



**R**apid Watershed Assessments (RWA) 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.

## Introduction

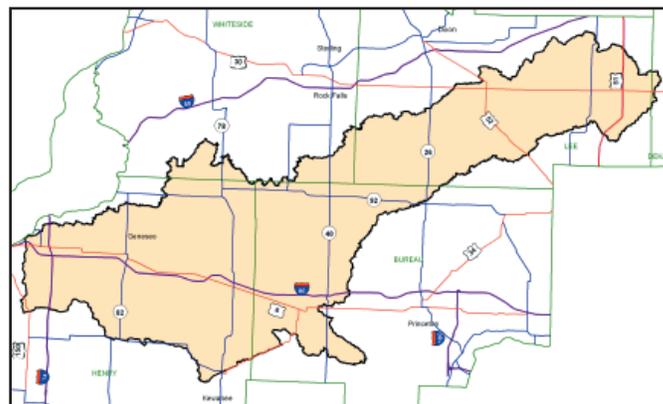
The Green River Watershed is located in Northwest Illinois.

The Green River flows in a westerly direction joining the Rock River just before it joins the Mississippi River near the Quad Cities. The watershed is 722,796 acres in size and is predominately agricultural. Approximately 75 percent of the area is associated with agriculture, with the dominant crops being corn and soybeans. The watershed includes parts of Henry, Whiteside, Lee, Bureau and DeKalb Counties. Conservation assistance is provided by five NRCS Field Offices, one soil survey office, and two Resource Conservation and Development (RC&D) offices.



The Green River Watershed is part of the Greater Lower Rock River Watershed. About half of the Lower Rock Watershed consists of the outwash plain known as

## Green River Watershed Location Map



the Green River Lowlands. Before Euro-Americans arrived in great numbers, about 75 percent of the land is thought to have been covered by grasses and flowering plants of the tall grass prairie. Some of the region's pre-settlement forests and prairies were wet much or most of the year, along with backwater lakes, seeps and marshes. To reduce flooding, all but 27 miles of the Green River has been dredged and straightened.

The population of the watershed is mostly rural, but there are many small towns and villages found throughout the area. The largest population centers are the cities of Geneseo, (pop. 6,480), Colona, (pop. 5,173), Amboy, (pop. 2,561), and Atkinson (pop. 1,001). Agriculture and manufacturing are the major components of the regional economy.



Watershed Information .....	4
Elevation & Annual Precipitation .....	5
Common Resource Areas .....	6
Land Cover .....	7
Classifications .....	8-9
- Drainage	
- Farmland	
Hydric Soils .....	10
Soil Parent Materials .....	11
Public Lands and Natural Areas .....	12
Aquifer Sensitivity .....	13-14
- Nitrate Leaching	
- Pesticide Leaching	
National Wetland Inventory .....	15
303(d) Impaired Waters .....	16-17
Biologically Significant Streams .....	18
Conservation on the Ground .....	19-21
- Practice Summary	
- PRS Performance Measures	
Census and Social Data .....	22
Related Watershed Projects, Conservation Partners .....	23
Endnotes .....	24-26

All RWA data is a collection of information from various sources that was developed and compiled by different entities which over time will become obsolete as new data is gathered and analyzed. For the most up-to-date information possible, RWA users should consult the present web sites and archives offered by agencies and entities listed in the endnotes.

## Hydrologic Unit Classification

**W**atersheds are organized into a hydrologic classification system that divides and subdivides areas of the U.S. into successively smaller watersheds. These levels, used to organize hydrologic data, are called "hydrologic units," which represent natural and man-made watersheds. They are identified by a numeric code called "hydrologic unit code," or "HUC", which is an 8-digit code. The HUC describes the relation of units to each other, representing how smaller watersheds (12-digit codes) drain areas that together form larger watersheds (10-digit codes).

## Green River Watershed County Areas

County	County Acres	Acres in HUC	% Acres of HUC	% of County in HUC
Henry	528,690	292,506	40.0	55.0
Whiteside	446,179	33,861	5.0	7.0
Lee	466,551	223,873	31.0	48.0
Bureau	559,187	171,014	24.0	30.0
DeKalb	405,938	1,542	0.2	0.3
<b>Total</b>		<b>722,796</b>		

## Green River Subwatershed

HUC_10_Name	HUC 10 ID	Acres	% of Area
Willow Creek-Green River	0709000701	126,807.00	17.50
Walnut Creek-Green River	0709000702	162,498.00	22.50
Mud Creek	0709000703	155,616.00	21.50
Main Union Special Ditch-Green River	0709000704	92,253.10	12.80
Spring Creek-Green River	0709000705	102,292.00	14.20
Green River	0709000706	83,343.70	11.50
<b>Total</b>		<b>722,809.80</b>	

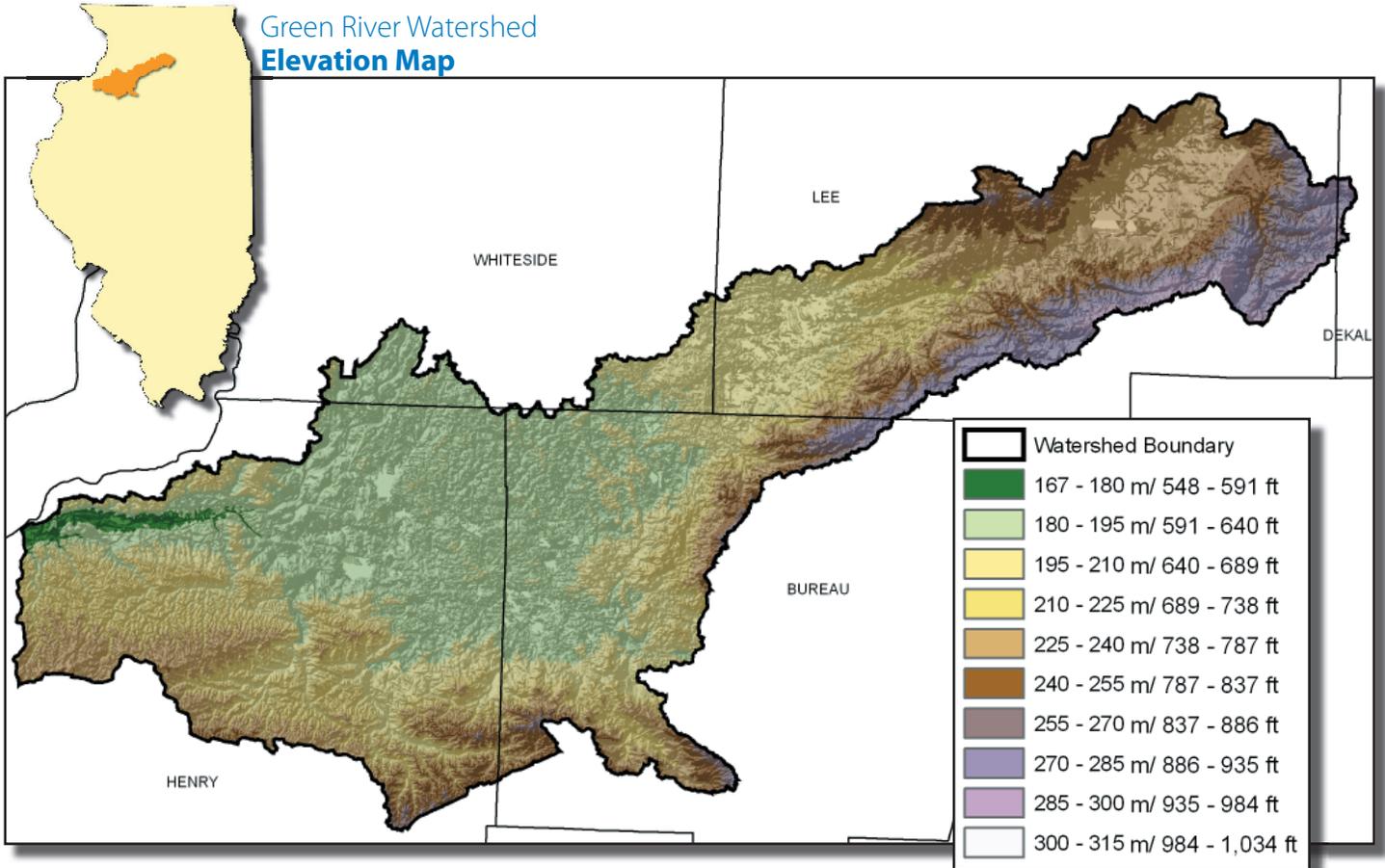
# Elevation & Annual Precipitation

**Green River Watershed**

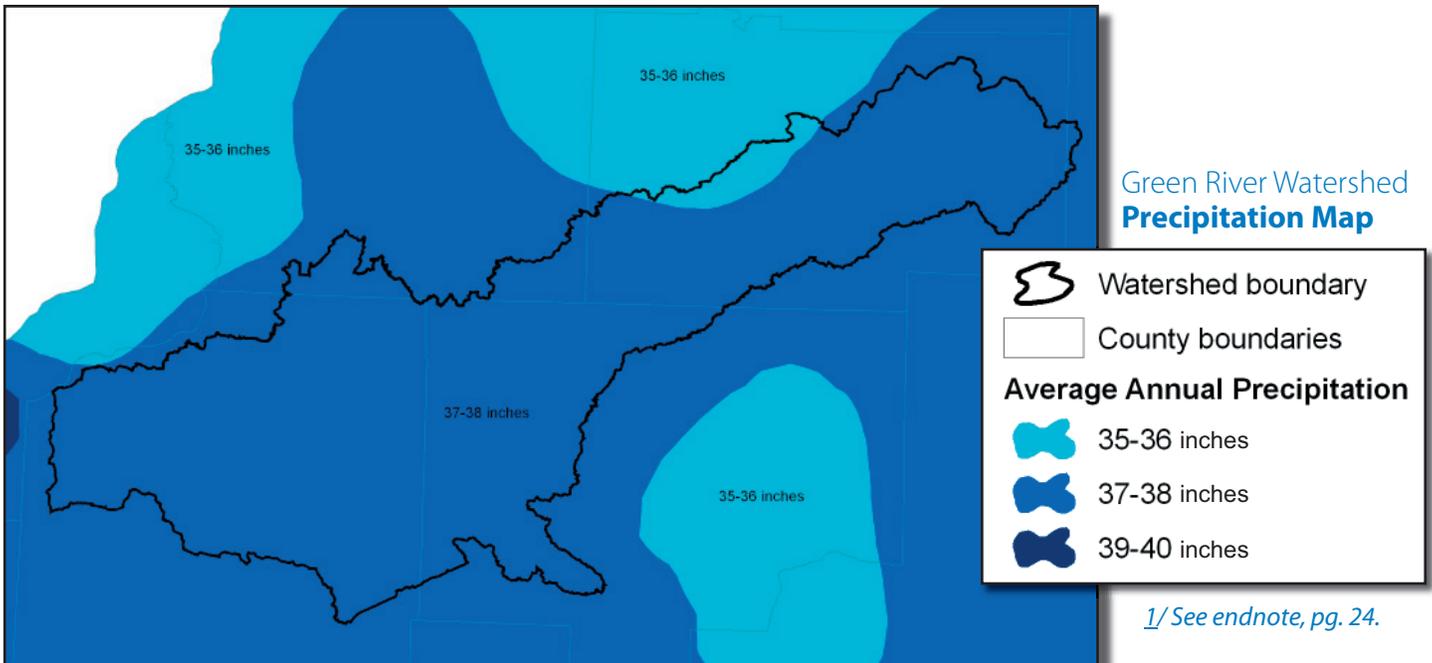
(IL) HUC: 07090007

Total Acres: 722,796

Green River Watershed  
**Elevation Map**



Green River Watershed  
**Precipitation Map**



*1/ See endnote, pg. 24.*

**C**ommon Resource Area (CRA) delineations are defined as geographical areas where resource concerns, problems and treatment needs are similar. CRAs 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 CRAs.

### 108.A3 Central Corn Belt Deep Loess and Drift Plains, Eastern Part - Moraines

Gently sloping and moderately sloping morainal area. Soils are dark colored, moderately well drained and somewhat poorly drained and formed in silty and loamy deposits overlying medium textured till. Poorly drained soils are in drainageways and potholes. The area is extensively used for corn and soybean production. The main resource concerns are cropland erosion, water quality, and wildlife habitat improvement.

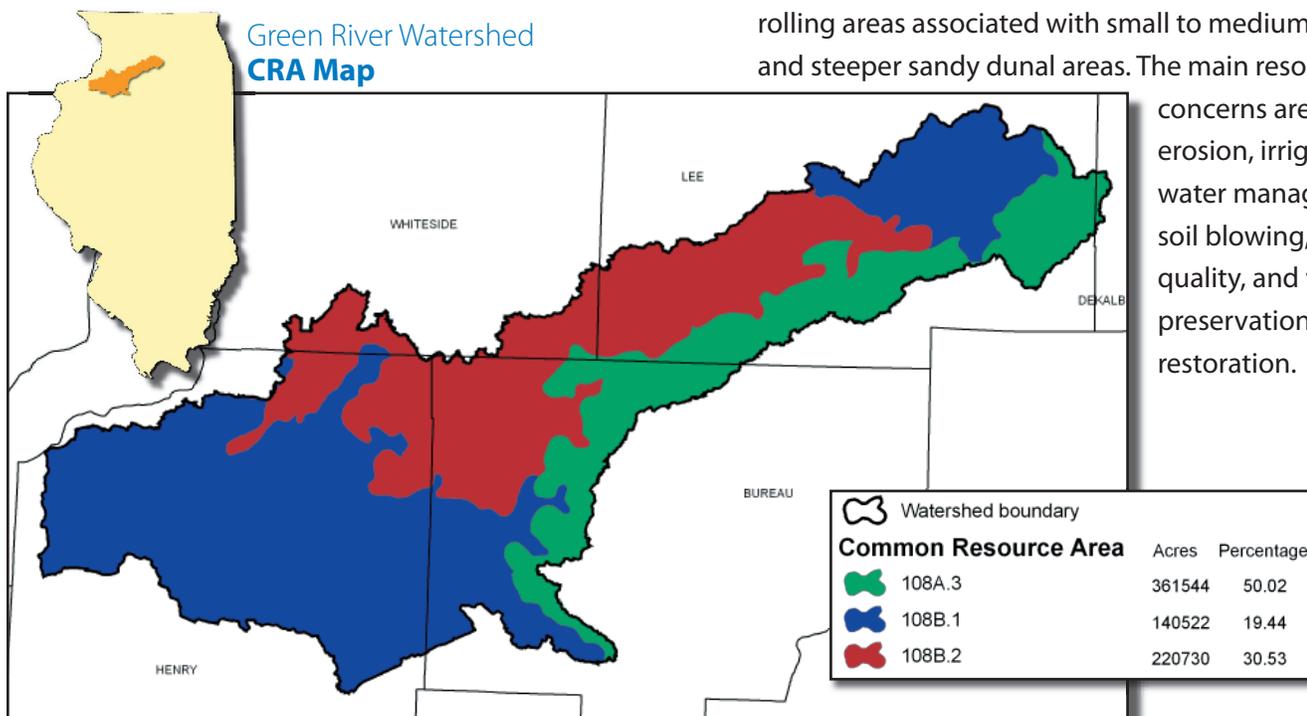
### 108.B1 Central Corn Belt Deep Loess and Drift Plains, Western Part

Nearly level and gently sloping, dark colored, poorly drained to moderately well drained soils formed in loess. The area is extensively subsurface drained and used for corn and soybean production. More diverse agriculture and the few remaining woodlands are in the more rolling areas associated with small to medium streams.

### 108.B2 Central Corn Belt Deep Loess and Drift Plains, Western Part - Outwash

Nearly level to sloping, dark colored, poorly drained to excessively drained soils formed in loamy to sandy outwash. Corn and soybean production is the main land use. Poorly drained areas are extensively subsurface drained. Well drained and excessively drained sandy areas are extensively irrigated. More diverse agriculture and the few remaining woodlands are in the more rolling areas associated with small to medium streams and steeper sandy dunal areas. The main resource

concerns are cropland erosion, irrigation water management, soil blowing, water quality, and wetland preservation and restoration.



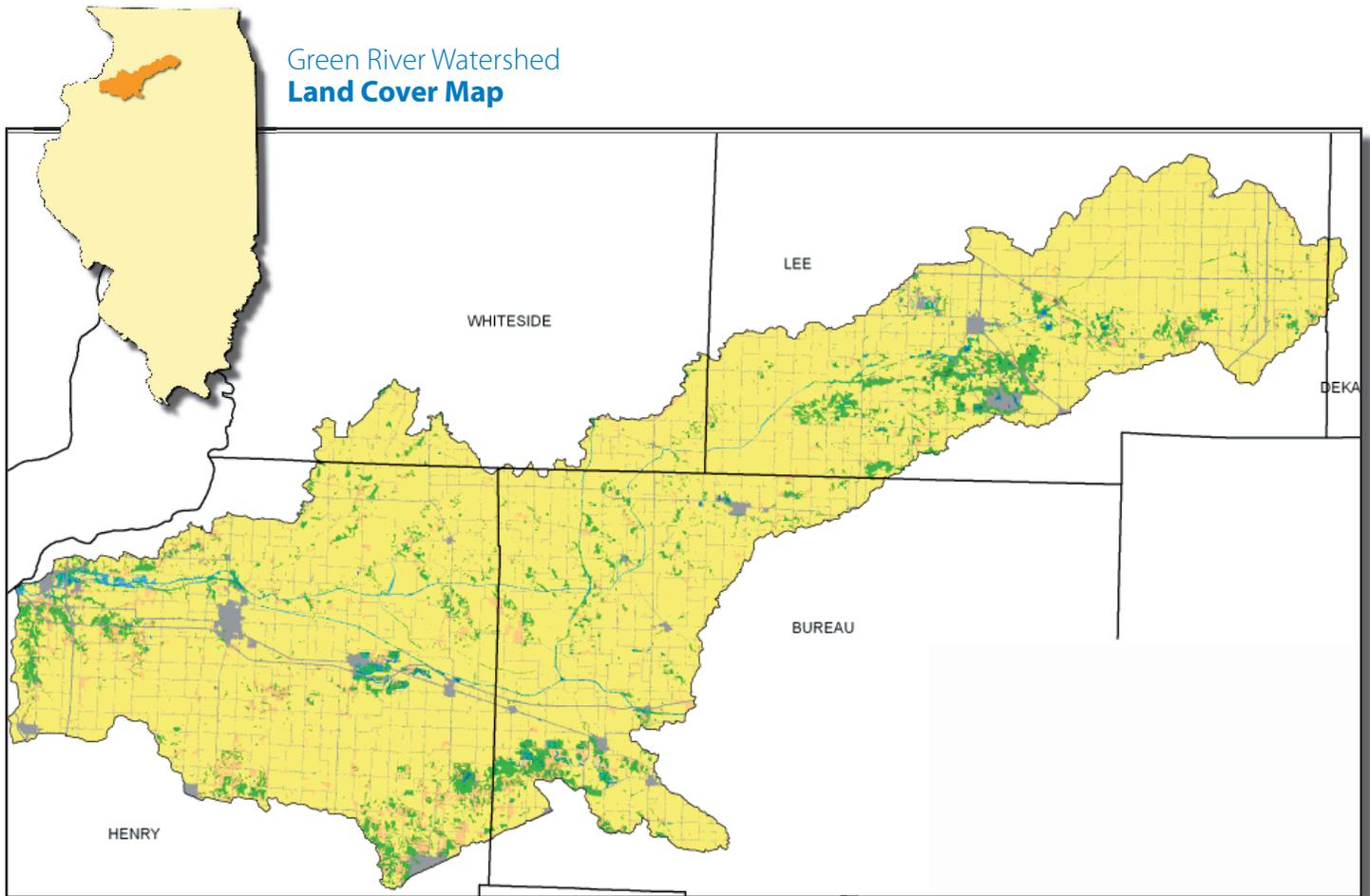
*2/ See endnote, pg. 24.*

# Land Cover Map

**Green River Watershed**

(IL) HUC: 07090007

Total Acres: 722,796



	Acres	Percentage
Watershed boundary		
<b>Landcover</b>		
Open water	2803	0.39
Developed, open space	28278	3.91
Developed, low intensity	15701	2.17
Developed, medium intensity	3514	0.49
Developed, high intensity	847	0.12
Barren land	108	0.01
Deciduous forest	43786	6.06
Evergreen forest	451	0.06
Grassland/ herbaceous	483	0.07
Pasture/hay	25363	3.51
Cultivated crops	598056	82.74
Woody wetlands	3388	0.47
Emergent herbaceous wetlands	18	0.00

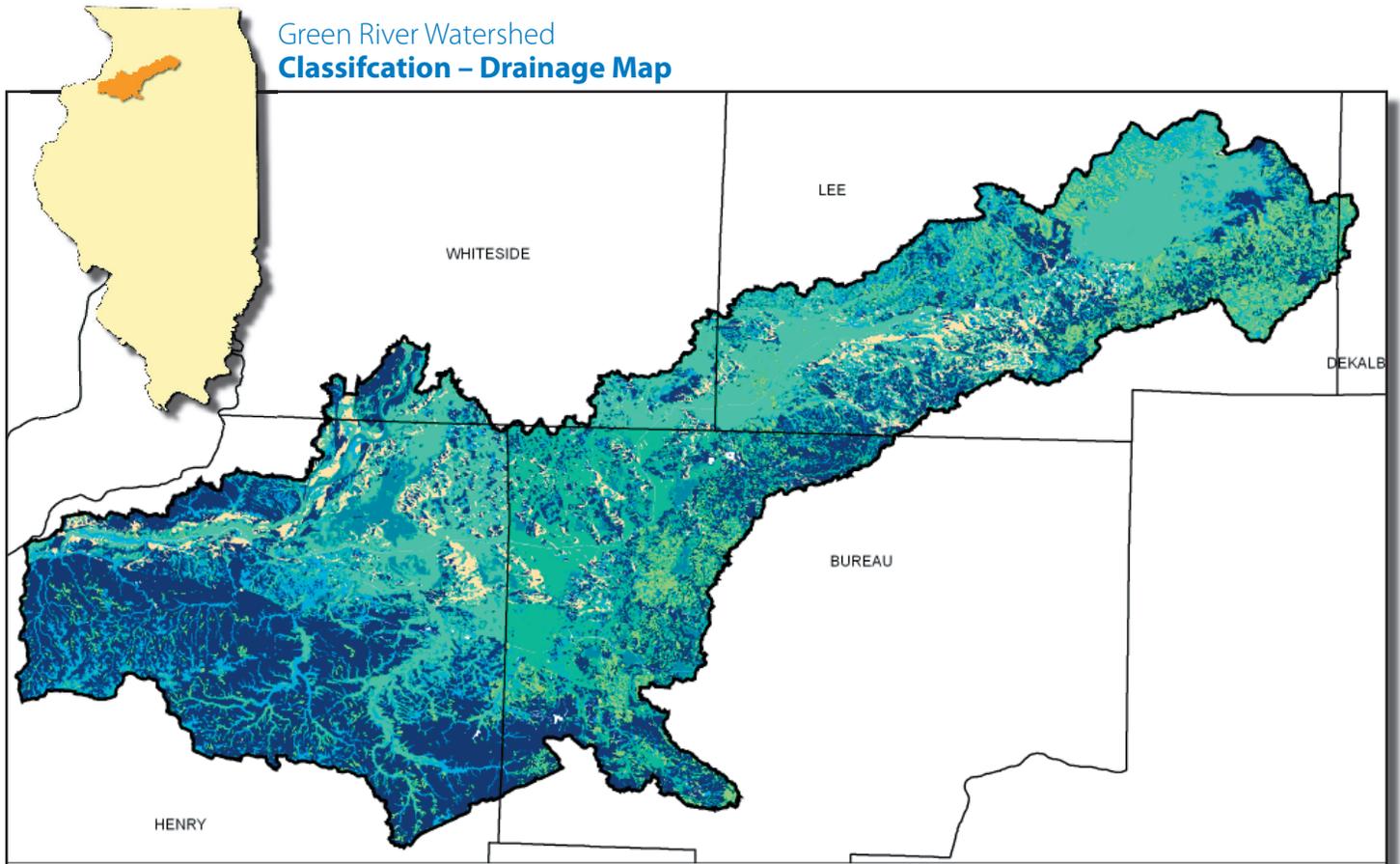
*4/ See endnote, pg. 24.*

# Classification

## Drainage

**Green River Watershed**  
 (IL) HUC: 07090007  
 Total Acres: 722,796

**D**rainage 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” that can be accessed at <http://soils.usda.gov/technical/manual/>.



Drainage Classification	Acres	Percentages
Watershed boundary		
Excessively drained	47526	6.57
Somewhat excessively drained	361	0.05
Well drained	260555	36.04
Moderately well drained	57041	7.89
Somewhat poorly drained	102453	14.17
Very poorly drained	21875	3.03
Poorly drained	233156	32.26

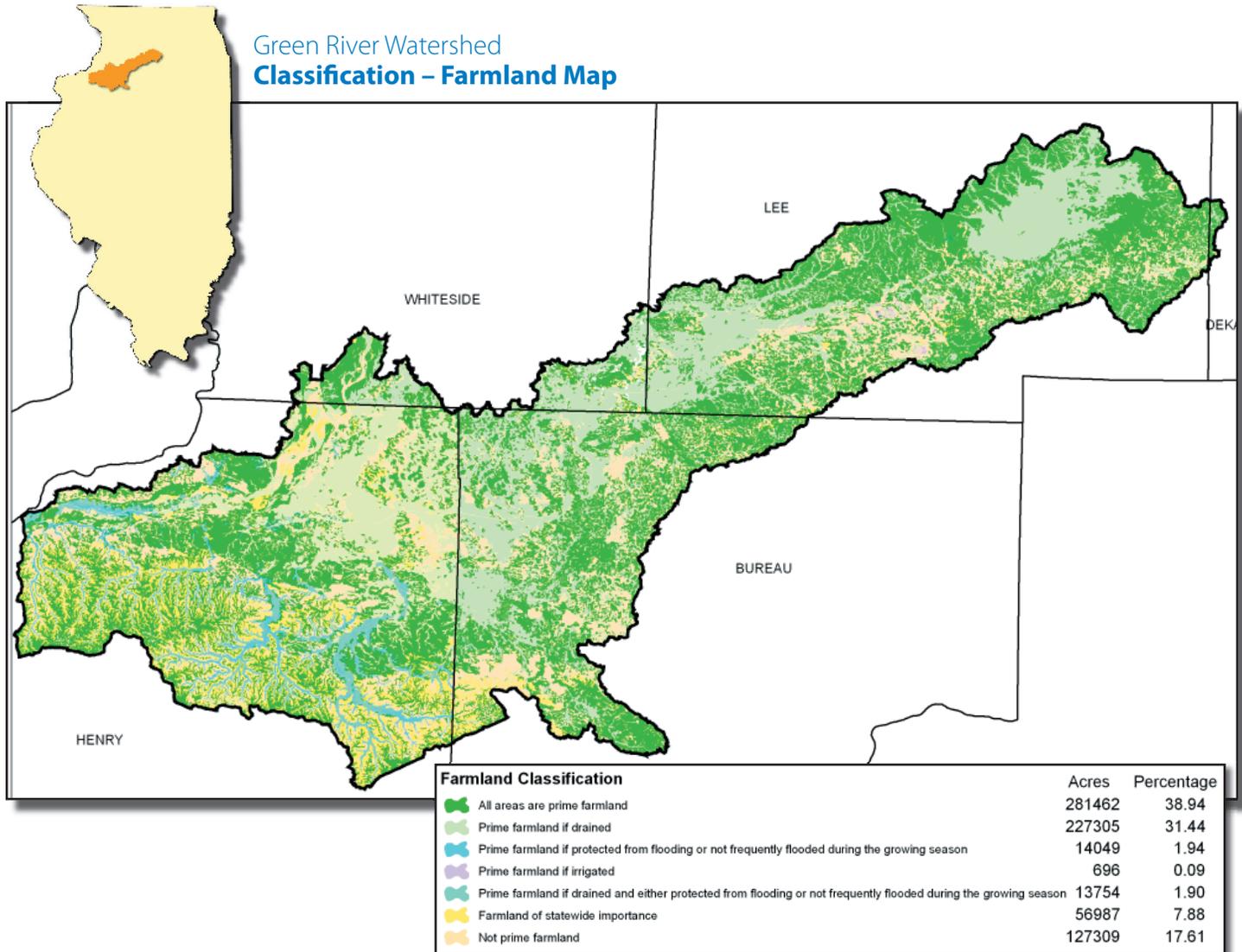
*4/ See endnote, pg. 24.*

# Classification

## Farmland

**Green River Watershed**  
 (IL) HUC: 07090007  
 Total Acres: 722,796

**F**armland 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 7CFR657. The website is: [http://www.access.gpo.gov/nara/cfr/waisidx\\_00/7cfr657\\_00.html](http://www.access.gpo.gov/nara/cfr/waisidx_00/7cfr657_00.html).

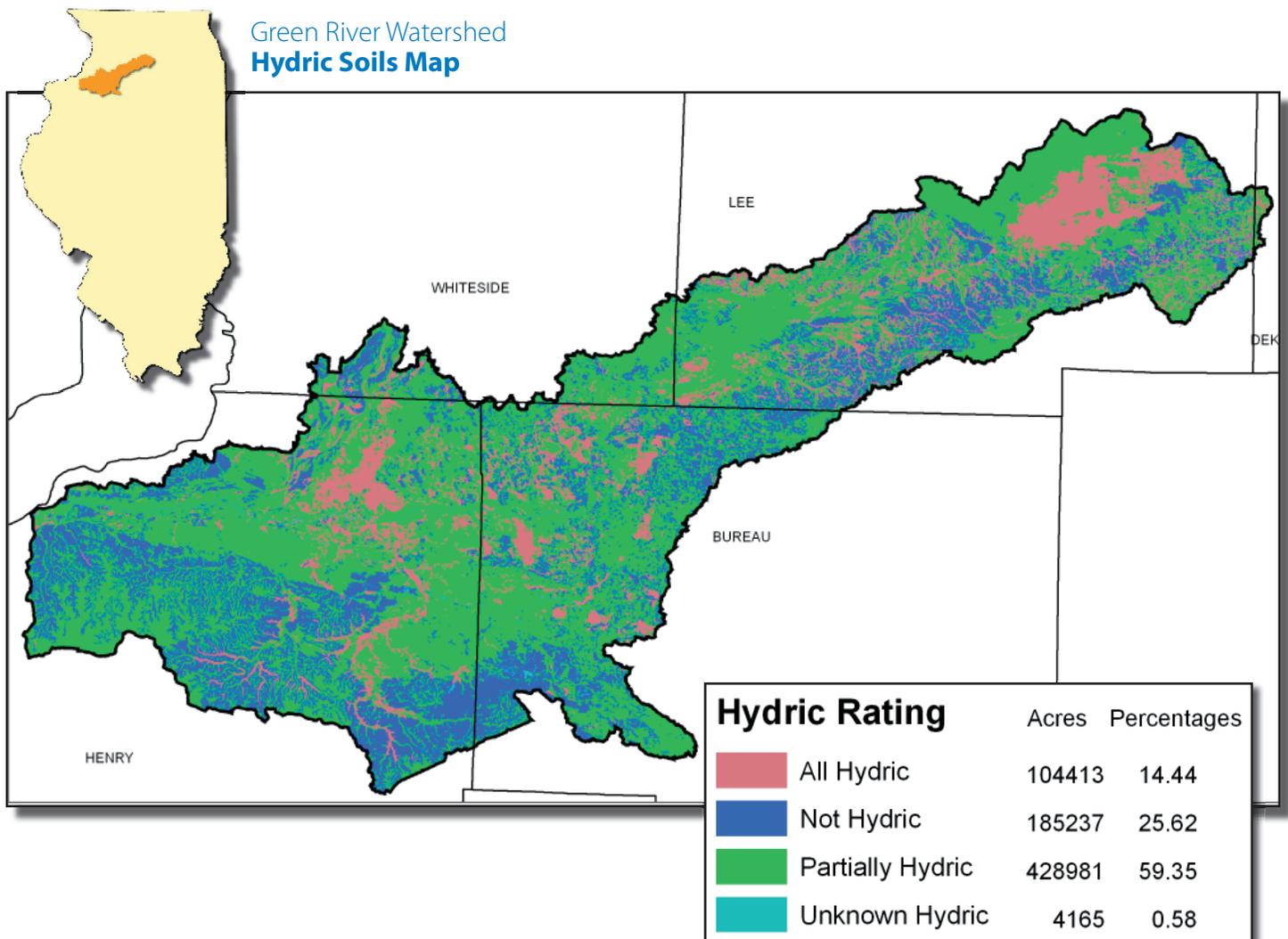


*5/ See endnote, pg. 25.*

# Hydric Soils

**Green River Watershed**  
 (IL) HUC: 07090007  
 Total Acres: 722,796

This rating provides an indication of the proportion of the map unit that meets criteria for hydric soils. Map units dominantly made up of hydric soils may have small areas or inclusions of non-hydric soils in higher positions on the landform. Map units dominantly made up of non-hydric soils may have inclusions of hydric soils in lower landform positions. Partially hydric soils are non-hydric soils with a probability of hydric soil inclusions. 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 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, which are used to make on site determinations of hydric soils. These are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and others, 2002).



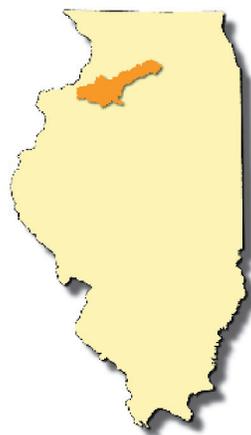
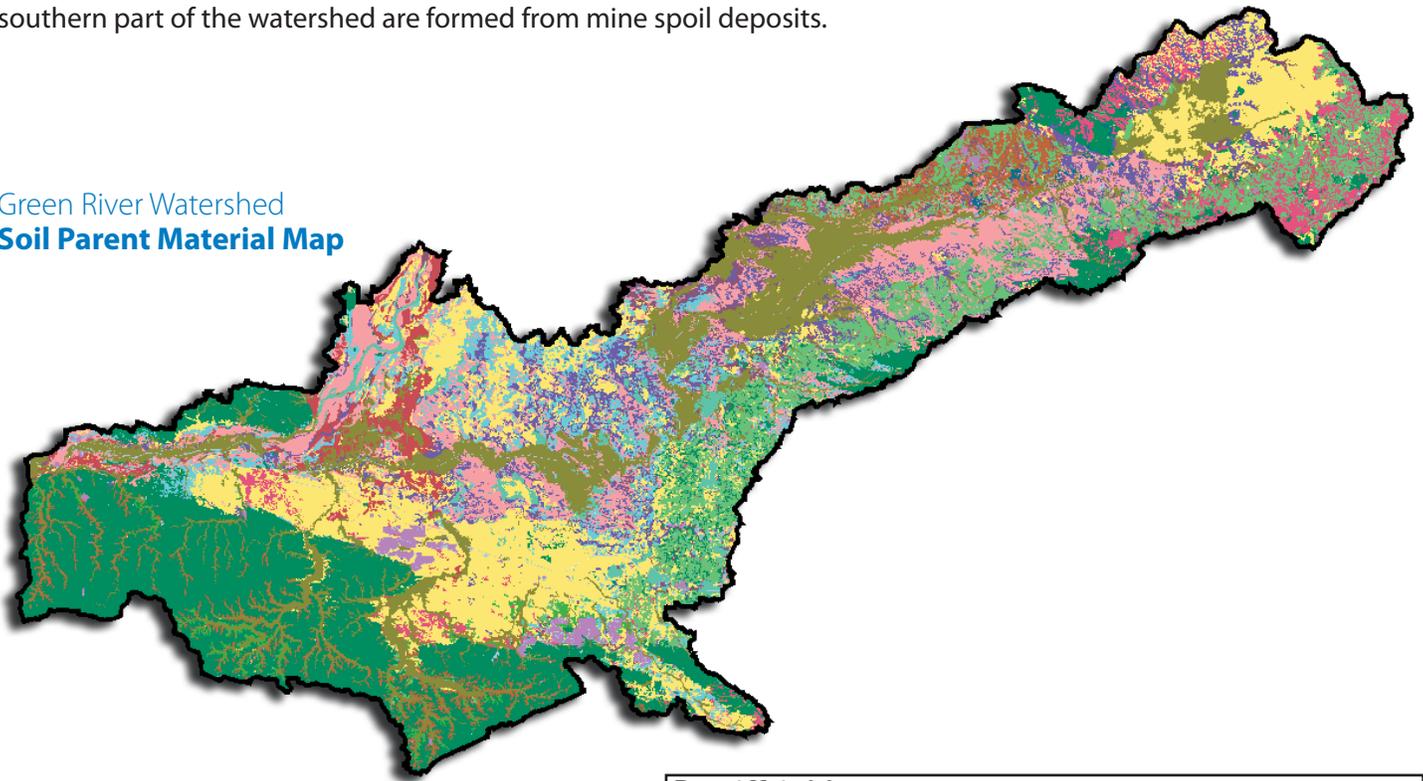
[6/ See endnote, pg. 25.](#)

# Soil Parent Materials

**Green River Watershed**  
 (IL) HUC: 07090007  
 Total Acres: 722,796

The soils in this watershed have formed mainly in wind blown silty or loess deposits overlying glacial diamicton (till), or in outwash deposits. The deepest loess deposits are in the southern part of the watershed. Deposits are often greater than 80 inches thick. These are generally well drained and moderately well drained soils. Soils in the southeastern part of the watershed have generally developed in 10 to 40 inches of loess and/or loamy material over underlying medium textured Wisconsin till. Deeper loess soils are still common in these areas. These areas with thinner silty layers are often moderately well drained and somewhat poorly drained soils. The north-central part of the watershed has poorly drained to excessively drained soils formed in loamy to sandy outwash. A few minor areas in the southern part of the watershed are formed from mine spoil deposits.

Green River Watershed  
**Soil Parent Material Map**



*See endnote, pg. 25.*

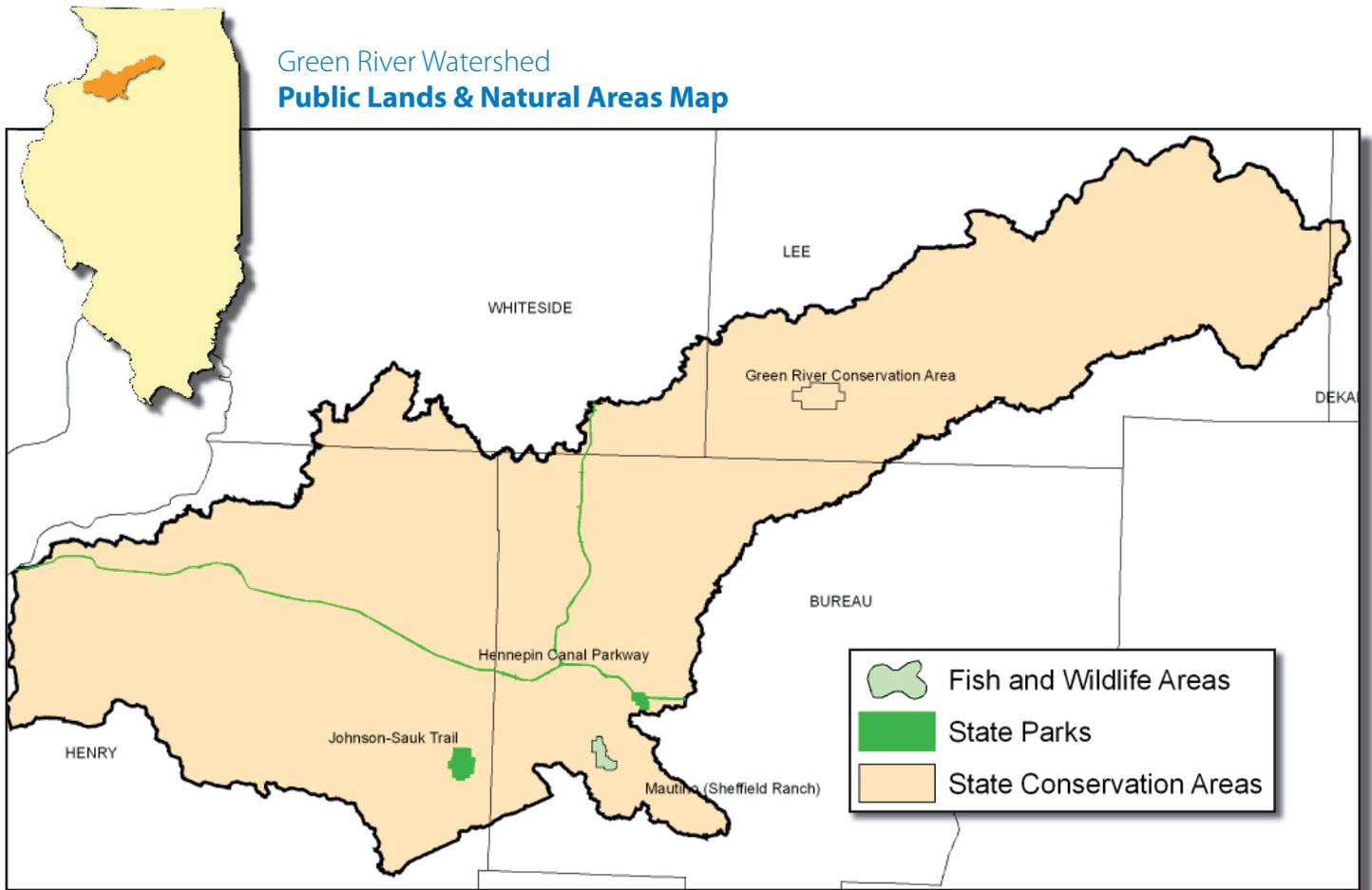
Parent Material	
	LOAMY OR SILTY WISCONSIN DRIFT (20-60 IN.) ON SANDY AND LOAMY OUTWASH
	LOESS (0-20 IN.) ON CLAYEY WISCONSIN TILL OR LACUSTRINE DEPOSITS
	LOESS (0-20 IN.) ON LOAMY WISCONSIN TILL OR LACUSTRINE DEPOSITS
	LOESS (0-40 IN.) ON LOAMY WISCONSIN TILL
	LOESS (10-80 IN.) ON ILLINOIAN DRIFT
	LOESS (20-60 IN.) ON SANDY WISCONSIN EOLIAN DEPOSITS
	LOESS (20-80+ IN.) ON LOAMY WISCONSIN OUTWASH
	LOESS (40-80 IN.) ON LOAMY OR CLAYEY WISCONSIN TILL OR LACUSTRINE DEPOSITS
	LOESS (>80 IN.)
	LOESS OR LOAMY DEPOSITS (10-60 IN.) ON LIMESTONE
	LOESS OR LOAMY DEPOSITS (10-60 IN.) ON SANDSTONE, SILTSTONE, OR SHALE
	MISC: MINE SPOIL OR EARTH FILL
	ORGANIC DEPOSITS
	SANDY TO CLAYEY ALLUVIUM
	SANDY WISCONSIN OUTWASH AND EOLIAN DEPOSITS
	SANDY, LOAMY, OR SILTY DRIFT (10-40 IN.) ON GRAVELLY WISCONSIN OUTWASH
	SANDY, LOAMY, SILTY, AND CLAYEY WISCONSIN LACUSTRINE DEPOSITS
	WATER

# Public Lands and Natural Areas

Green River Watershed

(IL) HUC: 07090007

Total Acres: 722,796



[8/ See endnote, pg. 25.](#)

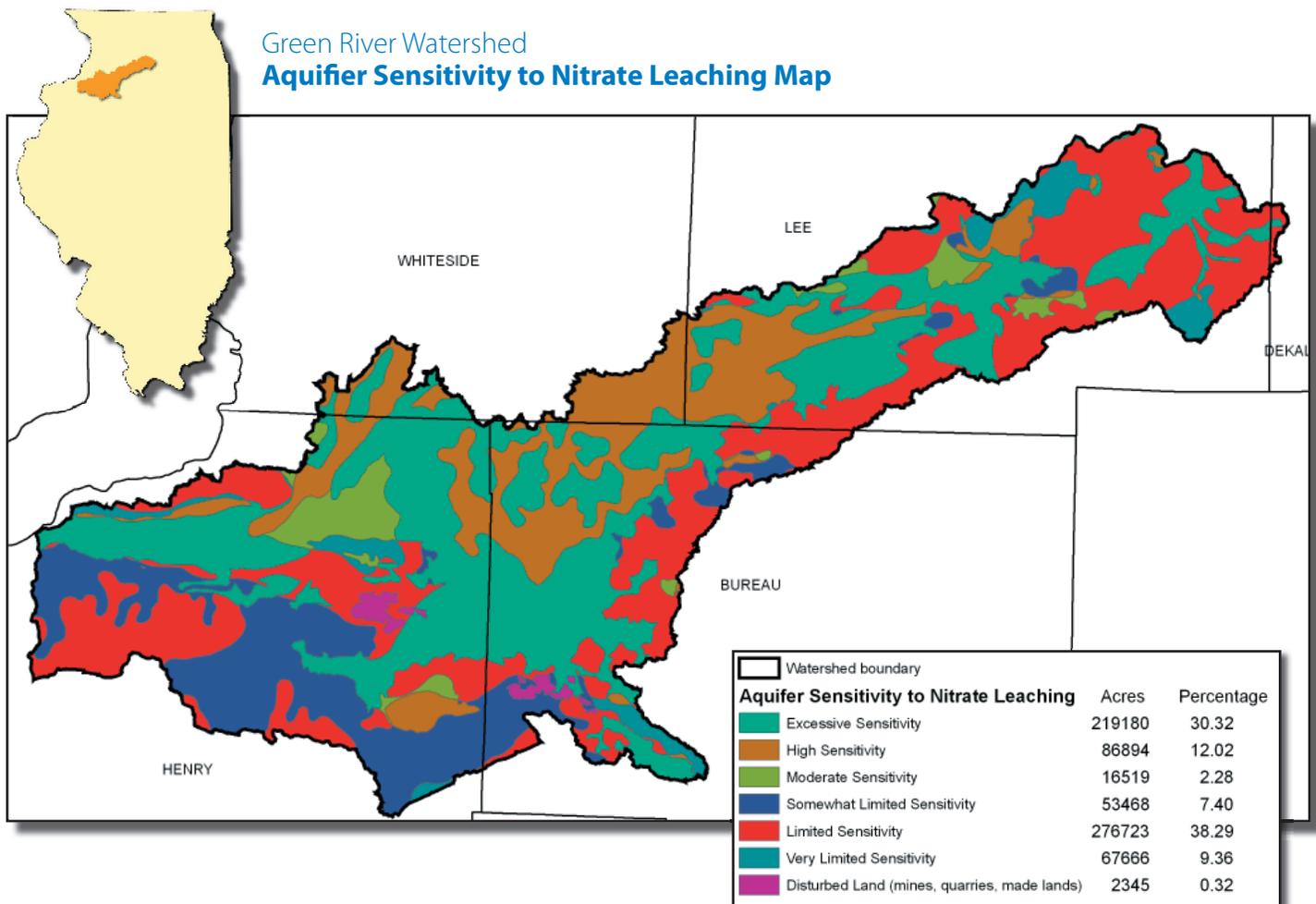
# Aquifer Sensitivity to Nitrate Leaching

## Potential of Agricultural Chemical Contamination of Aquifers

**Green River Watershed**  
 (IL) HUC: 07090007  
 Total Acres: 722,796

**T**wo statewide datasets were identified as containing information that would be useful for producing aquifer sensitivity maps: a soil association map (and database) and a map of geologic materials to a depth of 50 feet (Stack-Unit map). The soil association map and database were used in an interpretive mapping model that generated maps of nitrate and pesticide leaching classes by examining factors that relate to water movement characteristics of the soil. The pesticide contamination sensitivity dataset was created by combining the nitrate map interpretations with information on the distribution of organic matter. (Pesticides are compounds that tend to adsorb soil organic matter, and so have their movement slowed). *See page Pesticide Map on page 14.*

One of the results is six nitrate and six pesticide leaching classes that group soil associations based on relative probability of nitrate and pesticide movement through associated soil profiles. The ranking is qualitative, and is based on the median leaching value of soil map units that comprise each soil association. Leaching classes are listed in the legend below. *See Illinois State Geological Survey (ISGS) EG 148 for the derivation of these classes.*

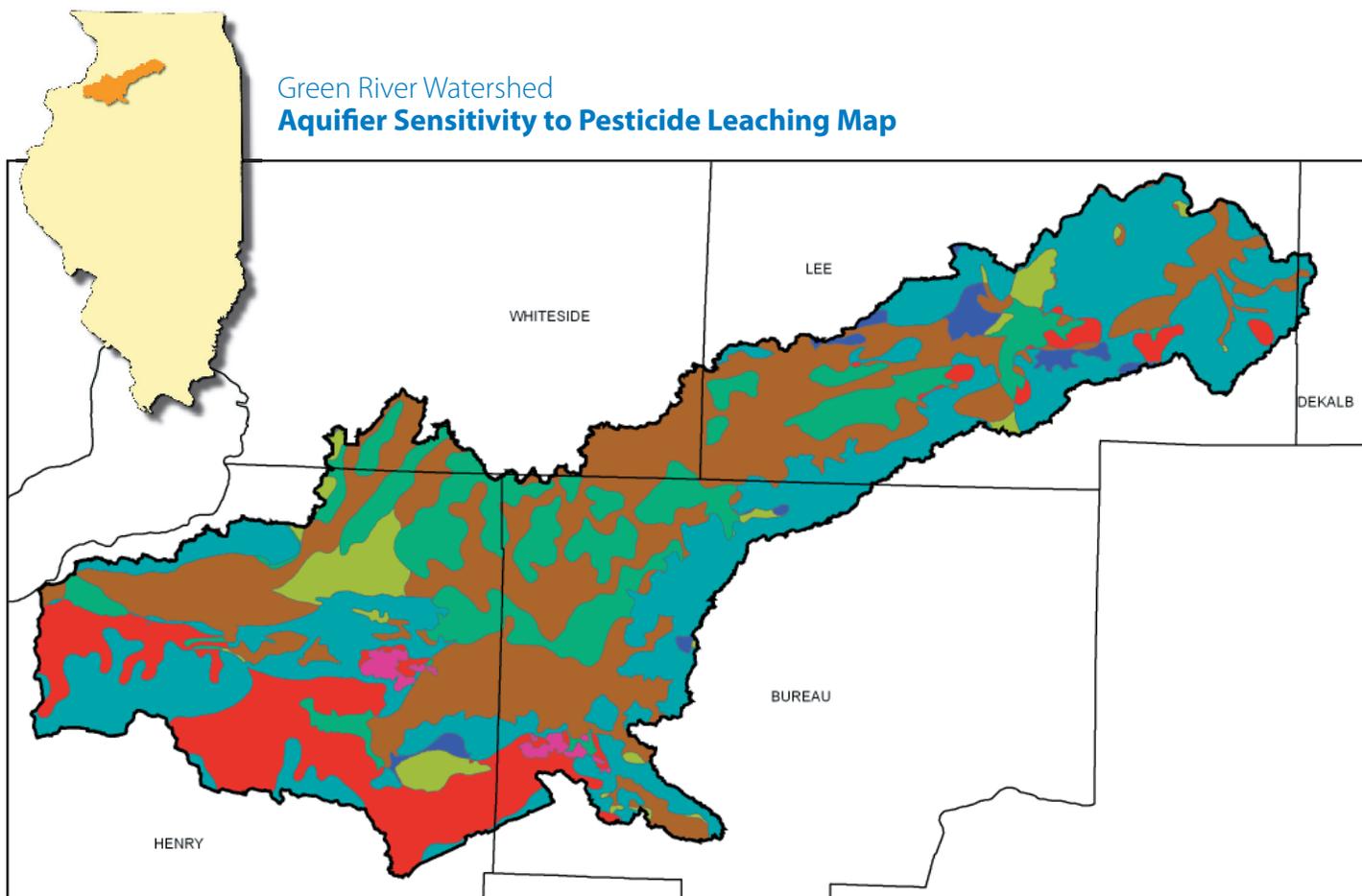


*9/ See endnote, pg. 25.*

# Aquifer Sensitivity to Pesticide Leaching

## Potential of Agricultural Chemical Contamination of Aquifers

**Green River Watershed**  
 (IL) HUC: 07090007  
 Total Acres: 722,796



Aquifer Sensitivity to Pesticides		Acres	Percentage
	Excessive Sensitivity	46484	6.43
	High Sensitivity	195804	27.09
	Moderate Sensitivity	15097	2.09
	Somewhat limited Sensitivity	16486	2.28
	Limited Sensitivity	45647	6.32
	Very Limited Sensitivity	400962	55.47
	Disturbed lands (mines, quarries, made lands)	2306	0.32

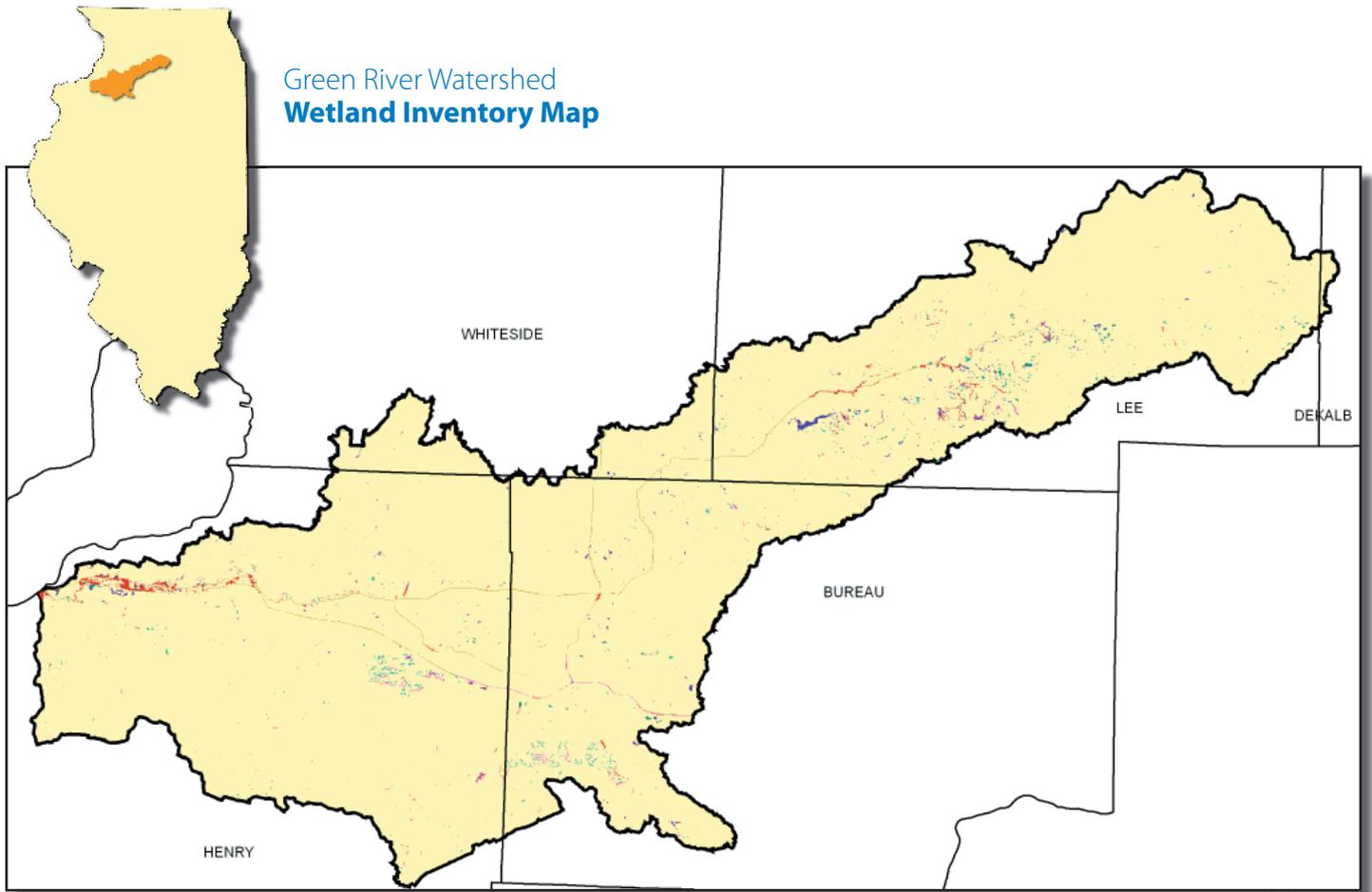
*9/ See endnote, pg. 25.*

# National Wetland Inventory

**Green River Watershed**

(IL) HUC: 07090007

Total Acres: 722,796



Wetlands	Acres	Percentage
Bottomland Forest	2475	0.34
Deep Marsh	319	0.04
Deepwater Lake	915	0.13
Open Water Wetlands	1648	0.23
Perennial Deepwater River	1669	0.23
Perennial Riverine	2	0.00
Shallow Marsh/Wet Meadow	2645	0.36
Shrub-Scrub Wetlands	368	0.05
Swamp	2	0.00

*10/ See endnote, pg. 26.*

# 303(d) Impaired Waters

## 303D Designations for Streams in Green River Watershed

**Green River Watershed**  
(IL) HUC: 07090007  
Total Acres: 722,796

Following the requirements of the Clean Water Act, the Illinois Environmental Protection Agency (IEPA) assesses and reports on the quality of the surface water (e.g. lakes, streams, and wetlands) and groundwater resources in the state. Streams and lakes are analyzed using biological, physiochemical, physical habitat, and toxicity data. Designated uses are identified for these water resources and impairments to achieving these uses are noted. The 303(d) List of Impaired Waters is prepared every two years to document the state's waters where uses are impaired, the pollutant(s) causing the impairment, and a priority ranking for the development of a Total Maximum Daily Load (TMDL) standard.

For Illinois streams, the major potential causes of impairment are pathogens (fecal coliform bacteria) that impair swimming (primary contact) use, mercury and PCBs in fish tissue or sediments. They impair fish consumption use, and creates low dissolved oxygen, high nutrients, excessive siltation, physical-habitat alterations, and high suspended solids that impair aquatic life use. The potential sources of these causes

are atmospheric deposition of toxins, agriculture, hydromodification, municipal point sources, urban runoff/storm sewers, surface mining, and impacts from hydrostructure flow regulation and modification.

All designations listed by IEPA for the streams, segments of streams, and/or open water bodies are considered to be **\*Medium** in priority. Each unit for consideration is designated by a 10-digit HUC. Within each entire streams, segments of streams and open water have been evaluated and assigned a rating. Contaminants of fecal coliform bacteria will cause a swimming impaired use. Mercury and polychlorinated biphenols in fish tissue or sediments will cause a fish consumption impaired use. Low dissolved oxygen, high nutrient level, excessive siltation, physical habitat alteration, and high suspended solids will cause an aquatic life impaired use.

**\* Note:** Prioritization is done on a watershed basis, not by individual stream segments. It is based on the 10-digit HUC. This prioritization is used in setting goals for Total Maximum Daily Load (TMDL) development. **Medium** priority means that the watershed contains one or more waters that are Not Supporting aquatic life use, fish consumption use, or primary contact (swimming) use. **Low** priority means the watershed contains waterbodies that are less than full support for aesthetic quality use only.

### Green River Watershed 303d Impaired Water Table (2006)

Waterbody	Fecal Coliform	Sedimentation Siltation	Aldrin	Barium	Hexachlorobenzene	Manganese	Dissolved Oxygen	Cause unknown
Big Slough Ditch			X	X	X			
Coal Creek								X
Fairfield Ditch			X					
Fairfield Union Sp Ditch		X	X					
Geneseo Creek		X						
Mineral Creek						X	X	X
Mud Creek								X
Spring Creek		X						
Walnut Special Ditch			X					
Green River	X							X

*11/ See endnote, pgs. 26.*

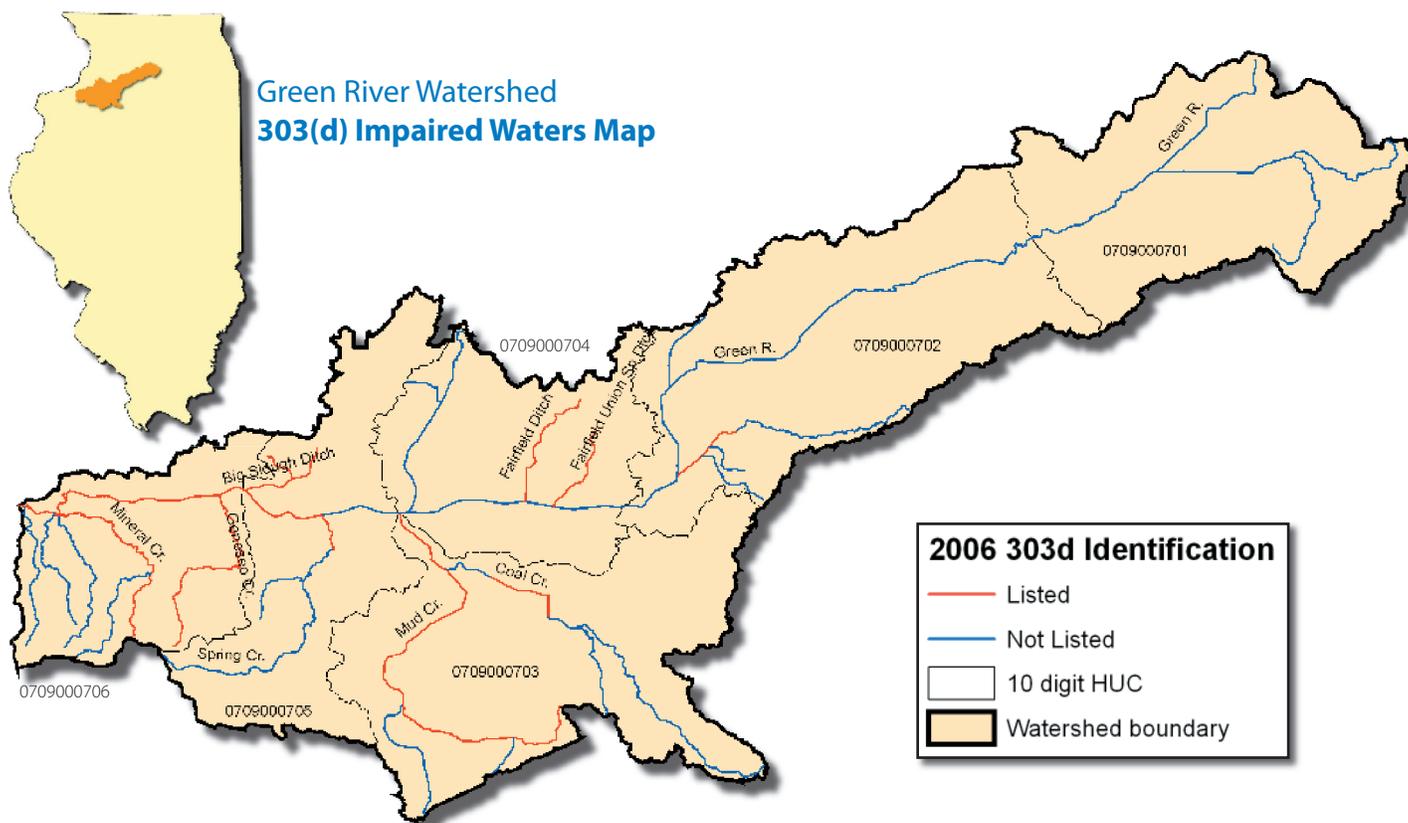
# 303(d) Impaired Waters

## 303D Designations for Streams in Green River Watershed (Continued)

Green River Watershed

(IL) HUC: 07090007

Total Acres: 722,796



**2006 303d Identification**

- Listed
- Not Listed
- 10 digit HUC
- Watershed boundary

### Impaired Waters of Green River Watershed List

Watercourse	Flow Alteration	Other Habit Alterations	Metals	Total Ammon - N	Priority Organics	Siltation	Nitrates	Pathogens	PCB's	Mercury
Big Slough Ditch	X	X	X	X						
Coal Creek		X								
Fairfield Ditch	X	X			X					
Fairfield Union Sp Ditch	X	X		X	X	X				
Geneseo Creek						X	X			
Mineral Creek	X	X		X						
Mud Creek							X			
Rock River									X	X
Spring Creek	X	X				X	X			
Walnut Special Ditch	X	X		X	X		X			
Green River	X	X		X		X	X	X		

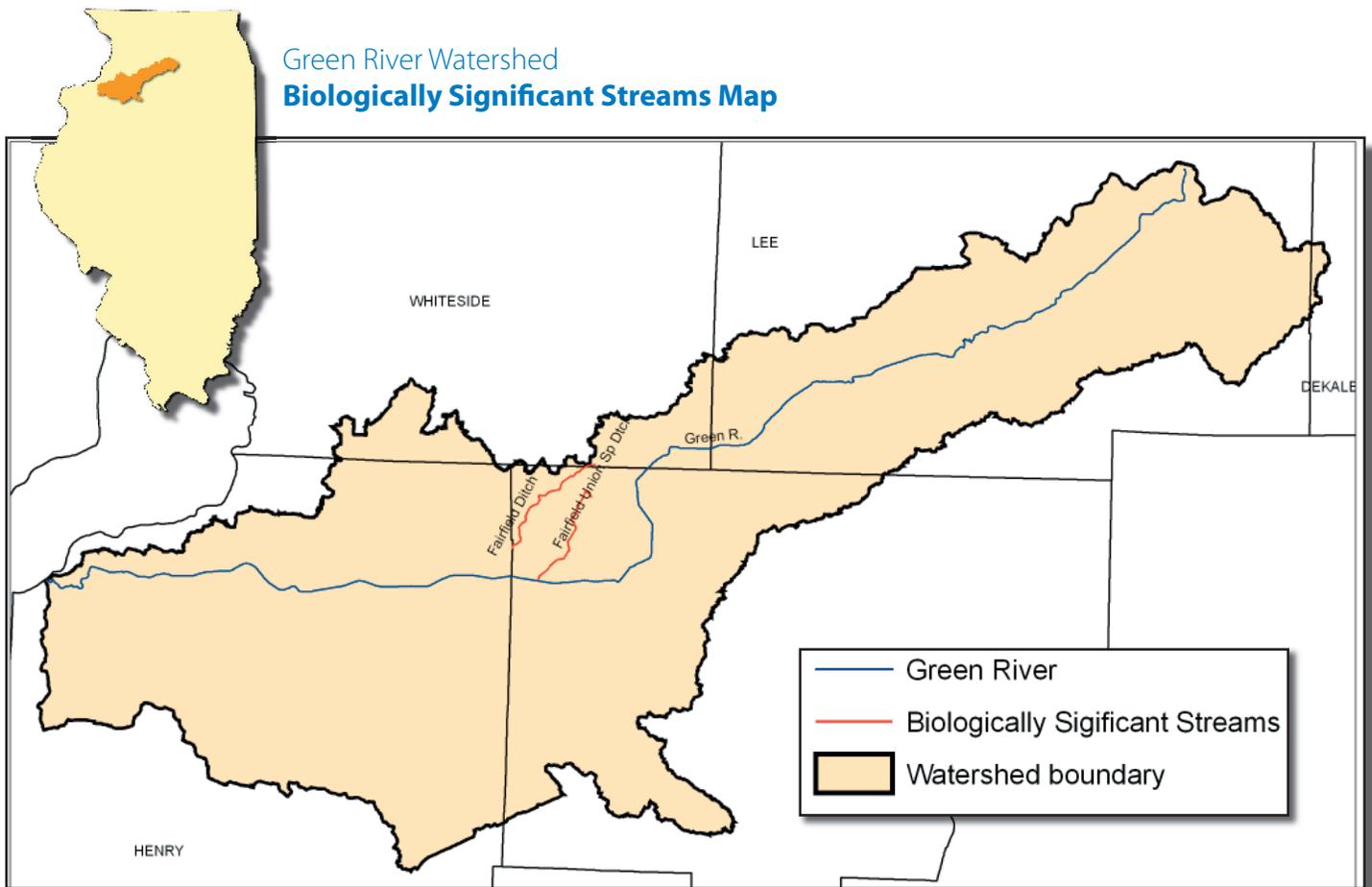
For detailed listing of all designations and more detailed information, please refer to [www.epa.state.il.us/water/](http://www.epa.state.il.us/water/)

*11/ See endnote, pgs. 26.*

# Biologically Significant Streams Map

Green River Watershed  
(IL) HUC: 07090007  
Total Acres: 722,796

**B**iologically Significant Stream designation is based on a comprehensive evaluation of the state's aquatic resources, and indicates the presence of high quality aquatic systems. The criteria included fish populations, water quality, macroinvertebrates, endangered and threatened species, and mussel diversity. The database is maintained at the Illinois Natural History Survey and was current as of November 1995. Grade A streams of the Biological Stream Characterization, based on data through 1993, are unique aquatic resources with an Index of Biotic Integrity (based on fish species richness and composition, trophic composition, and fish abundance and condition) score of 51 to 60 on a 60-point scale.



[12/ See endnote, pg. 26.](#)

# Conservation on the Ground

## Practice Summary

**Green River Watershed**  
 (IL) HUC: 07090007  
 Total Acres: 722,796

The main resource concerns for this area are cropland erosion, water quality, and wildlife habitat development. Ground water quality is also of concern since 42 percent of the watershed is rated with an excessive or high sensitivity to pesticide or nitrate leaching. There are four proposed ethanol plants in the area surrounding the watershed and one is located within the watershed which may affect resources in the Green River Watershed.

### Green River Watershed

#### PRS Summary

Conservation Practice	2005	2006	2007	2008 (3 Qtr.)
0.10 - Conservation plans written (Ac.)	7,456	12,836	8,555	6,949
0.20 - Watershed or area-wide conservation plans developed (No.)	0	0	0	0
1.10 - Cropland with conservation applied to improve soil quality (Ac.)	5,916	4,040	6,815	4,491
2.10 - Land with conservation applied to improve water quality (Ac.)	0	0	6,354	5,818
2.11 - CNMP written (No.)	1	0	5	1
2.12 - CNMP applied (No.)	1	0	1	0
3.10 - Grazing and forest land with conservation applied to protect and improve the resource base (Ac.)	381	388	225	620
3.20 - Non-federal land with conservation applied to improve fish and wildlife habitat quality (Ac.)	1,249	607	1,623	103
3.30 - Wetlands created, restored or enhanced (Ac.)	276	127	275	368

# Conservation on the Ground

## PRS Performance Measures

**Green River Watershed**  
 (IL) HUC: 07090007  
 Total Acres: 722,796

Green River Watershed

### Conservation Practices Planned/Applied FY04 -FY08

Summary Conservation Practices	Planned/Applied				
	2008 (3Qtr.)	2007	2006	2005	2004
Comprehensive Nutrient Mgmt Plan (100) (no)	1/1	2/1	0/0	3/1	0/0
Conservation Cover (327) (ac)	107/527	740/481	286/781	207/253	627/507
Conservation Crop Rotation (328) (ac)	4,748/3,101	5,948/5,311	10,477/4,049	6,022/5,822	5,975/5,080
Contour Farming (330) (ac)	0/0	70/362	222/172	0/0	257/5
Diversion (362) (ft)	1,228/50	1,000/0	0/0	0/0	150/0
Early Successional Habitat Development/Mgmt (647) (ac)	45/0	200/26	151/140	147/43	109/83
Fence (382) (ft)	37,710/40,372	1,500/0	63,015/33,150	52,100/0	29,899/6,500
Field Border (386) (ft)	19,883/14,358	11,693/25,261	0/0	21,470/15,870	250/650
Filter Strip (393) (ac)	33/70	59/12	107/135	66/39	78/67
Firebreak (394) (ac)	0/16,142	22,375/5,250	0/2,000	4,346/4,346	13,650/4,500
Forest Harvest Mgmt (511) (ac)	0/0	19/0	0/0	190/0	0/0
Grade Stabilization Structure (410) (no)	5/5	2/0	1/0	3/4	15/1
Grassed Waterway (412) (ac)	43/57	33/51	53/39	81/361	85/34
Hedgerow Planting (422) (ft)	0/0	0/1,485	0/0	2,640/0	0/0
Nutrient Management (590) (ac)	707/265	1,870/756	1,610/609	965/295	341/153
Pasture & Hay Planting (512) (ac)	271/207	49/95	645/133	911/273	53/0
Pest Mgmt (595) (ac)	0/10	5/36	419/386	427/269	1,188/1,059
Pipeline (516) (ft)	4,320/5,147	0/0	19,215/16,615	15,040/0	9,790/0
Prescribed Burning (338) (ac)	18/1	94/0	87/60	117/12	58/58
Prescribed Grazing (528/528A) (ac)	331/0	38/25	1,259/0	1,217/305	256/86

[more >](#)

# Conservation on the Ground

## PRS Performance Measures *(Continued)*

Green River Watershed

(IL) HUC: 07090007

Total Acres: 722,796

Green River Watershed

### Conservation Practices Planned/Applied FY04 -FY08 *(Continued)*

Summary Conservation Practices	Planned/Applied				
	2008 (3Qtr.)	2007	2006	2005	2004
Residue/Tillage Mgmt, Mulch Till (345) (ac)	2,470/2,130	1,123/693	0/0	0/0	0/0
Residue/Tillage Mgmt, No/Strip Till/Direct Seed (329) (ac)	3,291/1,654	4,286/2,260	0/0	0/0	0/0
Residue Mgmt, Mulch/Ridge/No-Till (346,329A &B) (ac)	0/90	795/2,709	11,429/4,523	6,528/6,574	6,389/5,592
Residue Mgmt, Seasonal (344) (ac)	0/0	0/42	0/16	0/86	0/0
Restoration & Mgmt Rare/Declining Habitats (643) (ac)	7/0	0/0	0/0	124/33	0/0
Riparian Forest Buffer (391) (ac)	0/0	0/0	0/0	18/18	6/0
Shallow Water Development & Mgmt (646) (ac)	1/3	1/20	0/14	15/46	6/6
Subsurface Drain (606) (ft)	0/600	20,950/22,325	6,880/2,930	13,040/9,945	41,670/16,760
Terrace (600) (ft)	5,400/0	0/0	0/0	0/0	2,000/0
Tree/Shrub Establishment (612) (ac)	24/37	348/145	13/18	37/27	96/54
Underground Outlet (620) (ft)	0/0	0/0	0/0	0/0	250/0
Upland Wildlife Habitat Mgmt (645) (ac)	502/103	1,648/1,188	210/120	1,429/918	229/59
Use Exclusion (472) (ac)	68/62	41/119	273/263	332/364	186/86
Waste Storage Facility (313) (no)	1/0	1/2	0/0	0/0	0/0
Waste Utilization (633) (ac)	34/0	1,804/310	0/0	0/0	0/0
Water & Sediment Control Basin (638) (no)	2/0	0/0	0/0	0/0	1/0
Watering Facility (614) (no)	8/10	0/0	21/0	17/0	10/0
Wetland Create/Enhance/Restore (658/659/657) (ac)	659/368	433/435	127/127	191/276	0/0
Wetland Wildlife Habitat Mgmt (644) (ac)	790/0	14,181/13,882	0/14	39/147	6/6
Windbreak/Shelterbelt Establishment/Restoration (380) (ft)	4,900/0	0/0	5,475/5,475	0/0	20,376/11,675

**T**here are approximately 1,500 farms in the Green River Watershed. About 62 percent of those are categorized as principal operator by primary occupation- farming. The annual household income in the watershed in the year 2000 ranged from \$20,000 - \$69,000. During the same period, the median household income in Illinois was \$46,590 compared to the US with \$41,994. The population per square mile was typically less than 100, with the exception of towns and cities, such as Geneseo, Colona, Green Rock and Amboy. The state median population per square mile in 2000 was 223.4; in the US as a whole, it was 79.6. The Ag Census data below is county data adjusted by the percent of the HUC in the county.

## Green River Watershed Ag Census Data

2002 Ag Census Data	Bureau	Henry	Lee	Whiteside	DeKalb*	Total
Farms (number)	327	706	404	70		1507
Land in farms (acres)	147,354	26,472	186,738	26,556		387,120
Land in farms- avg farm size (acres)	135	206	222	27		
Land in farms - median farm size (ac)	91	110	139	14		
Principal operator by primary occupation - farming (number)		529	104	49		927
<b>Operation Size</b>						
Farms - 1 to 9 ac	11	30	24	4		69
Farms - 10 to 49 ac	48	131	62	13		254
Farms - 50 to 179 ac	73	185	73	18		349
Farms - 180 to 499 ac	90	172	120	19		401
Farms - 500 to 999 ac	62	125	76	9		272
Farms - 1,000 acres or more	42	64	48	7		161
<b>Operation Type</b>						
Livestock & poultry - cattle & calves inventory (farms)	63	210	68	19		360
Livestock & poultry - cattle & calves inventory - beef cows (farms)	41	141	39	9		230
Livestock & poultry -cattle & calves inventory - milk cows (farms)	4	1	3	2		10
Livestock & poultry -hogs & pigs inventory (farms)	19	99	29	4		151
Livestock & poultry - sheep & lambs inventory (farms)	8	40	6	2		56
Livestock & poultry - layers 20 weeks old & older inventory (farms)	6	14	9	1		30

\* Because percentage of Dekalb county in HUC is less than 1%, statistics were not calculated.

## Social Census for 1990

Total Population	White	Af_Amer	Native	Asian	Other	Hispanic	PCAP Income
40,390	39,962	191	50	89	98	334	\$12,170

## Social Census for 2000

Total Population	White	Black	Amer_ES	Asian	Hawn_PI	Other	Multi_Race	Hispanic	PCAP Income
40,386	39,433	224	34	87	7	305	296	870	\$18,908



## Related Watershed Activities

**C**urrent activities in the Green River Watershed related to natural resource conservation, protection and restoration are limited. NRCS hopes that development of this Rapid Watershed Assessment document will facilitate the ability of local leaders and decision-makers to compile data, identify resource issues and concerns and develop a plan of action for residents of the watershed. It is through the interests and actions of local people that progress is made and sustained in natural resource improvements and ecosystems across Illinois. Many private landowners in the watershed use local, state and federal programs to access guidance, solutions and financial assistance in order to manage their land and resources in a sustainable manner. Working with locally elected leaders, the local Soil and Water Conservation Districts have identified the top resource concerns as:

- Sheet and Rill Erosion on Cropland
- Water Quality
- Wildlife Habitat Management—Control & Improvements

Future environmental successes within this watershed will be made possible by bringing together local entities, private landowners and others. By creating a diverse and like-minded team, the resources, productivity, economic outcomes and quality of life can be improved upon in the area and the region. For more information on how local watershed planning initiatives can succeed, contact your local Soil and Water Conservation District, USDA Natural Resources Conservation Service or visit [www.il.nrcs.usda.gov](http://www.il.nrcs.usda.gov).

## **1 Elevation and Annual Precipitation — (Page 5)**

The relief map was created using United States Geological Survey (USGS) 7.5 minute 30 meter Digital Elevation Models (DEMs). A painted relief model was applied to the DEMs to create the relief map. For more information on USGS DEMs visit: <http://edc.usgs.gov/guides/dem.html> and <http://data.geocomm.com/dem/>. For more information on creating painted relief maps visit: <http://gis.esri.com/library/userconf/proc99/proceed/papers/pap182/p182.htm>.

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 USDA 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 dataset from which the polygons and vectors were created. For more information about PRISM visit [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/> and <http://datagateway.nrcs.usda.gov/Catalog/ProductDescription/PRCIP.html>

## **2 Common Resource Area — (Page 6)**

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 Land Cover — (Page 7)**

The National Land Cover Database 2001 land cover layer was produced through a cooperative project conducted by the Multi-Resolution Land Characteristics (MRLC) Consortium. The MRLC Consortium is a partnership

of federal agencies ([www.mrlc.gov](http://www.mrlc.gov)), consisting of the U.S. Geological Survey (USGS), the National Oceanic and Atmospheric Administration (NOAA), the U.S. Environmental Protection Agency (EPA), the U.S. Department of Agriculture (USDA), the U.S. Forest Service (USFS), the National Park Service (NPS), the U.S. Fish and Wildlife Service (USFWS), the Bureau of Land Management (BLM) and the USDA Natural Resources Conservation Service (USDA-NRCS). One of the primary goals is to generate a current, consistent, seamless, and accurate National Land Cover Database (NLCD) circa 2001 for the United States at medium spatial resolution. The 2001 refers to the nominal year from which most of the Landsat 5 and Landsat 7 imagery was acquired. Visit: <http://datagateway.nrcs.usda.gov/Catalog/ProductDescription/NLCD.html>.

This land cover map and all documents pertaining to it are considered “provisional” until a formal accuracy assessment can be conducted. For a detailed definition and discussion on MRLC and the NLCD 2001 products, refer to Homer et al. (2004) - [www.mrlc.gov/pdfs/July\\_PERS.pdf](http://www.mrlc.gov/pdfs/July_PERS.pdf); and [www.mrlc.gov/mrlc2k.asp](http://www.mrlc.gov/mrlc2k.asp). The NLCD 2001 was created by partitioning the U.S. into mapping zones. A total of 66 mapping zones were delineated within the conterminous U.S. based on ecoregion and geographical characteristics, edge matching features and the size requirement of Landsat mosaics. The completed single pixel product was generalized to a 1-acre minimum mapping unit product. The data was downloaded from the USDA-NRCS Geospatial Data Gateway <http://datagateway.nrcs.usda.gov/>.

## **4 Drainage Classification — (Page 8)**

Drainage class was created from the United States Department of Agriculture – Natural Resource Conservation Service’s (USDA-NRCS) Soil Survey Geographic (SSURGO) Database. 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.

## **5 Farmland Classification** — (Page 9)

Farmland classification was created from the United States Department of Agriculture – Natural Resource Conservation Service’s (USDA-NRCS) Soil Survey Geographic (SSURGO) Database. 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.

**Note:** The work to resolve inconsistencies brought on by the county-based soil survey approach of implementing the Major Land Resource Area soil survey method is currently underway. By typifying soil series and map unit concepts across similar geographic areas instead of political boundaries, previous inconsistencies between counties will now be resolved.

## **6 Hydric Soils** — (Page 10)

Hydric soils classification was created from the United States Department of Agriculture – Natural Resource Conservation Service’s (USDA-NRCS) Soil Survey Geographic (SSURGO) Database. 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.

## **7 Parent Material** — (Page 11)

Prepared by USDA-Natural Resources Conservation Service Staff in the Rock Falls Soil Survey Office as part of update procedure.

## **8 Public Lands and Natural Areas** — (Page 12)

### Natural Areas

- Illinois Department of Natural Resources—Division of Natural Heritage
- Institute of Natural Resource Sustainability, Illinois Natural History Survey—University of Illinois

*This data set depicts the natural areas in Illinois, digitized from U.S. Geological Survey (USGS) 7.5 minute quadrangles or from aerial photographs at a scale of 1:8,000.*

### Federal land

- Institute of Natural Resource Sustainability, Illinois Natural History Survey—University of Illinois
- Illinois Department of Natural Resources (IDNR)

*Digitized from maps provided by U.S. Fish and Wildlife Service (USFWS), county plat books, and 1:24,000 quadrangle maps.*

### Illinois State Fish and Wildlife Areas

- Institute of Natural Resource Sustainability, Illinois Natural History Survey—University of Illinois

*Digitized from maps provided by Illinois Department of Natural Resources (IDNR), county plat books, USGS TIGER files, and 1:24,000 quadrangle maps. The Illinois Department of Conservation Land and Water Report of 30 June 1994 was used as a reference.*

### Illinois State Conservation Areas

- Institute of Natural Resource Sustainability, Illinois Natural History Survey—University of Illinois
- Illinois Department of Natural Resources (IDNR)

*Digitized from maps provided by IDNR, county plat books, USGS TIGER files, and 1:24,000 quadrangle maps. The Illinois Department of Conservation Land and Water Report of 30 June 1994 was used as a reference.*

## **9 Aquifer Sensitivity to Nitrate and Pesticide Leaching** — (Page 13-14)

From: “Potential of Agrichemical Contamination of Aquifers” Illinois State Geological Survey (ISGS) Illinois Natural Resources Geospatial Data Clearinghouse.

A statewide dataset for evaluating the potential for contamination of shallow aquifers by pesticides and nitrates. The sources of this dataset were published and digitized at 1:250,000; however, the soils map and depth to aquifer map (Stack-Unit map) were generated from source data mapped at 1:15,000 and 1:64,000, respectively. This aquifer sensitivity map was published at 1:500,000 (statewide map), and 1:250,000 (county maps). Nominal scale is 1:250,000. ISGS. [www.isgs.uiuc.edu/nsdihome/webdocs/st-hydro.html](http://www.isgs.uiuc.edu/nsdihome/webdocs/st-hydro.html) and [www.isgs/uiuc.edu/nsdihome/outmeta/IL\\_Aquifer\\_Agri\\_Contam\\_Potent.htm](http://www.isgs/uiuc.edu/nsdihome/outmeta/IL_Aquifer_Agri_Contam_Potent.htm).

**10 National Wetlands Inventory** — *(Page 15)*  
U.S. Fish and Wildlife Service, Illinois  
Department of Natural Resources, and Illinois  
Natural History Survey. Visit: [www.isgs.uiuc.edu/nsdihome/outmeta/IL\\_NWI\\_Wetlands\\_1987.html](http://www.isgs.uiuc.edu/nsdihome/outmeta/IL_NWI_Wetlands_1987.html).

This feature dataset contains wetlands and deepwater habitats in Illinois as of 1987 based on U.S. Fish and Wildlife Service National Wetlands Inventory (NWI) data. This feature dataset was quickly assembled from old Arc/Info coverages to produce a general representation of the State of Illinois and has not been reviewed or quality-controlled in any way and is not supported.

Attributes include NWI and IDNR identifiers and text designation of habitat. The data are in the Geographic Coordinate System, decimal degrees, NAD83. There are 13 habitat designations. Some examples are: Bottomland Forest, Emergent Lake, Intermittent Riverine, Open Water Wetlands, and Swamp.

More recent data may be available at the NWI web site [www.fws.gov/nwi/](http://www.fws.gov/nwi/). Data are available for download at that site by 1:24,000-scale and 1:100,000-scale quadrangle. Original NWI metadata are also available there. Edits to this dataset were made by the USDA Natural Resources Conservation Service's Carbondale Major Land Resource Area Soil Survey Office.

**11 303(d) Listed Streams** — *(Page 16-17)*  
**Reference:** Illinois EPA. 2006. Illinois Integrated Water Quality Report and Section 303(d) List-2008. Bureau of Water, Watershed Management Section, Springfield, IL: [www.epa.state.il.us/water/tmdl/303d-list.html](http://www.epa.state.il.us/water/tmdl/303d-list.html).

Prioritization is done on a watershed basis, not by individual stream segments. It is based on the 10-digit HUC. This prioritization is used in setting goals for Total Maximum Daily Load (TMDL) development. Medium priority means that the watershed contains one or more waters that are Not Supporting aquatic life use, fish consumption use, or primary contact (swimming) use.

**12 Biologically Significant Streams** — *(Page 18)*  
Biologically Significant Streams were provided by the Illinois Natural History Survey and developed through the Critical Trends Assessment Project: page, L.M., et al. 1992. Biologically Significant Illinois Streams: An Evaluation of the Streams of Illinois Based on Aquatic Biodiversity. Technical Report No. 1992 (1). Illinois Natural History Survey, Champaign.