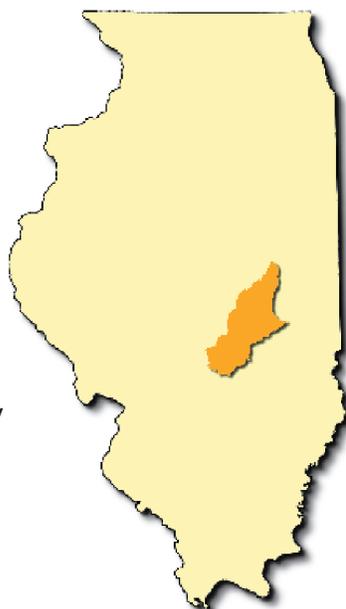




**R**apid Watershed Assessments (RWA) provide initial estimates of where conservation investments would best address the concerns of landowners, conservation districts, and other community organizations and stakeholders. These assessments help landowners and local leaders set priorities and determine the best actions to achieve their goals.

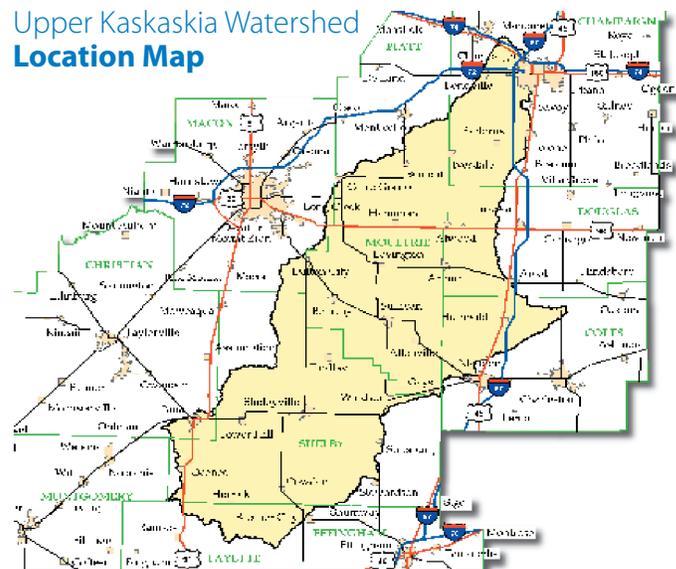
**Introduction**

The Upper Kaskaskia River Watershed is located in East Central Illinois and flows in a southwesterly direction encompassing more than 1,003,387 acres . The watershed covers land in all of Moultrie County, a majority of Shelby County, parts of Fayette, Coles, Douglas, Piatt and Champaign Counties, and a small portion of Christian, Effingham and Macon Counties. Conservation assistance is provided by five NRCS Field and Soil and Water Conservation District Offices, and two Resource Conservation and Development (RC&D) offices.



The mainly agricultural landscape has many small streams, creeks, and man-made lakes that flow into the Upper Kaskaskia River. Lake Shelbyville, an 11,000 acre man-made impoundment managed by the US Army Corps of Engineers, is the largest surface water body in

Upper Kaskaskia Watershed
   
**Location Map**



the watershed. The Kaskaskia River continues flowing southwest until it joins the Mississippi River near Elks Grove in Randolph County.

The majority of the land in the watershed, 75 percent, is devoted to agriculture. Forest land accounts for 10 percent of the area while developed land, grassland, and open water/wetlands comprise the balance of the watershed.

The population of the watershed is mostly rural, but there are many small cities and villages found throughout the area. A large portion of the City of Champaign (pop. 73,685 – 2006 census) is in the upper end of the watershed. Other major population centers in the watershed include the cities of Pana, (pop. 5,614), Shelbyville, (pop. 4,917), Sullivan, (pop. 4,326), Tolono (pop. 2,700), and Arthur (pop. 2,203). Agriculture, recreation, and manufacturing are the major components of the regional economy.



Watershed Information .....	4
Elevation .....	5
Common Resource Areas .....	6-7
Land Cover .....	8
Classifications .....	9-10
- Drainage	
- Farmland	
Hydric Soils .....	11
Quaternary Deposits .....	12
Public Lands and Natural Areas.....	13
Aquifer Sensitivity .....	14-15
- Nitrate Leaching	
- Pesticide Leaching	
National Wetland Inventory .....	16
303(d) Impaired Waters .....	17-19
Biologically Significant Streams.....	20
Conservation on the Ground .....	21-23
- Practice Summary	
- PRS Performance Measures	
Census and Social Data .....	24
Related Watershed Projects, Conservation Partners.....	25
Endnotes .....	26-28

*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 (HUC)

**W**atersheds are organized into a hydrologic 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 the way smaller watersheds (12-digit codes) drain areas that together form larger watersheds (10-digit codes).

## Upper Kaskaskia Watershed County Areas

HUC_10	Name	Acres	Percent
0714020101	Lake Fork	109,422	10.9%
0714020102	Dry Fork-Kaskaskia River	103,361	10.3%
0714020103	Jonathan Creek	36,861	3.7%
0714020104	Flat Branch-Kaskaskia River	116,706	11.6%
0714020105	Whitley Creek	33,655	3.4%
0714020106	West Okaw River	154,085	15.4%
0714020107	Lake Shelbyville-Kaskaskia River	122,569	12.2%
0714020108	Robinson Creek	79,117	7.9%
0714020109	Richland Creek	54,635	5.4%
0714020110	Mitchell Creek	130,837	13.0%
0714020111	Kaskaskia River	62,139	6.2%
<b>Total</b>		<b>1,003,387</b>	<b>100.0%</b>

## Upper Kaskaskia Subwatershed

County Name	County Acres	Acres in HU	% of HU from County	% of County in HU
Champaign	638,864	107,907	10.8%	16.9%
Christian	457,984	13,221	1.3%	2.9%
Coles	326,094	75,861	7.6%	23.3%
Douglas	266,764	74,526	7.4%	27.9%
Effingham	307,138	1,499	0.1%	0.5%
Fayette	464,213	40,600	4.0%	8.7%
Macon	374,825	15,452	1.5%	4.1%
Montgomery	454,196	4	0.0%	0.0%
Moultrie	220,343	220,250	22.0%	100.0%
Piatt	281,102	108,824	10.8%	38.7%
Shelby	491,513	345,240	34.4%	70.2%

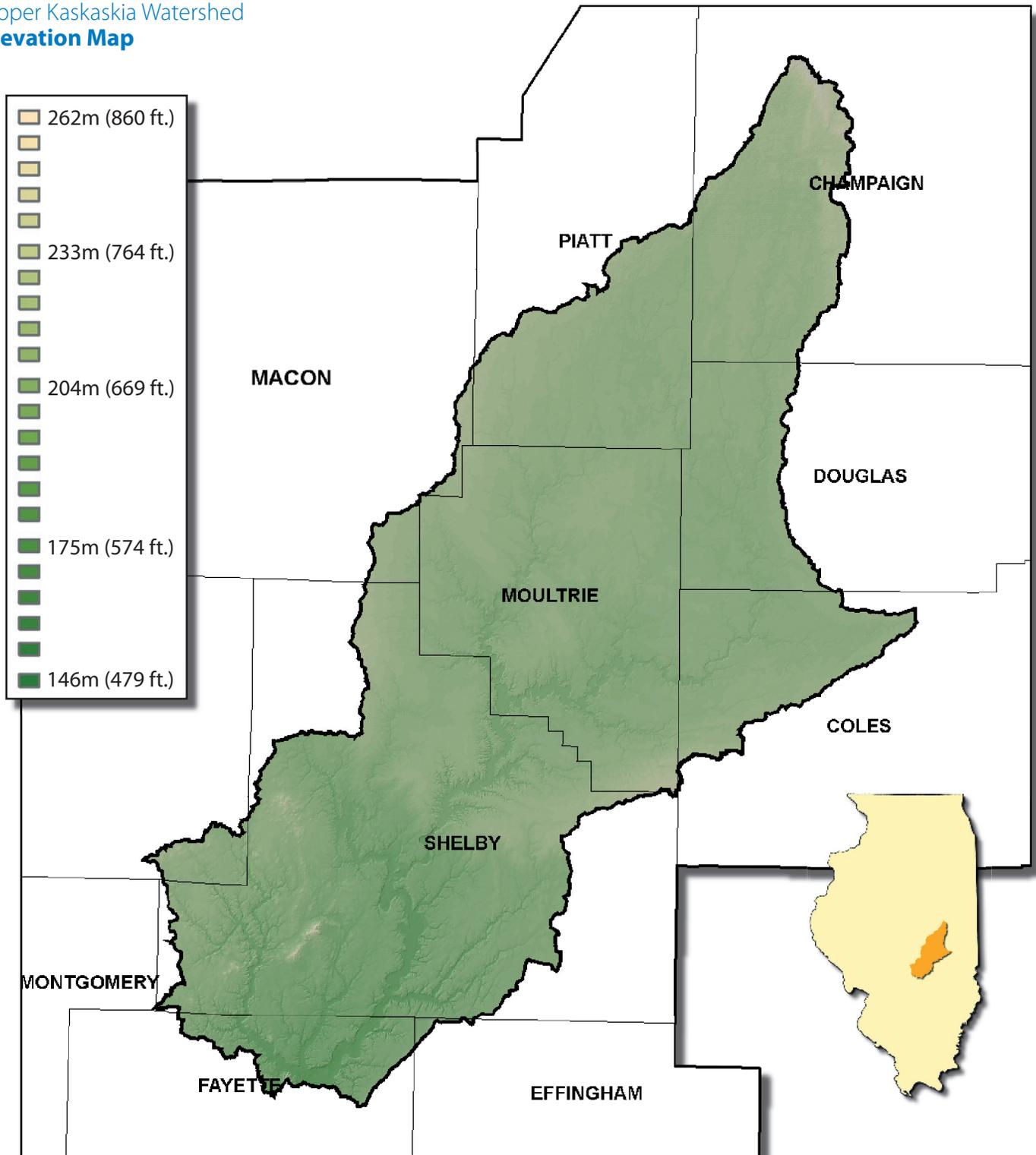
# Elevation

Upper Kaskaskia Watershed

(IL) HUC: 07140201

Total Acres: 1,003,387

## Upper Kaskaskia Watershed Elevation Map



*1/ See endnote, pg. 26.*

**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.

### **108A.1 Central Corn Belt Deep Loess and Drift Plains, Eastern Part**

Nearly level and gently sloping, dark colored, very poorly drained to moderately well drained soils formed in silty and loamy deposits overlying medium textured till. The original prairie and oak-hickory forest is extensively subsurface drained and used for corn and soybean production. More diverse agriculture is located in the rolling areas associated with glacial moraines.

### **108A.3 Central Corn Belt Deep Loess and Drift Plains, Eastern Part - Moraines**

Gently sloping and moderately sloping morainal area. The 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 found in drainage ways 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.

### **108B.1 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 located in the more rolling areas associated with small to medium streams.

### **13.1 Clay Pan Till Plains**

Nearly level and gently sloping, well-developed claypan soils on a flat glacial till plain. Light to moderately dark colored, poorly drained and somewhat poorly drained soils formed primarily in loess. Loess thickness generally ranges from greater than 6 feet in the western part to about 3 feet in the eastern part. The low clay surface soil changes abruptly to the high clay subsoil. The area is intensively cropped with row crops and small grain. Sodium affected soils are found throughout the area and occur in an intricate pattern with soils not affected by sodium. The more sloping areas adjacent to streams are more commonly used for pasture or remain in woodland. Postglacial stream erosion has made little progress and most of the surface is flat or gently rolling with local relief less than 100 feet. Bedrock exposures are rare.

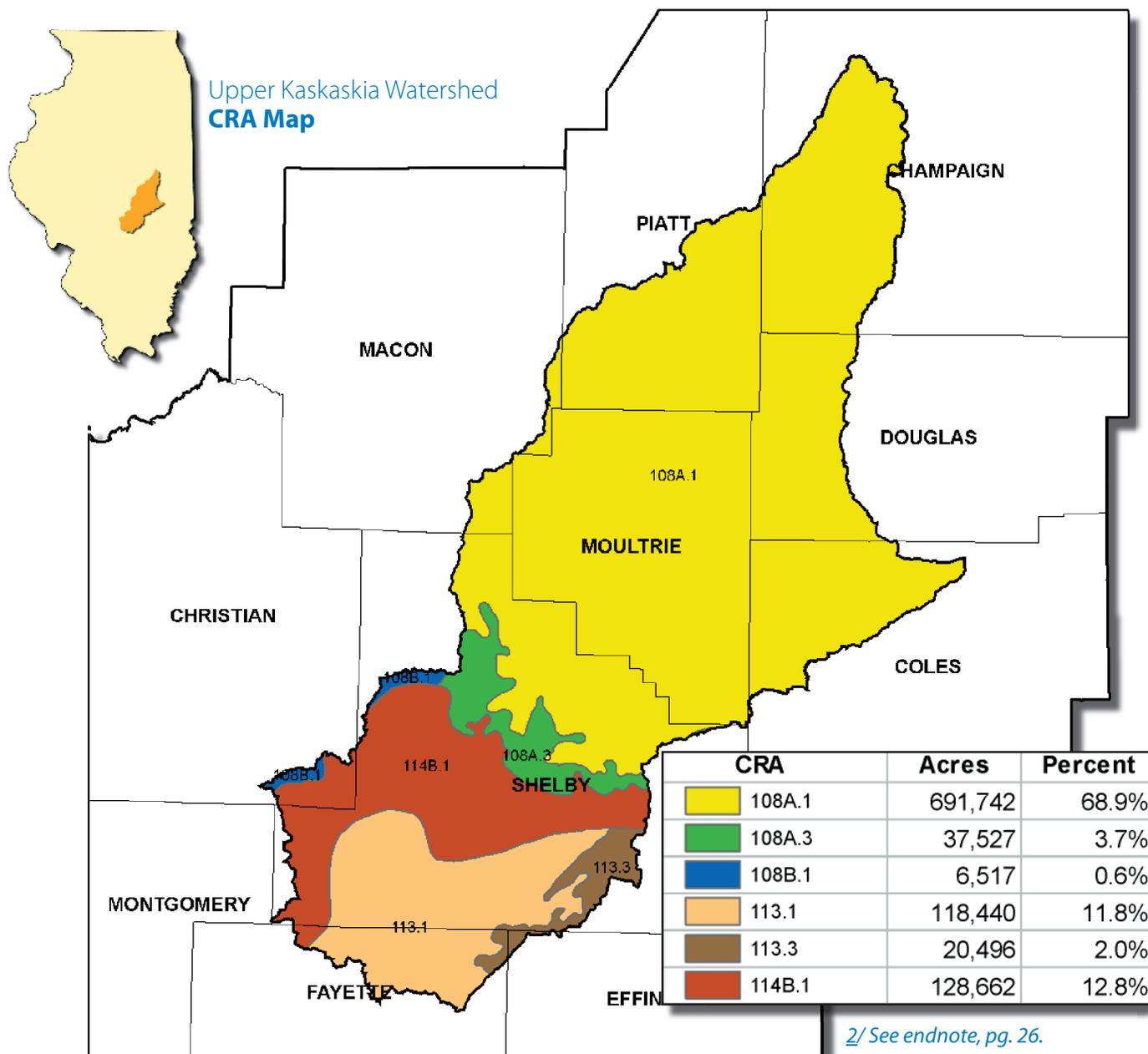
### **113.3 Illinois Central Clay Pan -- Sodium Affected**

Nearly level and gently sloping, light to moderately dark colored, poorly drained and somewhat poorly drained soils formed primarily in loess. Loess thickness generally ranges from greater than 4 feet in the western part to about 3 feet in the eastern part. The low clay surface soil changes abruptly to the high clay subsoil. Corn, soybeans, livestock, and general farming are the main land uses. Sodium affected soils are found throughout the area and occur in an intricate pattern with soils not affected by sodium. Moderately well drained and well drained soils on narrow ridges commonly have fragipans. The sloping to steep areas adjacent to streams are dominantly formed in till and are more commonly used for pasture or remain in woodland. Resource concerns are erosion from cropland, surface water management, nutrient management, and wildlife habitat management.

## 114B.1 Southern Illinois and Indiana Thin Loess and Till Plain, Western Part

Nearly level to moderately sloping, light to moderately dark colored, well drained to very poorly drained soils formed in deeply leached pre-Wisconsin till and a mantle of loess in most places. Corn, soybeans, livestock, and general farming are the main land

uses. Urban development is expanding into the northwestern part of the watershed. Well drained soils formed in till are common in the rolling and very steep areas along drainage ways. These areas are commonly wooded. Karst topography impacts significant areas of Monroe and Randolph Counties.



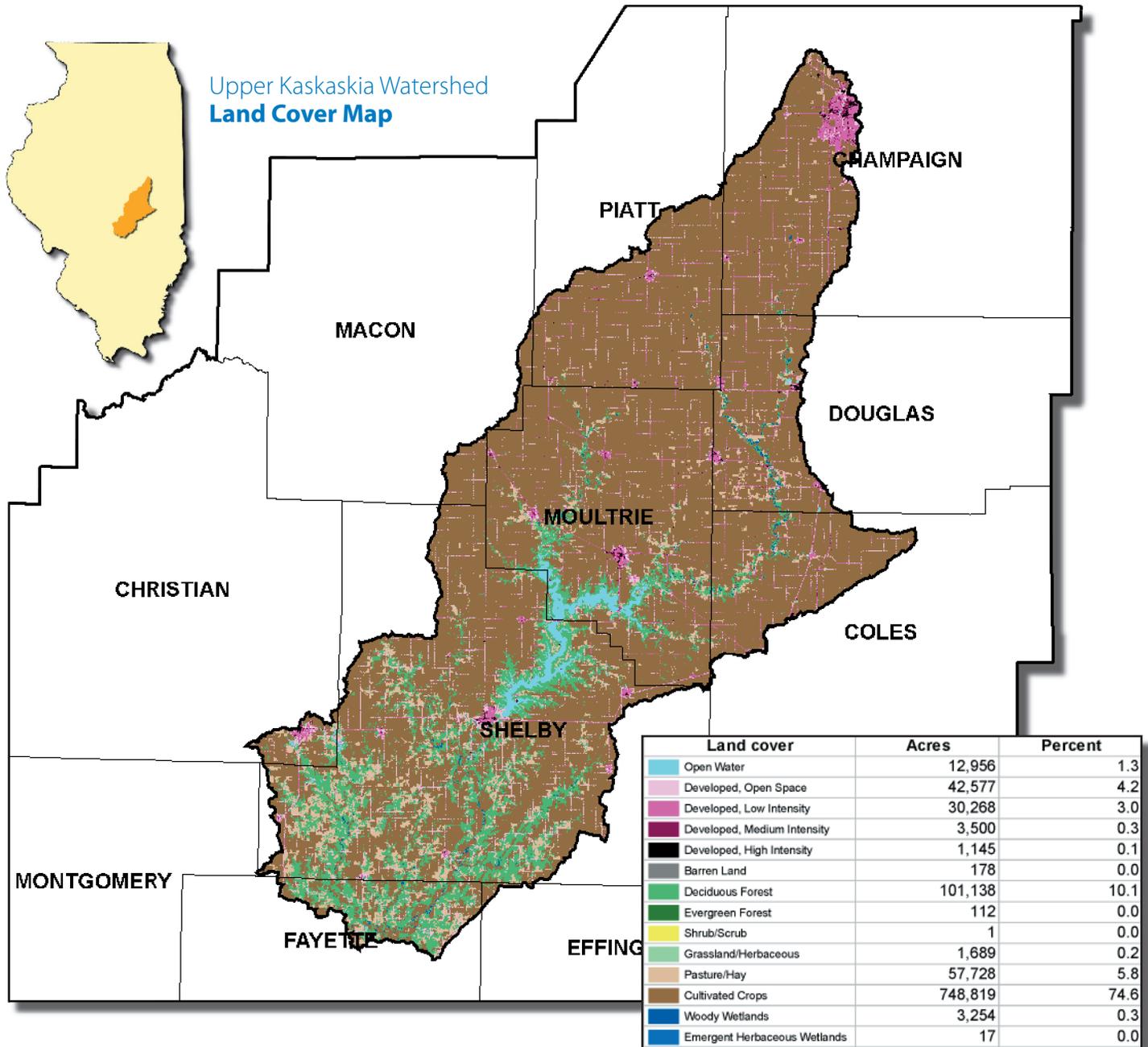
# Land Cover

Upper Kaskaskia Watershed

(IL) HUC: 07140201

Total Acres: 1,003,387

There are 2,176 farms in the watershed covering a total of 797,607 acres. Average farm size in the watershed is 367 acres compared to a statewide average of 374 acres in Illinois. Please refer to table below for more detailed information or visit the web site of the Illinois office of the National Agriculture Statistics Service at: [www.nass.usda.gov/statistics](http://www.nass.usda.gov/statistics).



3/ See endnote, pg. 26.

# Classification

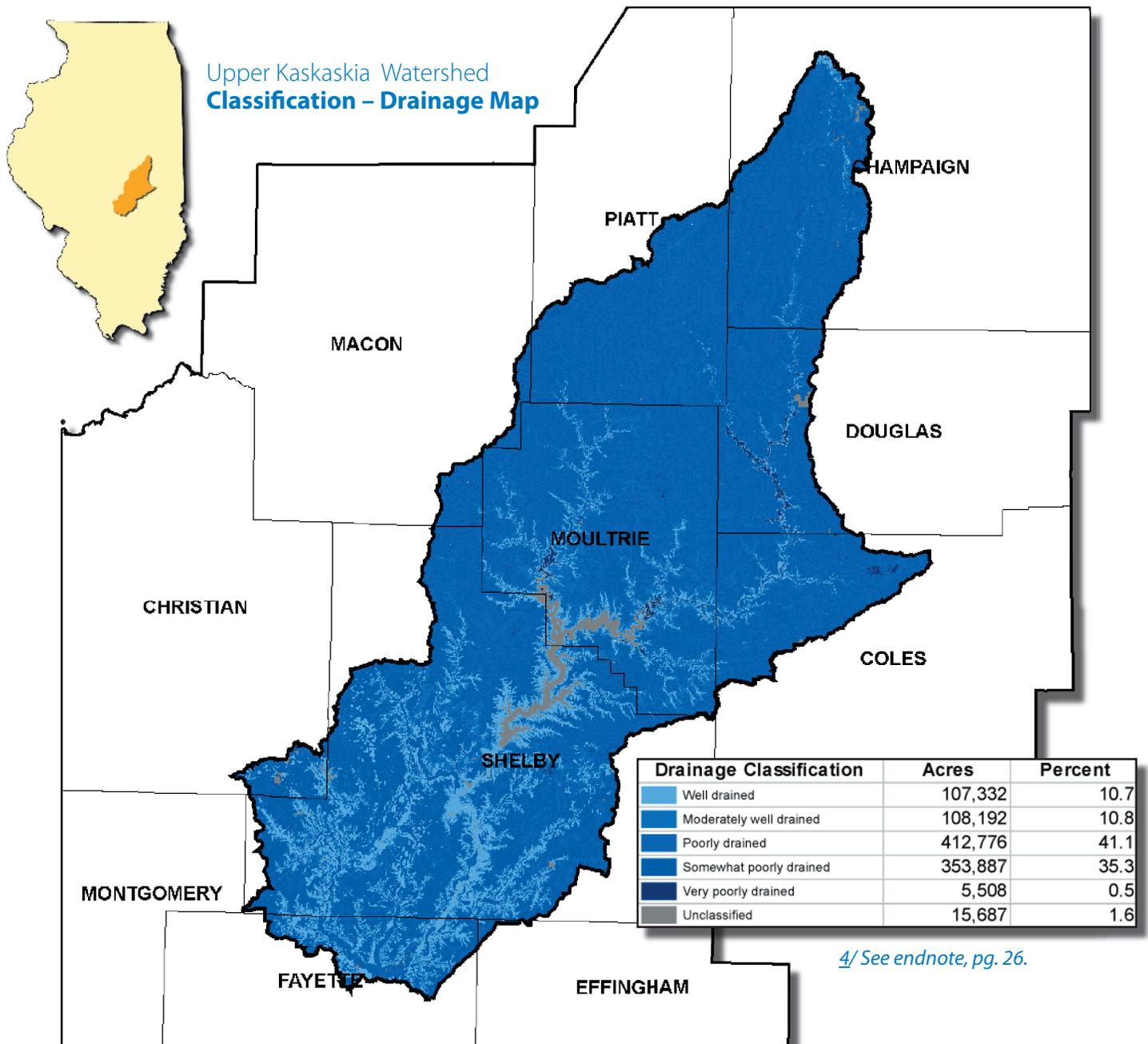
## Drainage

Upper Kaskaskia Watershed

(IL) HUC: 07140201

Total Acres: 1,003,387

**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 classifications 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 classifications are defined in the “Soil Survey Manual” that can be accessed at <http://soils.usda.gov/technical/manual/>.

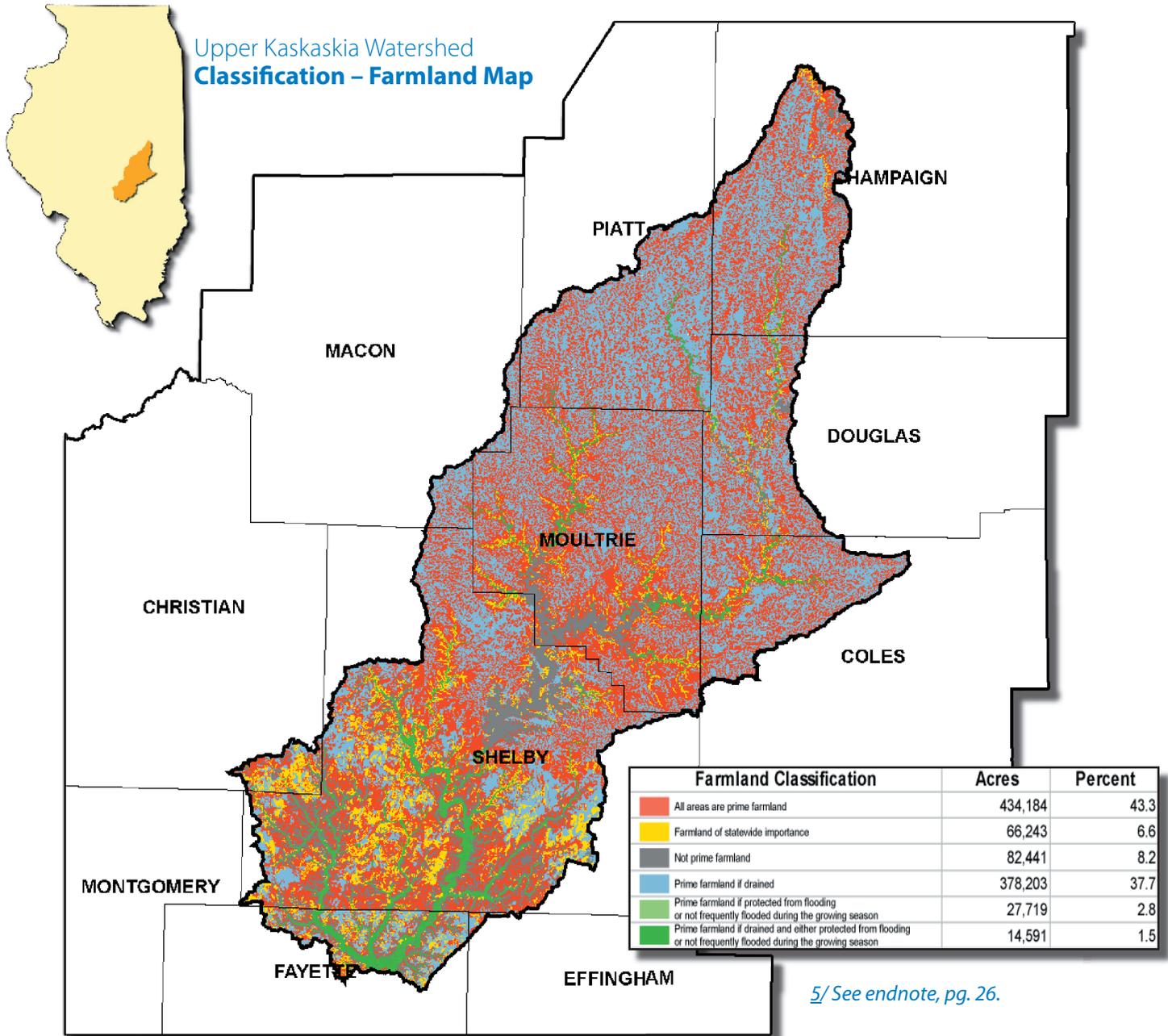


# Classification

## Farmland

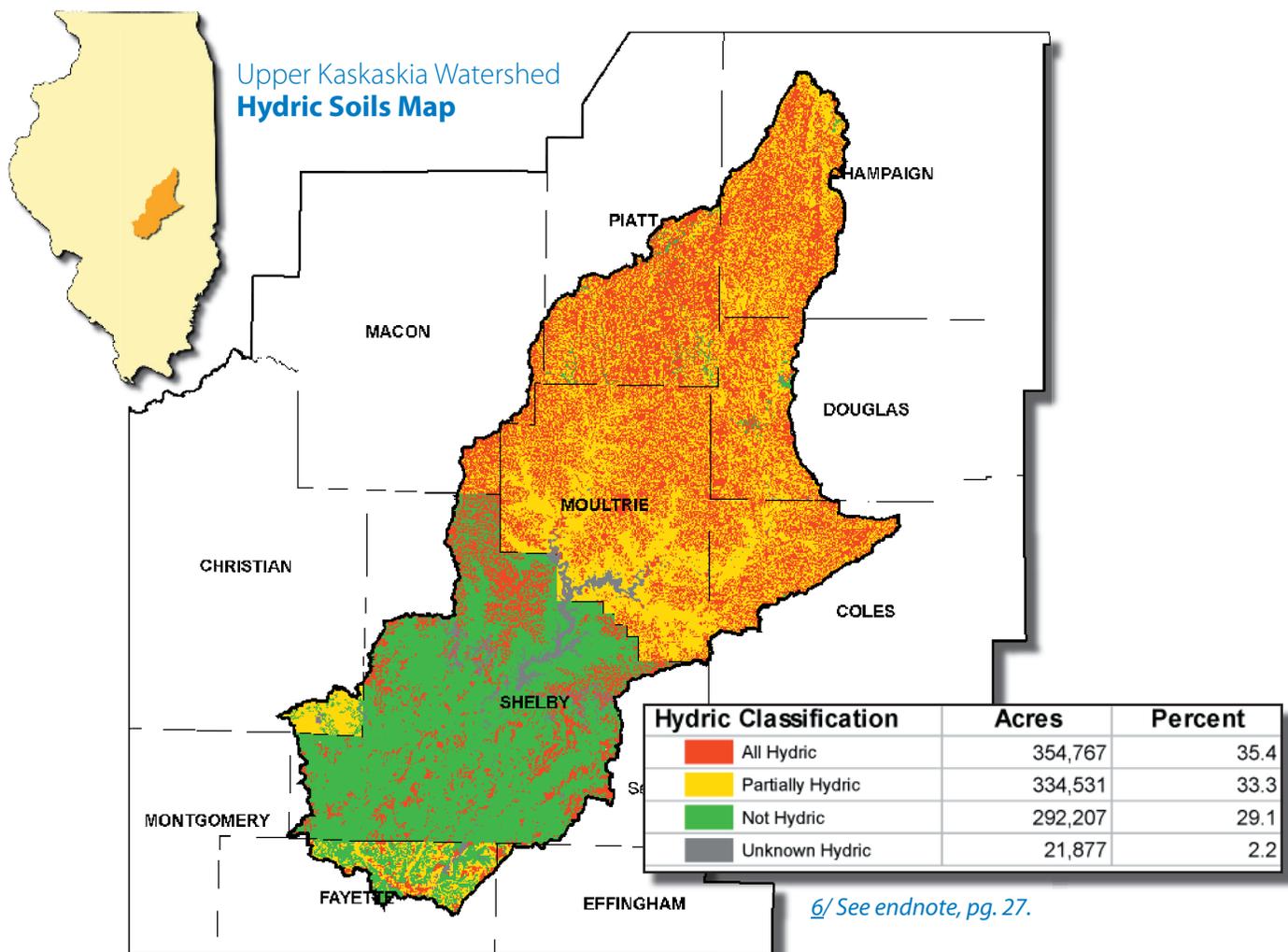
Upper Kaskaskia Watershed  
 (IL) HUC: 07140201  
 Total Acres: 1,003,387

**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: [www.access.gpo.gov/nara/cfr/waisidx\\_00/7cfr657\\_00.html](http://www.access.gpo.gov/nara/cfr/waisidx_00/7cfr657_00.html).



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 landscape. Map units dominantly made up of non-hydric soils may have inclusions of hydric soils in lower landscape 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).



# Quaternary Deposits

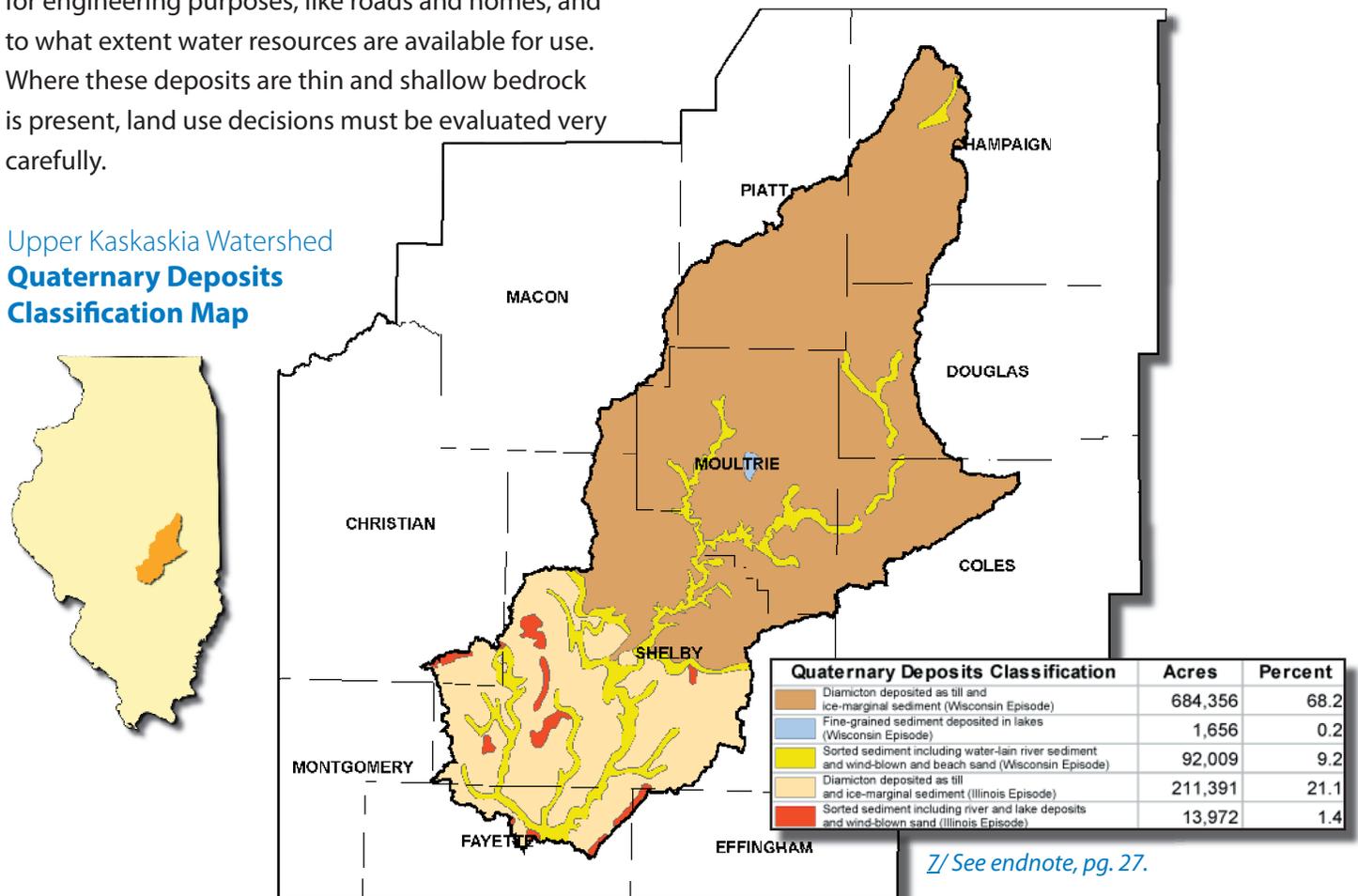
Upper Kaskaskia Watershed  
(IL) HUC: 07140201  
Total Acres: 1,003,387

Quaternary is a relic term from the 1800's that attempted to subdivide the geological record and establish a time classification for rocks and sediment material found at the earth's surface. Today, use of the term persists, but the actual data/definition has changed. By removing original terms of Primary, Secondary and Tertiary, "Quaternary" now refers to sediments deposited during the geologic period from the beginning of the Ice Age to present day.

Quaternary deposits are those unconsolidated, more recent deposits, which overlie Illinois glacial bedrock. Distribution of these materials across the landscape determine how productive the land is from an agricultural perspective, how well the land performs for engineering purposes, like roads and homes, and to what extent water resources are available for use. Where these deposits are thin and shallow bedrock is present, land use decisions must be evaluated very carefully.

Glacial till is a dense, relatively impermeable material deposited directly by glaciers that covered Illinois. It is an unsorted mixture of stones, sand, gravel, silt and clay. The lacustrine material, or fine-textured sediments deposited in pro-glacial lakes, is homogeneous in nature and composed mainly of smaller silt and clay size particles. River deposits are most often sand and sometimes gravel deposited by flowing streams that originated within or in front of glaciers. As the sand was exposed to the wind and dried considerably, some deposits were picked up and re-deposited as sand dunes. Loess, silty material derived from old flood plain deposits was also picked up by the wind and covers the entire watershed in varying thicknesses. Each of these materials is best suited to different intensity and type of land use.

Upper Kaskaskia Watershed  
Quaternary Deposits  
Classification Map



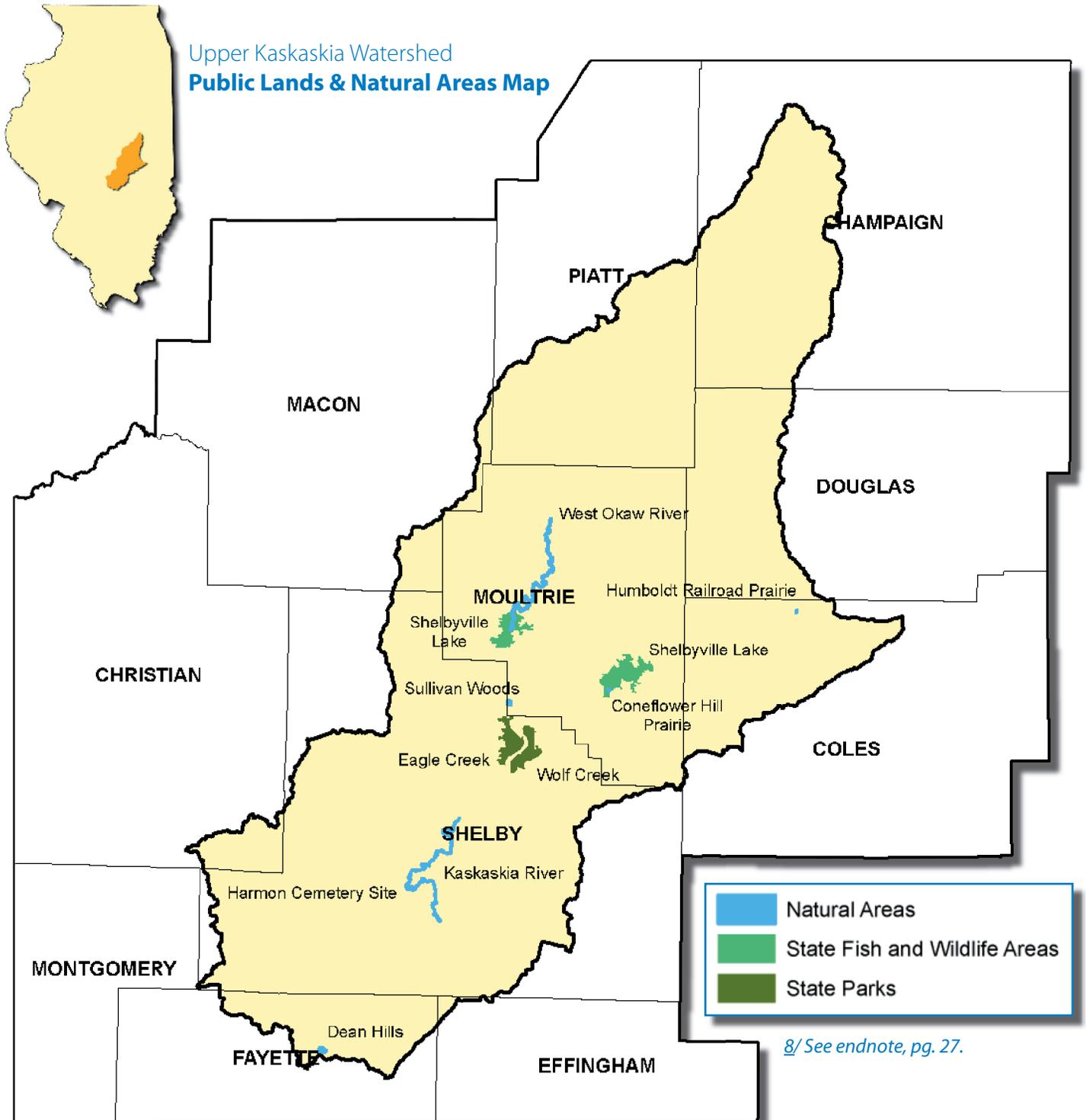
*/ See endnote, pg. 27.*

# Public Lands and Natural Areas

Upper Kaskaskia Watershed

(IL) HUC: 07140201

Total Acres: 1,003,387



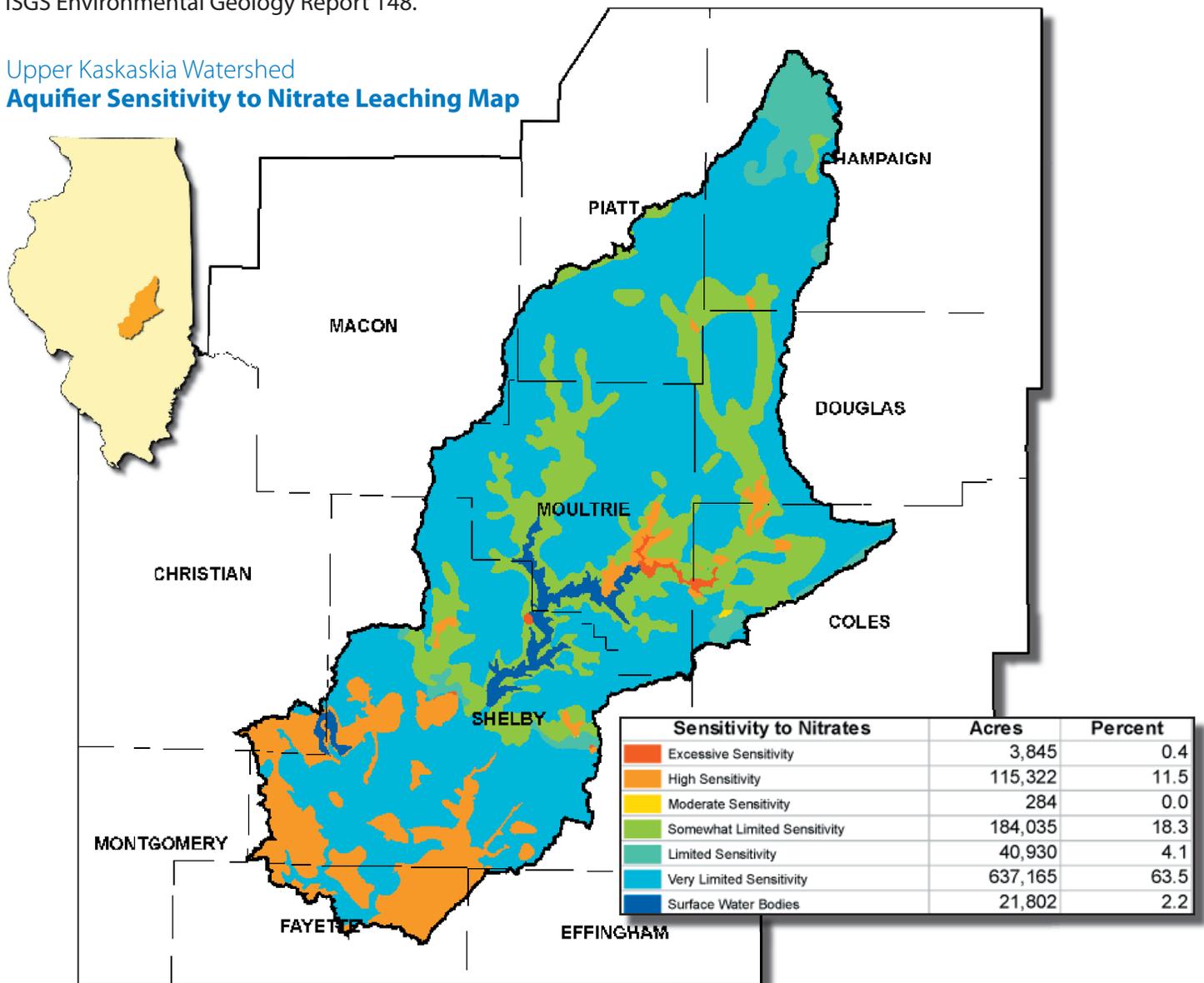
# Aquifer Sensitivity to Nitrate Leaching

Upper Kaskaskia Watershed  
(IL) HUC: 07140201  
Total Acres: 1,003,387

The Illinois State Geological Survey (ISGS) statewide Stack-Unit map was used to create a map of depth to the uppermost aquifer, which was then combined with maps of nitrate and pesticide leaching classes to ultimately derive aquifer sensitivity to contamination by nitrate and pesticide leaching. Six aquifer sensitivity classes are shown as indicated below. Disturbed land and surface water areas are also shown. These data are to be used in conjunction with ISGS Environmental Geology Report 148.

This dataset was designed for statewide evaluation of agrichemical leaching characteristics and associated aquifer sensitivity to contamination. It was created to classify soils and aquifer settings according to predictions of leaching potential. Classifications have not been validated by results of water quality sampling. Accordingly, reliability of these aquifer sensitivity ratings as predictors of water quality has not been evaluated.

Upper Kaskaskia Watershed  
**Aquifer Sensitivity to Nitrate Leaching Map**



9/ See endnote, pg. 27.

# Aquifer Sensitivity to Pesticide Leaching

## Potential of Agricultural Chemical Contamination of Aquifers

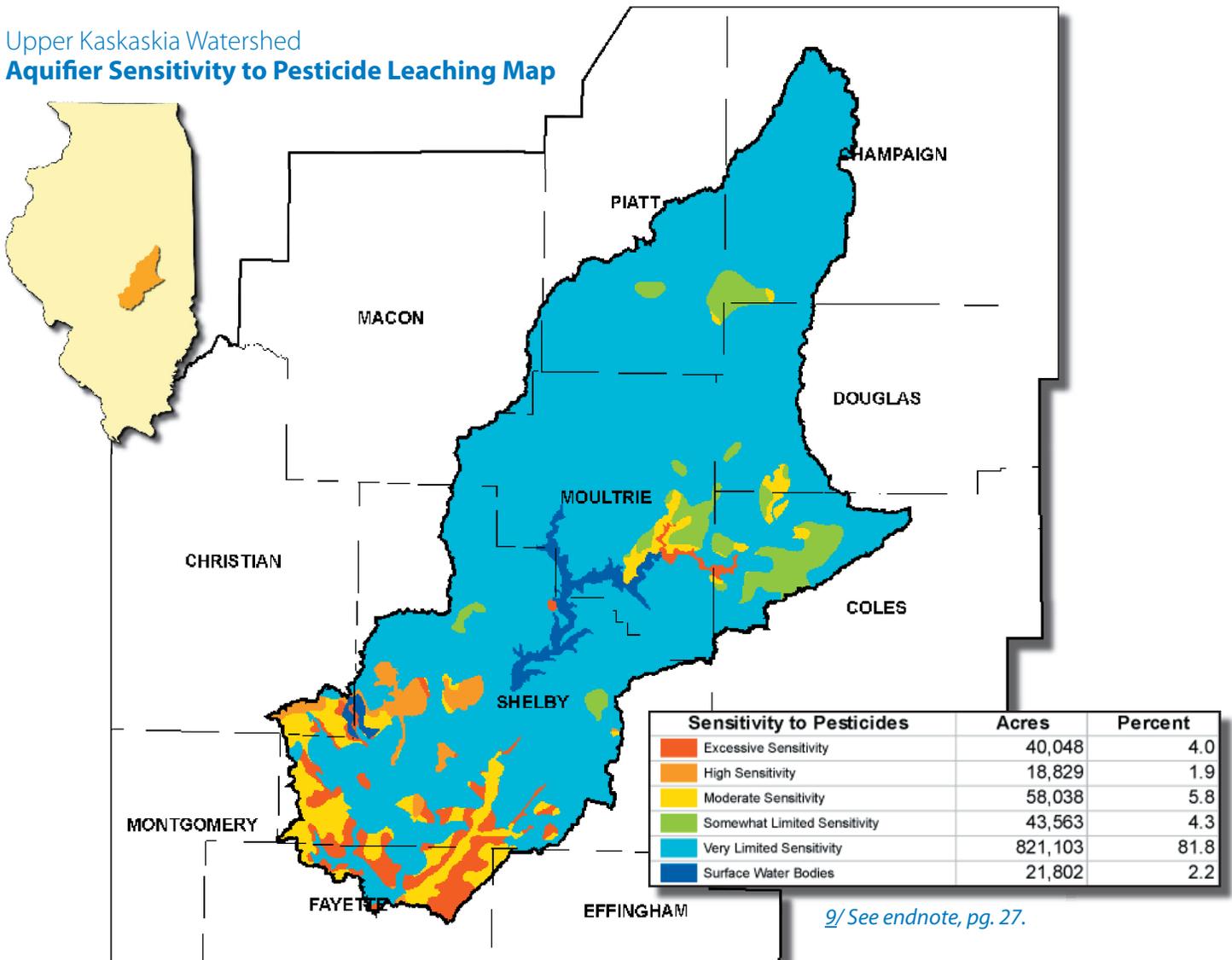
Upper Kaskaskia Watershed  
 (IL) HUC: 07140201  
 Total Acres: 1,003,387

Two 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 organic compounds that tend to adsorb to soil organic matter, and so have their movement slowed.)

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. *See Illinois State Geological Survey (ISGS) EG 148 for the derivation of these classes.*

Upper Kaskaskia Watershed  
**Aquifer Sensitivity to Pesticide Leaching Map**



*9/ See endnote, pg. 27.*

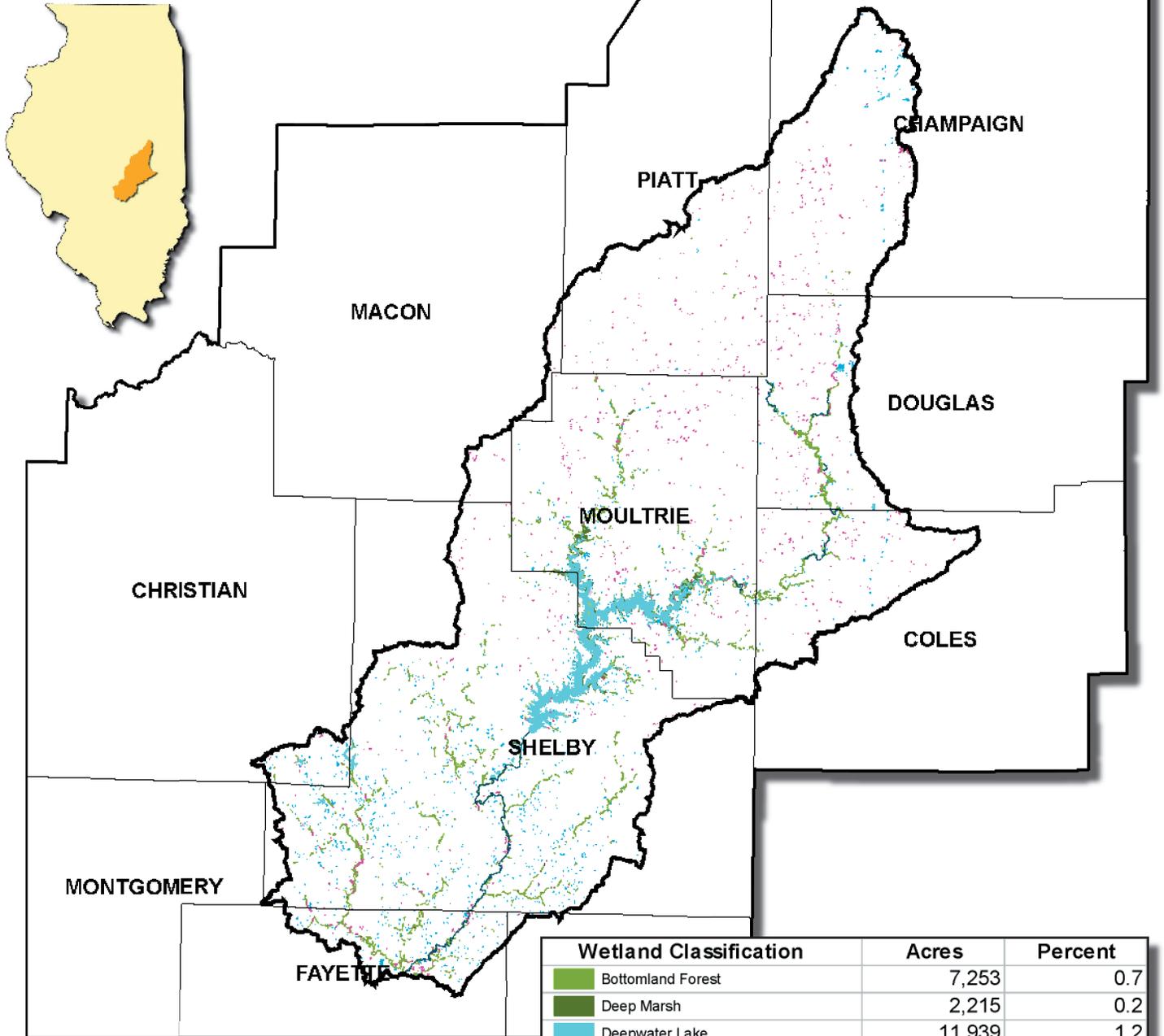
# National Wetland Inventory

Upper Kaskaskia Watershed

(IL) HUC: 07140201

Total Acres: 1,003,387

## Upper Kaskaskia Watershed Wetland Inventory Map



Wetland Classification	Acres	Percent
Bottomland Forest	7,253	0.7
Deep Marsh	2,215	0.2
Deepwater Lake	11,939	1.2
Open Water Wetlands	1,299	0.1
Perennial Deepwater River	668	0.1
Perennial Riverine	14	0.0
Shallow Lake	19	0.0
Shallow Marsh/Wet Meadow	1,465	0.1
Shrub-Scrub Wetlands	343	0.0
Swamp	47	0.0

*10/ See endnote, pgs. 28.*

# 303(d) Impaired Waters

## 303D Designations for Streams in Upper Kaskaskia Watershed

Upper Kaskaskia Watershed  
(IL) HUC: 07140201  
Total Acres: 1,003,387

**D**esignations listed by IEPA for the streams, segments of streams, and/or open water bodies in this watershed are considered to be **\*Medium** in priority. Each unit for consideration is designated by a 10-digit HUC. Within each entire stream, segments of stream, 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. 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/).

### Upper Kaskaskia Watershed 303(d) Impaired Waters List

HUC 8 (10)	305B Segment ID	Name	Priority	Miles/ Acres	Designated Use	Potential Causes
7140201(01)	IL_OW-01	Kaskaskia River, Lake Fork	Medium	9.37	Aquatic Life	Sedimentation/Siltation
7140201(01)	IL_OW-02	Kaskaskia River, Lake Fork	Medium	4.79	Aquatic Life	Sedimentation/Siltation
7140201(01)	IL_OW-03	Kaskaskia River, Lake Fork	Medium	19.49	Fish Consumption	Mercury, Polychlorinated biphenyls
7140201(02)	IL_O-13	Kaskaskia River	Medium	8.80 Mi.	Fish Consumption	Polychlorinated biphenyls
7140201(02)	IL_O-31	Kaskaskia River	Medium	5.22 Mi.	Fish Consumption	Polychlorinated biphenyls
7140201(02)	IL_O-35	Kaskaskia River	Medium	15.10 Mi.	Fish Consumption	Polychlorinated biphenyls
7140201(02)	IL_O-37	Kaskaskia River	Medium	7.83 Mi.	Fish Consumption	Polychlorinated biphenyls
7140201(02)	IL_OZZW	Dry Fork		11.89 Mi.	Aquatic Life	Cause Unknown
7140201(03)	IL_OU-01	Jonathon Creek	Medium	17.98 Mi.	Primary Contact Rec	Fecal Coliform
7140201(04)	IL_OZZU	Coon Creek North	Medium	4.78 Mi.	Aquatic Life	Cause Unknown
7140201(04)	IL_O-15	Kaskaskia River	Medium	11.62 Mi.	Fish Consumption	Polychlorinated biphenyls
7140201(04)	IL_O-17	Kaskaskia River	Medium	10.96	Fish Consumption	Polychlorinated biphenyls
7140201(04)	IL_O-02	Kaskaskia River	Medium	13.15 Mi.	Fish Consumption	Polychlorinated biphenyls
7140201(06)	IL_OT-02	West Okaw River	Medium	4.96 Mi.	Aquatic Life	Dissolved Oxygen (Nonpollutant)*, pH, Phosphorus
7140201(06)	IL_OT-04	West Okaw River	Medium	4.77 Mi.	Aquatic Life	Dissolved Oxygen (Nonpollutant)*, pH, Phosphorus
7140201(07)	IL_OZZT-01	Asa Creek	Medium	9.05 Mi.	Aquatic Life	Dissolved Oxygen (Nonpollutant)*, Total Suspended Solids (TSS)
7140201(07)	IL_ROC	Kaskaskia River	Medium	62.61 Mi.	Aesthetic Quality	Total Suspended Solids (TSS)
7140201(07)	IL_ROC	Kaskaskia River	Medium	62.61 Mi.	Aesthetic Quality	Total Suspended Solids (TSS)
7140201(10)	IL_ROF	Pana Lake	Medium	0.73 Mi.	Aesthetic Quality	Cause Unknown
7140201(10)	IL_OQ-01	Becks Creek	Medium	27.01 Mi.	Primary Contact Rec	Fecal Coliform
7140201(10)	IL_OQCA-01	Coal Creek	Medium	1.14 Mi.	Aquatic Life	Phosphorus (Total)
7140201(11)	IL_O-10	Kaskaskia River	Medium	23.01 Mi.	Fish Consumption	Mercury
7140201(11)	IL_O-11	Kaskaskia River	Medium	8.66 Mi.	Fish Consumption	Mercury
7140201(11)	IL_OZZJ-01	Jordan Creek	Medium	9.85 Mi.	Aquatic Life	Cause Unknown
7140201(11)	IL_O-32	Kaskaskia River	Medium	6.59 Mi.	Fish Consumption	Mercury

**\* 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 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.

**F**ollowing 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.

For Illinois inland lakes, the major potential causes of impairment based on lake acres affected are mercury and PCBs in fish tissue or sediments impairing fish consumption use, and phosphorus (total), aquatic algae, and total suspended solids impairing aquatic life and aesthetic quality uses. The potential major sources of these causes are: atmospheric deposition of toxins, crop production, littoral/shore area modification (nonriverine), other recreational pollution sources, runoff from forest/grassland/parkland, contaminated sediments, urban runoff/storm sewers, municipal point source discharges, and on-site treatment systems (septic systems and similar decentralized systems).

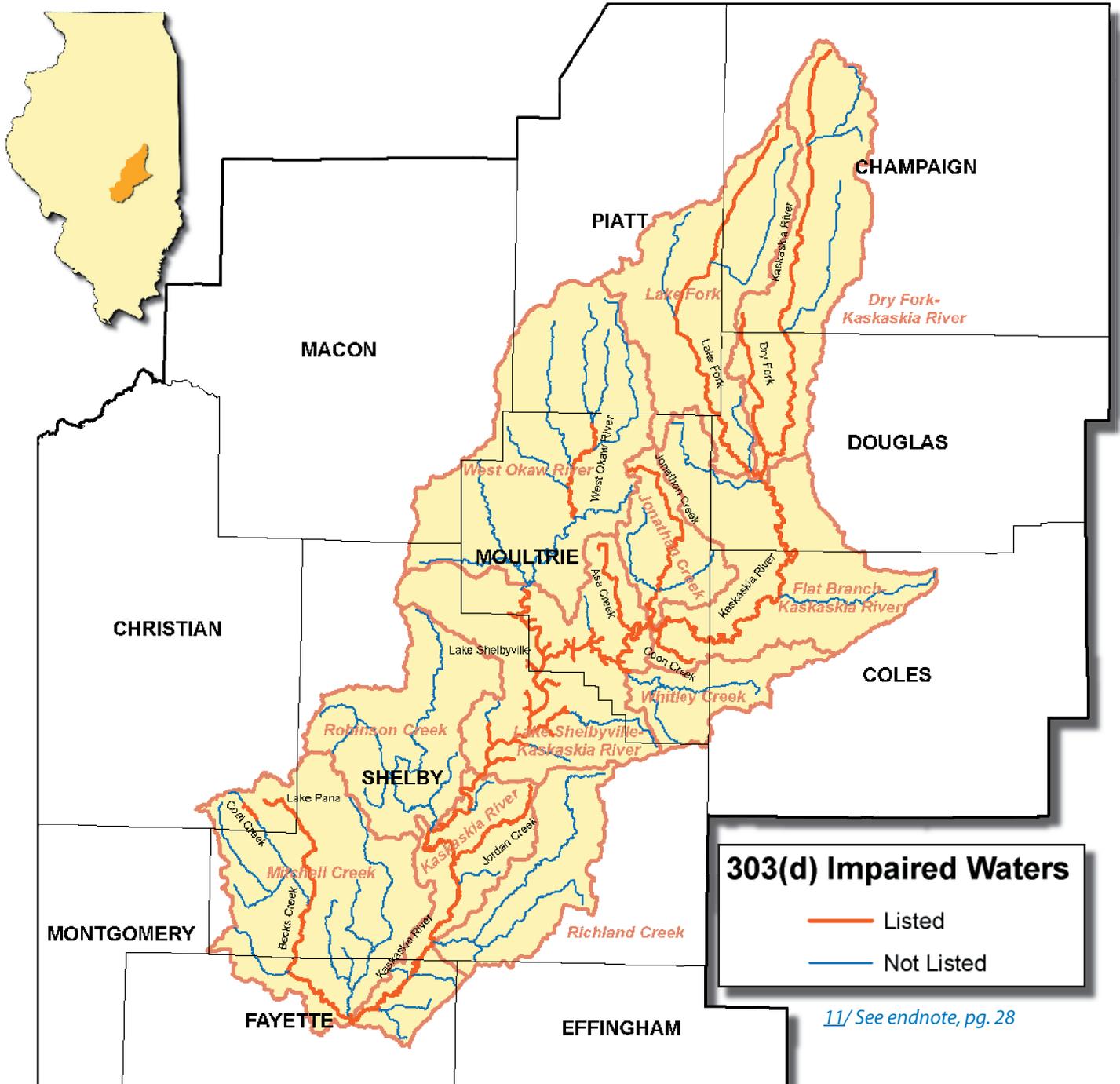
# 303(d) Impaired Waters (Continued)

Upper Kaskaskia Watershed

(IL) HUC: 07140201

Total Acres: 1,003,387

## Upper Kaskaskia Watershed 303(d) Impaired Waters Map

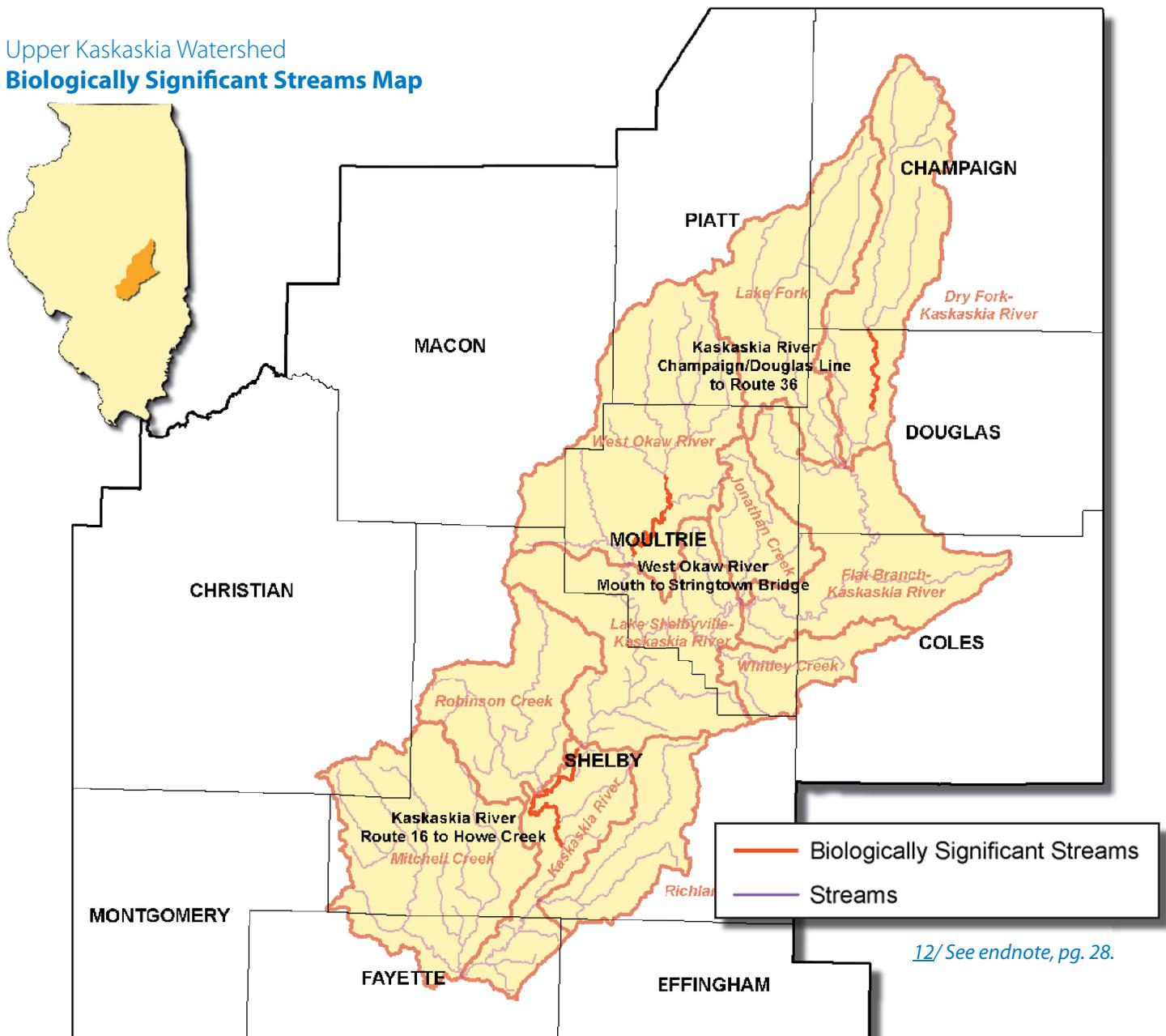


# Biologically Significant Streams Map

Upper Kaskaskia Watershed  
(IL) HUC: 07140201  
Total Acres: 1,003,387

**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.

Upper Kaskaskia Watershed  
**Biologically Significant Streams Map**



# Conservation on the Ground

## Practice Summary

Upper Kaskaskia Watershed  
 (IL) HUC: 07140201  
 Total Acres: 1,003,387

The major resource concerns from working lands in the watershed include gully erosion, streambank erosion, soil erosion, flooding, and water quality. Stabilization is needed in many creeks and tributaries as culverts and ditches are plugged with sediment. Some Best Management Practice (BMPs) well-suited to address these concerns include buffers strips, water and sediment control basins, terraces, grassed waterways, grade stabilization structures, streambank stabilization restoration projects, and nutrient management.

Land use change to developed land uses, particularly in the upper reaches of the watershed, will result in negative impacts to the resource base without proper planning and implementation of BMPs. The western expansion of the City of Champaign will cause construction site erosion, increased rates and volumes of storm water runoff, changes in stream flow regimes, loss of wildlife habitat, and a degradation of water quality. Planned expansion of sewer lines and a new waste water treatment facility, in addition to the proposed construction of an ethanol plant, will increase baseline flow to the Kaskaskia River and its tributaries.

### Upper Kaskaskia Watershed PRS Summary

Fiscal Year	2005	2006	2007	2008 (3 Qtr.)
0.10 - Conservation plans written (Ac.)	11,496	11,615	23,573	6,640
0.20 - Watershed or area-wide conservation plans developed (No.)	0	0	3	0
1.10 - Cropland with conservation applied to improve soil quality (Ac.)	8,247	6,507	11,202	6,905
2.10 - Land with conservation applied to improve water quality (Ac.)	0	0	10,885	7,644
2.12 - CNMP applied (No.)	0	0	0	1
3.10 - Grazing and forest land with conservation applied to protect and improve the resource base (Ac.)	272	378	351	921
3.20 - Non-federal land with conservation applied to improve fish and wildlife habitat quality (Ac.)	3,819	2,160	1,331	1,261
3.30 - Wetlands created, restored or enhanced (Ac.)	220	161	0	0

# Conservation on the Ground

## PRS Performance Measures

Upper Kaskaskia Watershed  
(IL) HUC: 07140201  
Total Acres: 1,003,387

Upper Kaskaskia Watershed

### Conservation Practices Planned/Applied FY04 - FY08

Summary Conservation Practices	Planned/Applied				
	FY08 (3 Qtr.)	FY07	FY06	FY05	FY04
Brush Management (314) (ac)	0/0	0/0	84/65	0/0	0/0
Comprehensive Nutrient Mgmt Plan (100) (no)	0/10	1/0	1/0	0/0	0/0
Conservation Cover (327) (ac)	349/563	2,015/244	1,065/826	881/961	698/259
Conservation Crop Rotation (328) (ac)	4,910/7,288	15,723/10,371	9,704/5,963	11,153/9,351	8,391/4,919
Critical Area Planting (342) (ac)	40/0	0/0	8/13	0/0	16/0
Diversion (362) (ft)	0/0	0/0	650/0	0/0	225/225
Drainage Water Mgmt (554) (ac)	0/0	306/0	0/0	0/0	0/0
Early Successional Habitat Development/Mgmt (647) (ac)	153/11	2,322/52	89/2	405/30	0/0
Fence (382) (ft)	20,583/26,383	23,630/35,952	110,285/7,240	85,082/8,192	57,760/16,015
Field Border (386) (ft)	76,431/24,433	189,748/4	3,500/0	102,929/89,770	7,926/3,966
Filter Strip (393) (ac)	117/190	146/54	55/124	137/152	166/60
Forest Harvest Mgmt (666)	0/7	7/0	65/65	15/0	2/0
Forest Stand Improvement (666) (ac)	1,156/28	43/0	152/0	33/0	656/40
Grade Stabilization Structure (410) (no)	5/1	1/1	15/5	3/2	7/3
Grassed Waterway (412) (ac)	43/24	268/43	95/169	42/37	68/24
Nutrient Management (590) (ac)	1/705/1,457	3,832/1,315	2,612/748	918/249	4,041/1,063
Pasture & Hay Planting (512) (ac)	70/58	80/44	644/11	249/38	154/50
Pest Mgmt (595) (ac)	3/0	7/0	17/0	196/239	1,375/381
Pipeline (516) (ft)	4,153/8,565	4,600/3,780	48,170/0	21,742/3,105	21,075/5,900
Prescribed Burning (338) (ac)	140/9	14/0	0/0	63/18	0/0
Prescribed Forestry (409) (ac)	361/423	2,053/1	0/0	0/0	0/0

[more >](#)

# Conservation on the Ground

## PRS Performance Measures (Continued)

Upper Kaskaskia Watershed  
(IL) HUC: 07140201  
Total Acres: 1,003,387

Upper Kaskaskia Watershed

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

Summary Conservation Practices	Planned/Applied				
	FY08 (3 Qtr.)	FY07	FY06	FY05	FY04
Prescribed Grazing (528/528A) (ac)	185/146	80/44	974/171	748/75	378/217
Residue/Tillage Mgmt, Mulch Till (345) (ac)	3,393/1,788	7,931/4,999	0/0	1,150/280	0/0
Residue/Tillage Mgmt, No/Strip Till/Direct Seed (329) (ac)	2,163/808	5,955/3,975	0/0	0/0	0/0
Residue Mgmt, Mulch/Ridge/No-Till (346,329 A & B) (ac)	76/2,523	2,238/1,234	8,255/5,817	9,020/9,221	9,410/5,168
Residue Mgmt, Seasonal (344) (ac)	0/0	72/72	0/0	647/1,353	113/77
Restoration & Mgmt Rare/Declining Habitats (643) (ac)	0/0	13/17	42/42	161/0	0/0
Riparian Forest Buffer (391) (ac)	0/70	13/5	72/163	238/312	957/449
Shallow Water Development & Mgmt (646) (ac)	10/0	0/6	10/10	4/3	5/0
Subsurface Drain (606) (ft)	0/720	0/2,260	6,300/6,450	3,750/0	4,434/1,300
Terrace (600) (ft)	3,390/15,950	17,210/0	36,700/1,000	10,000/0	23,550/1,000
Tree/Shrub Establishment (612) (ac)	12/193	98/118	175/138	213/232	828/431
Underground Outlet (620) (ft)	1,840/20	4,430/20	1,380/80	80/20	5,885/0
Upland Wildlife Habitat Mgmt (645) (ac)	1,042/1,223	5,150/1,323	2,983/1,558	2,444/2,252	567/126
Use Exclusion (472) (ac)	5/4	38/5	83/89	149/97	220/104
Waste Storage Facility (313) (no)	0/0	0/0	1/0	0/0	0/0
Waste Utilization (633) (ac)	0/0	0/0	0/0	0/0	174/96
Water & Sediment Control Basin (638) (no)	14/4	15/9	50/4	3/1	10/0
Watering Facility (614) (no)	8/10	2/0	29/0	23/2	32/7
Wetland Create/Enhance/Restore (658/659/657) (ac)	10/0	0/0	161/161	177/210	830/775
Wetland Wildlife Habitat Mgmt (644) (ac)	0/38	6/8	364/119	26/44	668/648
Windbreak/Shelterbelt Establishment (380) (ft)	2,640/4,000	5,5005/2,480	0/0	1,400/1,400	4,002/0

## Farm Census Data

Agricultural Operation	Champaign	Christian	Coles	Douglas	Effingham	Fayette	Macon	Moultrie	Piatt	Shelby
Farms (number)	217	23	159	161	6	109	27	441	171	862
Land in farms (acres)	97,524	11,905	60,845	64,920	1,390	31,814	13,147	186,478	99,795	294,709
Total cropland (acres)	94,513	11,291	55,591	67,313	1,189	27,207	12,416	176,831	97,162	263,118
Irrigated land (farms)	6	2	4	3	0	1	1	7	4	3
Principal operator by primary occupation-farming (no.)	157	2	105	116	3	66	19	310	133	566
<b>Farms by size:</b>										
1 to 9 acres	9	1	10	14	0	3	2	37	10	25
10 to 49 acres	38	5	37	31	1	32	6	95	25	208
50 to 179 acres	50	5	41	46	2	36	6	115	32	237
180 to 499 acres	51	4	29	24	2	9	4	61	33	195
500 to 999 acres	41	4	24	25	1	12	4	64	36	120
1,000 acres or more	29	4	18	20	0	3	5	69	34	77
<b>Livestock and poultry:</b>										
Cattle & calves inventory (farms)	17	5	35	30	2	37	4	116	20	260
Beef cows (farms)	11	4	25	7	1	29	3	55	16	195
Milk cows (farms)	2	1	3	15	0	3	0	36	2	16
Hogs & pigs inventory (farms)	4	1	5	8	1	4	1	27	6	47
Sheep & lambs inventory (farms)	3	0	3	5	0	3	0	28	5	13
Layers 20 weeks old & older inventory (farms)	4	0	4	8	0	2	1	15	4	6
Broilers & other meat-type chickens sold (farms)	1	0	1	0	0	0	0	1	1	0
<b>Selected crops harvested:</b>										
Corn for grain (acres)	46,902	5,685	24,455	30,231	451	8,767	6,192	86,121	48,977	117,026
Corn for silage/greenchop (acres)	28	5	7	206	22	163	1	679	54	1,855
Wheat for grain, All (acres)	406	82	285	136	53	1,562	10	777	208	9,182
Winter wheat for grain (acres)	406	82	285	136	53	1,562	10	777	208	9,182
Oats for grain (acres)	68	18	9	351	1	10	8	548	45	113

## Social Census for 1990

Total Population	White	Af_Amer	Native	Asian	Other	Hispanic	PCAP Income
87,335	82,806	3,445	182	853	49	388	\$13,726

## Social Census for 2000

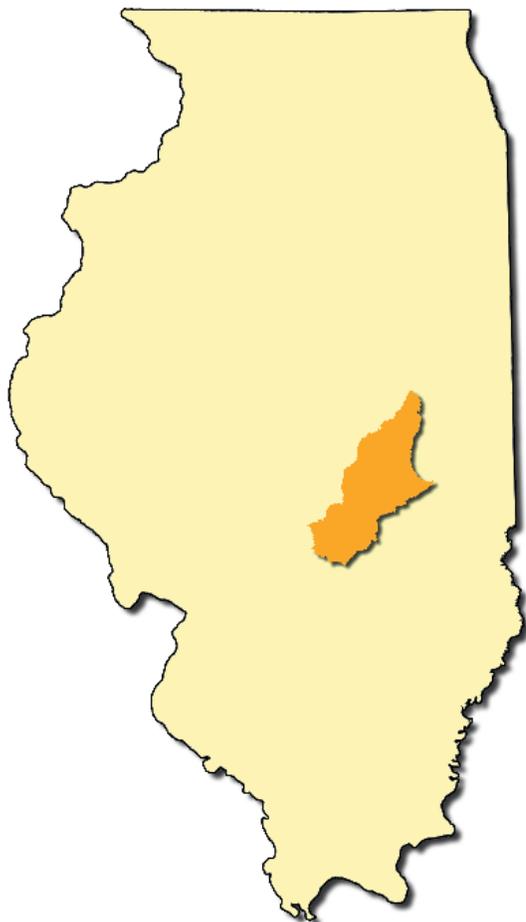
Total Population	White	Black	Amer_ES	Asian	Hawn_PI	Other	Multi_Race	Hispanic	PCAP Income
90,944	83,110	4,413	134	1,865	22	455	1	272	\$21,530

## Related Watershed Activities

Current activities in the Upper Kaskaskia 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 which include:

- Flooding
- Sheet and Rill Erosion
- Streambank Erosion and Maintenance
- Surface Water Quality
- Education—Conservation Practices & Farm Programs
- Water Quality – Livestock Waste Concerns
- Water Quality Nutrient Runoff/Fertilizer
- Wildlife Habitat Management

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— (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>.

## 2 Common Resource Areas — (Page 7)

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

## 3 Land Cover — (Page 8)

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 <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 NRCS Geospatial Data Gateway <http://datagateway.nrcs.usda.gov/>.

## 4 Drainage Classification — (Page 9)

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 10)

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 by political boundaries, previous inconsistencies between counties will now 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.

## 6 Hydric Soils — (Page 11)

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 Quaternary Deposits — (Page 12)

Quaternary Deposits of Illinois data was created by the Illinois State Geological Survey. This feature dataset is a generalized version of Quaternary Deposits of Illinois. It was updated to reflect the aerial distribution of the Wedron and Mason Groups (Wisconsin and Hudson Episodes) and deposits of the Illinoian and pre-Illinoian episodes in Illinois as described in ISGS Bulletin 104. Episodes are diachronic temporal units. Refer to primary sources for more information. Scale is 1:2,500,000.

Source: Digital Databases of Illinois, CD-ROM, Volume 1, 1994. Illinois Department of Energy and Natural Resources. Visit: [www.isgs.uiuc.edu/nsdihome/webdocs/st-geolq.html](http://www.isgs.uiuc.edu/nsdihome/webdocs/st-geolq.html) and [www.isgs.uiuc.edu/nsdihome/outmeta/IL\\_Quat\\_Units\\_2500K\\_1996.html](http://www.isgs.uiuc.edu/nsdihome/outmeta/IL_Quat_Units_2500K_1996.html).

## 8 Public Lands and Natural Areas — (Page 0)

### Natural Areas

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

*This dataset 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)

*This dataset was 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

*This dataset was 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.*

### Illinois State Conservation Areas

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

*This dataset was 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 14-15)

From: "Potential of Agrichemical Contamination of Aquifers" ISGS Illinois Natural Resources Geospatial Data Clearinghouse.

This statewide dataset evaluates 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. Visit [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 Wetland Inventory** — *(Page 16)*  
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) Impaired Waters** — *(Page 17-19)*  
Reference: Illinois EPA. 2008. Illinois Integrated Water Quality Report and Section 303(d) List-2008. Bureau of Water, Watershed Management Section, Springfield, IL. Visit [www.epa.state.il.us/water/tmdl/303d-list.html](http://www.epa.state.il.us/water/tmdl/303d-list.html).

**12 Biologically Significant Streams** — *(Page 20)*  
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.