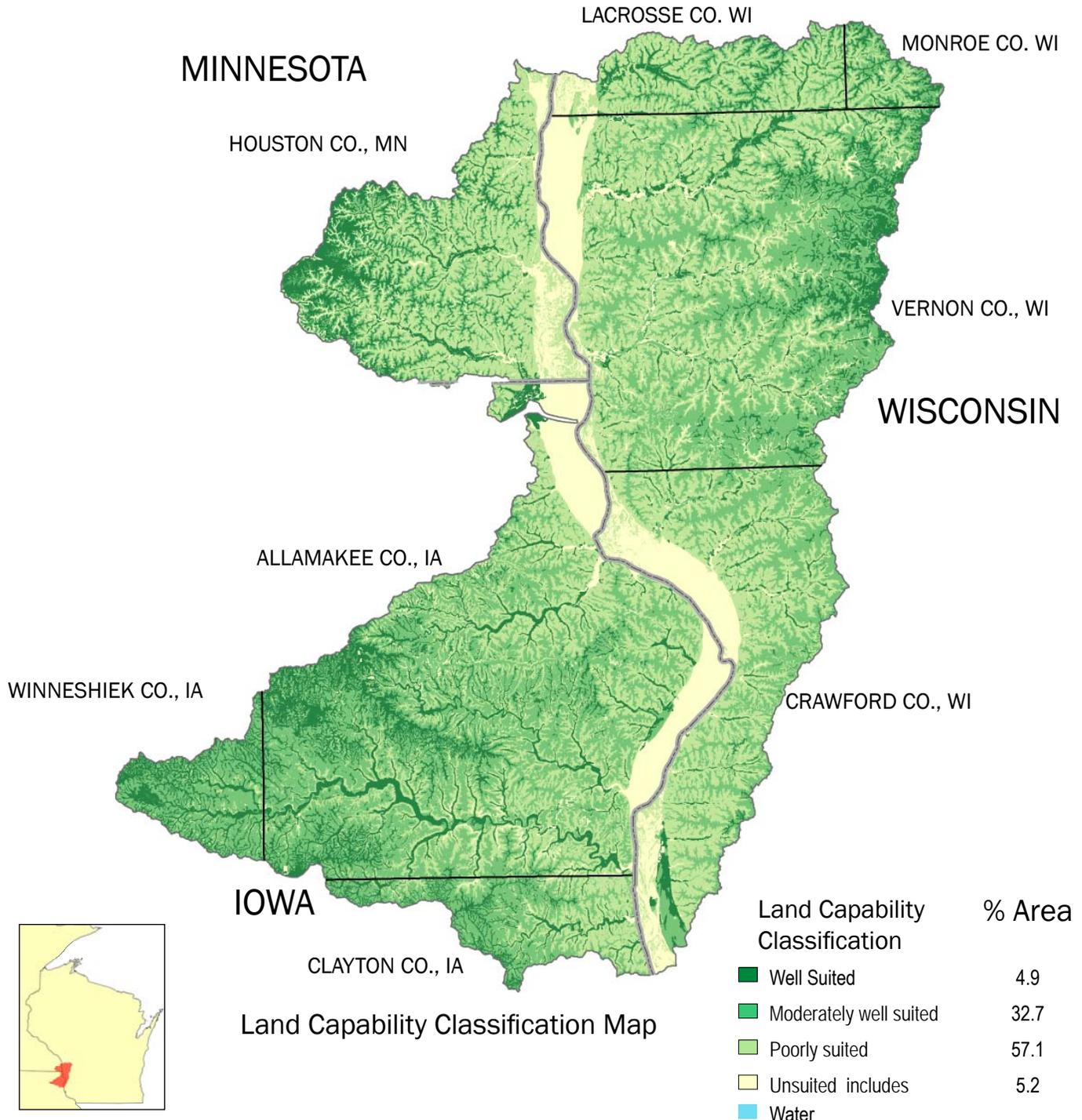
Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register 1994). These soils, under natural conditions, 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).



Hydric Soils Map

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.



RESOURCE CONCERNS

Due to the extent of steep, highly erodible land in the watershed, the largest nonpoint resource concern in the watershed is soil erosion; sheet, rill, and gully. Soil erosion and runoff contributes to excess sediment and nutrients in surface water as well as streambank erosion. Contour strip cropping, no-till planting, grassed waterways, and managed grazing, particularly livestock exclusion from woodlands, are some of the most effective conservation practices in addressing these concerns. Acute oxygen depletion in surface water caused by manure runoff events from fields, barnyards and other livestock feeding areas is also a concern, particularly for trout streams, and can lead to fish kills.

In many areas, shallow and fractured bedrock makes groundwater susceptible to contamination. Mass soil movement is also a concern when steep slopes are disturbed during road and building construction.

Flash flooding, due in large part to the steep gradient of the watershed, is a resource and safety concern. Heavy rains in August, 2007 led to significant flooding and damage in the watershed. Much damage was prevented by over 20 flood control structures built in the watershed in the 1960's and 1970's through the federal PL-566 program administered by the USDA-Soil Conservation Service in partnership with county governments. The Coon Creek and Bad Axe River subwatersheds have the largest concentration of the structures, which include a few, small recreational impoundments.



PRS AND OTHER DATA⁸.

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/>

PRS PERFORMANCE MEASURES

PRS Performance Measures	FY99	FY00	FY01	FY02	FY03	FY04	FY05	FY06	TOTAL
Total Conservation Systems Planned (acres)	11,304	22,500	22,580	22,232	20,902	0	22,944	28,258	150,720
Total Conservation Systems Applied (acres)	5,573	18,115	15,400	16,796	15,156	0	20,460	19,587	111,087
Conservation Practices									
Riparian Forest Buffers (391) (acres)	742	2,410	77	298	55	26	26	7	3,641
Erosion Control Total Soil Saved (tons/year)	2,853	76,893	75,817		151,500	0	0	0	567,013
Total Nutrient Management (590) (Acres)	0	1,642	2,042	2,472	2,344	7,152	3,269	2,285	21,206
Pest Management Systems Applied (595A) (Acres)	0	71	574	0	876	420	11	398	2,350
Prescribed Grazing 528a (acres)	758	3,050	2,848	106	1,263	645	196	364	9,230
Tree & Shrub Establishment (612) (acres)	565	428	427	475	147	185	71	53	2,351
Residue Management (329A-C) (acres)	2,069	7,110	7,754	6,259	6,878	8,488	7,249	7,890	53,697
Total Wildlife Habitat (644 - 645) (acres)	455	7,335	5,612	3,199	2,543	1,879	1,877	1,061	23,961
Total Wetlands Created, Restored, or Enhanced (acres)	17	22	44	36	8	4	5	23	159
Acres enrolled in Farmbill Programs									
Conservation Reserve Program	4,706	9,716	3,796	1,971	3,590	0	722	1,200	25,701
Wetlands Reserve Program	0	0	0	0	0	0	0	0	0
Environmental Quality Incentives Program	17	3,572	2,510	3,457	1,463	0	7,758	6,012	24,789
Wildlife Habitat Incentive Program	0	56	792	129	26	0	966	105	2,074
Farmland Protection Program	0	0	0	0	0	0	0	0	0

CENSUS AND SOCIAL DATA (RELEVANT)⁹.

There are 1,343 farms in the watershed, covering a total of 268,027 acres. Average farm size in the watershed is 200 acres compared to a statewide average of 201 acres in Wisconsin. 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

2002 Ag Census Data		Crawford	La Crosse	Monroe	Vernon	Clayton	Allamakee	Winneshiak	Houston	Total
	Farms (number)	432	124	41	1,051	133	748	98	333	2,959
	Land in farms (acres)	98,596	13,606	145,197	64,533	35,839	225,148	24,792	81,871	689,580
	Total cropland (acres)	50,218	7,453	76,698	37,015	26,086	132,277	19,783	48,974	398,504
	Irrigated land (acres)	52	64	1,527	13	40	6	2	77	1,781
	Principal operator by primary occupation - Farming (number)	271	35	473	228	92	485	65	205	1,855
Farms by Size	Farms by size - 1 to 10 acres	16	4	34	14	5	34	4	9	120
	Farms by size - 11 to 49 acres	78	13	146	72	18	112	19	54	512
	Farms by size - 50 to 179 acres	206	27	375	177	45	206	31	111	1,177
	Farms by size - 180 to 499 acres	158	19	192	93	45	266	31	122	925
	Farms by size - 500 to 999 acres	27	5	39	16	16	94	10	30	237
	Farms by size - 1,000 acres or more	9	1	14	4	4	36	4	7	79
Livestock and Poultry	Livestock and poultry - Cattle and calves inventory (farms)	264	33	457	231	63	367	48	170	1,635
	Livestock and poultry - Cattle and calves inventory - Beef cows (farms)	126	14	160	84	36	235	26	106	786
	Livestock and poultry - Cattle and calves inventory - Milk cows (farms)	86	12	212	99	24	106	16	46	599
	Livestock and poultry - Hogs and pigs inventory (farms)	19	2	35	14	15	41	10	22	159
	Livestock and poultry - Sheep and lambs inventory (farms)	6	2	33	13	3	18	4	13	93
	Livestock and poultry - Layers 20 weeks old and older inventory (farms)	24	3	65	31	3	7	2	9	144
	Livestock and poultry - Broilers and other meat-type chickens sold (farms)	6	1	22	6	1	1	1	4	43
Selected Crops Harvested	Selected crops harvested - Corn for grain (acres)	10,757	2,388	17,921	8,268	10,839	42,801	7,755	15,084	115,813
	Selected crops harvested - Corn for silage or greenchop (acres)	1,685	402	6,239	2,283	698	4,543	793	2,273	18,917
	Selected crops harvested - Wheat for grain, all (acres)	135	15	197	112	8	0	0	35	502
	Selected crops harvested - Wheat for grain, all - Winter wheat for grain (acres)	0	12	0	102	8	0	0	0	121
	Selected crops harvested - Wheat for grain, all - Spring wheat for grain (acres)	0	4	0	10	0	0	0	0	14
	Selected crops harvested - Oats for grain (acres)	1,323	164	2,254	1,041	582	3,834	485	1,364	11,047
	Selected crops harvested - Barley for grain (acres)	68	14	129	92	26	405	47	60	840
	Selected crops harvested - Soybeans for beans (acres)	4,609	827	6,212	3,547	4,883	19,976	4,514	7,698	52,268
	Selected crops harvested - Forage - land used for all hay and all haylage, grass silage, and greenchop (see text) (acres)	16,079	2,352	28,103	13,194	3,920	30,135	3,121	12,769	109,673
	Selected crops harvested - Vegetables harvested for sale (see text) (acres)	32	12	47	30	0	29	3	10	162
	Selected crops harvested - Land in orchards (acres)	274	7	45	18	8	53	2	68	474

11. URBAN POPULATION

Name	1990	2000	2005	Median Household Income*
Brownsville, MN	415	517	531	\$46,250
Chaseburg, WI	365	306	304	\$38,438
Ossian, IA	810	853	836	\$38,214
Coon Valley, WI	817	718	748	\$36,458
Waterville, IA	140	145	142	\$35,625
Monona, IA	1520	1550	1433	\$35,000
Prairie du Chien, WI	5,659	6,018	5,880	\$34,038
Ferryville, WI	154	174	178	\$33,958
De Soto, WI	326	366	369	\$33,036
New Albin, IA	534	527	529	\$32,981
Genoa, WI	266	263	266	\$32,857
Postville, IA	1472	2273	2322	\$32,667
Caledonia, MN	2846	2,965	2,939	\$32,455
Westby, WI	1,866	2,045	2,142	\$32,340
Eastman, WI	369	437	431	\$32,321
Stoddard, WI	775	815	817	\$31,250
La Crosse, WI	51,003	51,818	50,287	\$31,103
Cashton, WI	780	1,008	1,018	\$30,938
Lynxville, WI	153	176	175	\$30,833
Castalia, IA	177	175	174	\$30,417
Waukon, IA	4019	4135	4013	\$30,325
Marquette, IA	479	421	850	\$30,179
McGregor, IA	797	871	897	\$30,163
Eitzen, MN	221	229	240	\$29,688
Luana, IA	190	249	239	\$29,583
Lansing, IA	1007	1012	987	\$29,482
Mount Sterling, WI	217	215	212	\$29,375
Harpers Ferry, IA	284	330	319	\$29,091
Viroqua, WI	3,922	4,335	4,424	\$28,804

POPULATION ETHNICITY - ALL STATES IN WATERSHED

Total Population = 46,283
 Urban population = 13,052
 Rural Population = 33,234
 White alone = 44,761
 Hispanic or Latino = 678
 Two or more races = 295
 Black or African American alone = 430
 Some other race alone = 468
 American Indian and Alaska Native alone = 92
 Asian Alone = 237
 Native Hawaiian and Other Pacific Islander alone = 1

10.

POPULATION ETHNICITY - IOWA

Total Population = 14,213
 Urban population = 523
 Rural Population = 13,691
 White alone = 13,599
 Hispanic or Latino = 532
 Two or more races = 86
 Black or African American alone = 38
 Some other race alone = 424
 American Indian and Alaska Native alone = 19
 Asian Alone = 46
 Native Hawaiian and Other Pacific Islander alone = 1

POPULATION ETHNICITY - MINNESOTA

Total Population = 4,098
 Urban population = 2,500
 Rural Population = 1,598
 White alone = 3,791
 Hispanic or Latino = 47
 Two or more races = 50
 Black or African American alone = 117
 Some other race alone = 20
 American Indian and Alaska Native alone = 6
 Asian Alone = 113
 Native Hawaiian and Other Pacific Islander alone = 0

POPULATION ETHNICITY - WISCONSIN

Total Population = 27,972
 Urban population = 10,029
 Rural Population = 17,945,
 White alone = 27,371
 Hispanic or Latino = 99
 Two or more races = 159
 Black or African American alone = 275
 Some other race alone = 24
 American Indian and Alaska Native alone = 67
 Asian Alone = 78
 Native Hawaiian and Other Pacific Islander alone = 0

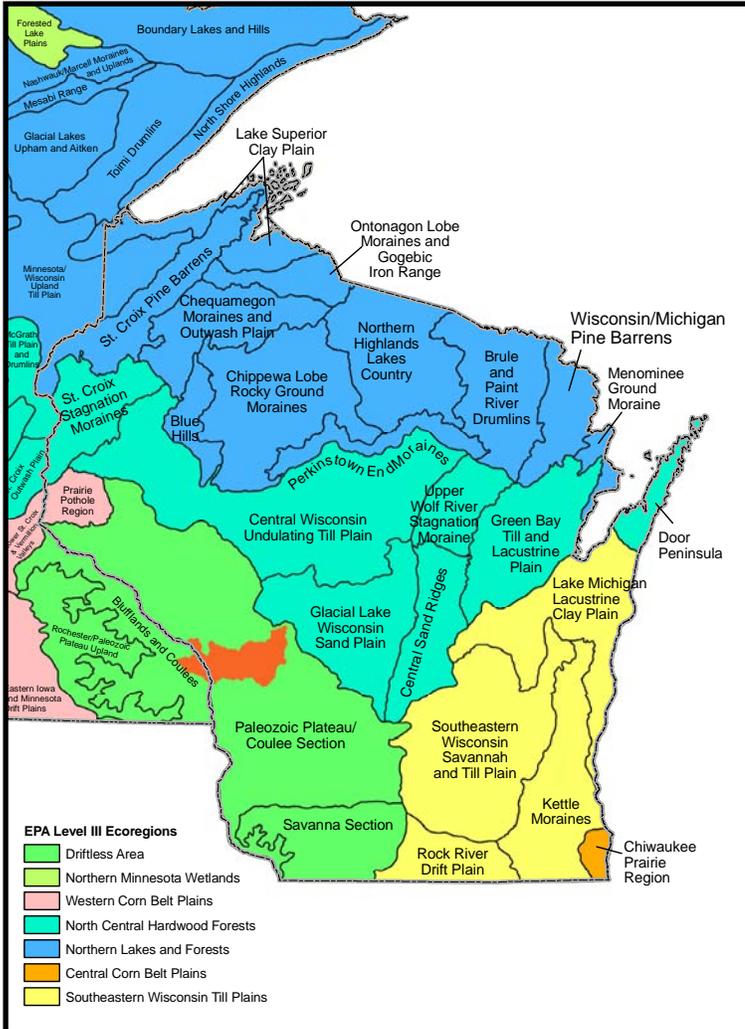
ECOLOGICAL LANDSCAPES¹².
GENERAL DESCRIPTIONS

DRIFTLESS AREA

The hilly uplands of the Driftless Area ecoregion easily distinguish it from surrounding ecoregions. Much of the area consists of a deeply dissected loess-capped plateau. Also called the Paleozoic Plateau because there is evidence of glacial drift in this region, the glacial deposits have done little to affect the landscape compared to the subduing influences in adjacent ecoregions. Livestock and dairy farming are major land uses and have had a major impact on stream quality. In contrast to the adjacent glaciated ecoregions, the Driftless Area has few lakes, most of which are reservoirs with generally high trophic states, and a stream density and flow that is generally greater than regions to the east.

Paleozoic Plateau Coulee Section

Dissected slopes and open hills with most of the gentle slope on the lowland characterize the Coulee Section ecoregion. Soils are well drained silty loess over residuum, limestone, sandstone or shale, with soils over quartzite in the Baraboo Hills area. Land use in the region is predominantly mixed agriculture/ woodland, with most of the agriculture occurring on the lowlands and more level hilltops. The potential natural vegetation of this Coulee Section ecoregion is a mosaic of oak forests and prairie, with larger areas of sugar maple/basswood/oak forests than in Savanna Section ecoregion.



Blufflands and Coulees

Steeply dissected plateau, wooded on slopes with crops in bottoms, some pasture and crops on bluffs.

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 Coon-Yellow Watershed is 5.2.

WATERSHED PROJECTS, STUDIES, MONITORING, ETC.

Dozens of miles of stream habitat improvement work has been performed over many years in the watershed. Partners include county land conservation departments, the Wisconsin Department of Natural Resources (WDNR), Trout Unlimited, USDA-NRCS, and others. Projects are typically done on trout streams and involve streambank shaping, stabilization, and the installation of lunger structures to provide habitat and cover for fish.

The Minnesota and Wisconsin portions of the watershed are project areas for the Conservation Reserve Enhancement Program (CREP). CREP is local, state, and federal partnership effort that builds upon the USDA Conservation Reserve Program (CRP). Practices such as filter strips, riparian buffers, and grassed waterways are available to landowners to agree to a fifteen year agreement that involve installation, practice, and annual payments with the option of perpetual easement. The Iowa portion of the watershed is not eligible for CREP but the similar continuous Conservation Reserve Program (CRP) is available.

Watershed projects within this HUC include Little Paint Creek and Big Paint Creek in Allamakee County, Iowa. The Little Paint Creek project focuses on cold water stream work and ground and surface water protection, with funding from the USDA-NRCS' PL-566 program. The Big Paint Creek project's focus is cold water stream work and is funded by the Iowa Department of Agriculture and Land Stewardship and the US Army Corps of Engineers' Aquatic Ecosystem Restoration Program. There have not been any WDNR Priority Watershed projects in this watershed. The WDNR conducts water quality monitoring in many streams and lakes within the watershed each year. The Minnesota Pollution Control Agency is responsible for water quality monitoring in the Minnesota portion of the watershed. The Iowa Department of Natural Resources is responsible for the portion in Iowa. The WDNR Surface Water Data Viewer (SWDV) is an online interactive mapping tool with multiple water-related datasets. <http://dnrmaps.wisconsin.gov/imf/imf.jsp?site=SurfaceWaterViewer>

PARTNER GROUPS

- Conservation Districts of Iowa <http://www.cdiowa.org/>
- Driftless Area Initiative <http://www.driftlessareainitiative.org/index.html>
- Iowa Department of Agriculture and Land Stewardship <http://www.agriculture.state.ia.us/>
- Iowa Department of Natural Resources <http://www.iowadnr.com/>
- Iowa Rivers Revival <http://www.iowarivers.org/Home/tabid/36/Default.aspx>
- Iowa State University Extension <http://www.extension.iastate.edu/>
- Minnesota Board of Water and Soil Resources <http://www.bwsr.state.mn.us>
- Minnesota Department of Agriculture <http://www.mda.state.mn.us>
- Minnesota Pollution Control Agency <http://www.pca.state.mn.us>
- Minnesota Department of Natural Resources <http://www.dnr.state.mn.us>
- Minnesota Waters <http://www.minnesotawaters.org>
- River Alliance of Wisconsin <http://www.wisconsinrivers.org/>
- Trout Unlimited
 - Coulee Region Chapter (WI)- www.CouleeRegionTU.org
 - Iowa Driftless Chapter <http://www.iadriftless.org/>
 - Minnesota - <http://www.mntu.org/index.php>
- US Army Corps of Engineers <http://www.usace.army.mil/>
- USDA Farm Service Agency
 - (IA) <http://www.fsa.usda.gov/FSA/stateoffapp?mystate=ia&area=home&subject=landing&topic=landing>
 - (MN) <http://www.fsa.usda.gov/mn/news/default.asp>
 - (WI) <http://www.fsa.usda.gov/wi/news/default.asp>,
- US Fish and Wildlife Service <http://www.fws.gov/midwest>
- USDA-Natural Resources Conservation Service
 - (IA) <http://www.ia.nrcs.usda.gov/>
 - (MN) <http://www.mn.nrcs.usda.gov/>
 - (WI) <http://www.wi.nrcs.usda.gov>
- University of Minnesota Extension <http://www.extension.umn.edu>
- University of Wisconsin Cooperative Extension <http://www.uwex.edu/ces/> and <http://basineducation.uwex.edu>
- Wisconsin Department of Agriculture, Trade, and Consumer Protection <http://www.datcp.state.wi.us>
- Wisconsin Department of Natural Resources <http://dnr.wi.gov/>
- Wisconsin Land and Water Conservation Association (County Land Conservation Committee organization)
www.wlwca.org
- Land and Water Conservation Directory
<http://datcp.state.wi.us/arm/agriculture/land-water/conservation/pdf/ar-pub-119-2007.pdf>

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 Coon Yellow Watershed were derived from a report issued by the Wisconsin Department of Natural Resources titled “The State of the Bad-Axe LaCrosse River Basin Report” March 2002, WDNR at <http://www.dnr.state.wi.us/org/gmu/> and the “Iowa Water Resources Project Directory” May 2004, USDA-NRCS-IA [ftp://ftp-fc.sc.egov.usda.gov/IA/news/2004 Water Resources.pdf](ftp://ftp-fc.sc.egov.usda.gov/IA/news/2004%20Water%20Resources.pdf)
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. 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:
 - LaCrosse Co., WI (WI063) Published 20061031
 - Monroe Co., WI (WI081) Published 20061206
 - Crawford Co. WI (WI023) Published 20060124
 - Vernon Co. WI (WI123) Published 20060124

Houston Co. MN (MN055) Published 20070113
Alamakee Co. IA (IA005) Published 20061114
Clayton Co. IA (IA043) Published 20061114
Winneshiek Co. IA (IA191) Published 20061116

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

12. Level III and IV Ecoregions Regions of Wisconsin map and descriptions were derived from electronic coverages available from Wisconsin DNR, Bureau of Integrated Science Services Branch in cooperation with the U.S Environmental Protection Agency. For more information visit ftp://ftp.epa.gov/wed/ecoregions/wi/wi_eco_pg.pdf