



Rapid 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.

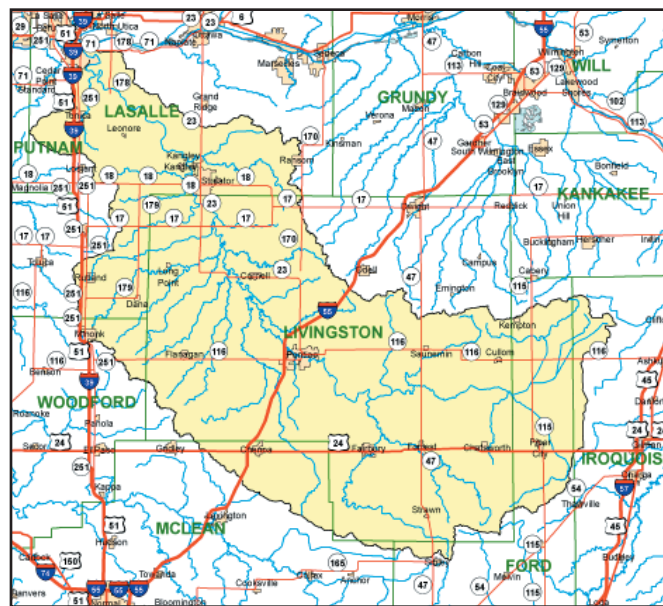
Introduction

The Vermilion River Watershed is located in North Central Illinois and flows in a northwesterly direction encompassing more than 853,606 acres that drain into the Illinois River Basin. The watershed covers the majority of land within Livingston County, parts of LaSalle, Woodford, McLean, Ford and Iroquois Counties, and a small portion of Marshall County. The mainly agricultural landscape has many small streams, creeks, and man-made lakes that flow into the Vermilion River which eventually enters the Illinois River near Oglesby. Conservation assistance is provided by six NRCS Field and seven Soil and Water Conservation District Offices, and two Resource Conservation and Development (RC&D) offices.



Vermilion River Watershed

Location Map



The majority of the land in the watershed, 85.5 percent, is devoted to agriculture. Developed land accounts for 10.1 percent of the area while forest land, non-agricultural grasslands, and open water/wetlands comprise the balance of the watershed. Farms primarily consist of cash grain, hog and beef operations. Major crops include corn, soybeans, wheat and alfalfa.

The population of the watershed is mostly rural, but there are several small cities and towns found throughout the area. The largest population centers are the cities of Streator, (pop. 14,190) Pontiac, (pop. 11,864), Fairbury (pop. 3,968), Oglesby, (pop. 3,647), and the towns of Forrest (pop. 1,225) and Flanagan, (pop. 1,083). Agriculture, manufacturing, and public sector employment are the major components of the regional economy.

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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)

Watersheds 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).

Vermilion River Watershed County Areas

County	County Acres	Acres in HUC	% of HUC from County	% of County in HUC
LaSalle	734,518	171,415	20.08%	20.08%
Marshall	255,083	3,372	0.40%	0.40%
Livingston	669,241	525,630	61.58%	61.58%
Iroquois	715,685	16,173	1.89%	1.89%
Ford	311,032	77,491	9.08%	9.08%
Woodford	347,435	15,738	1.84%	1.84%
McLean	758,989	43,787	5.13%	5.13%
Total	3,791,983	853,606	100.00%	100.00%

Vermilion River Subwatershed

HUC_10	Name	Acres	Percent HUC
0713000201	Kelly Creek-North Fork Vermilion River	122,641	14.4%
0713000202	South Fork Vermilion River	120,057	14.1%
0713000203	North Fork Vermilion River	127,922	15%
0713000204	Rooks Creek	84,061	9.8%
0713000205	Scattering Paint Creek	53,714	6.3%
0713000206	Upper Vermilion River	63,262	7.4%
0713000207	Long Point Creek	58,860	6.9%
0713000208	Middle Vermilion River	88,324	10.34%
0713000209	Lower Vermilion River	133,467	15.6%

Elevation & Annual Precipitation

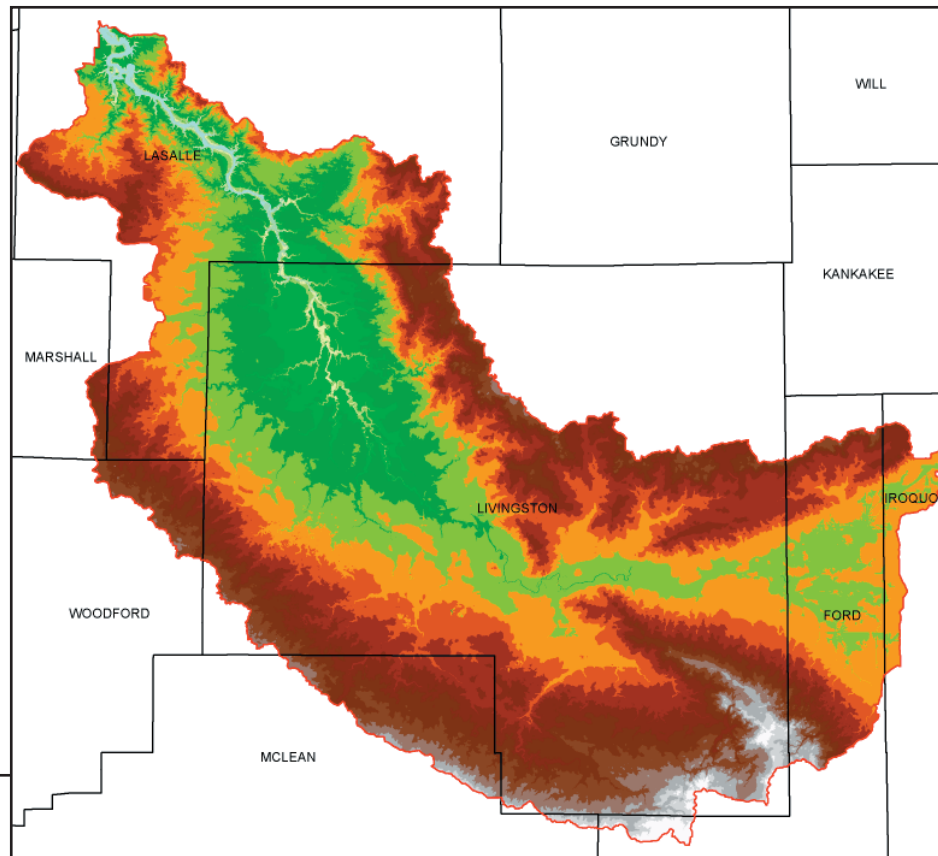
Vermilion River Watershed

(IL) HUC: 07130002

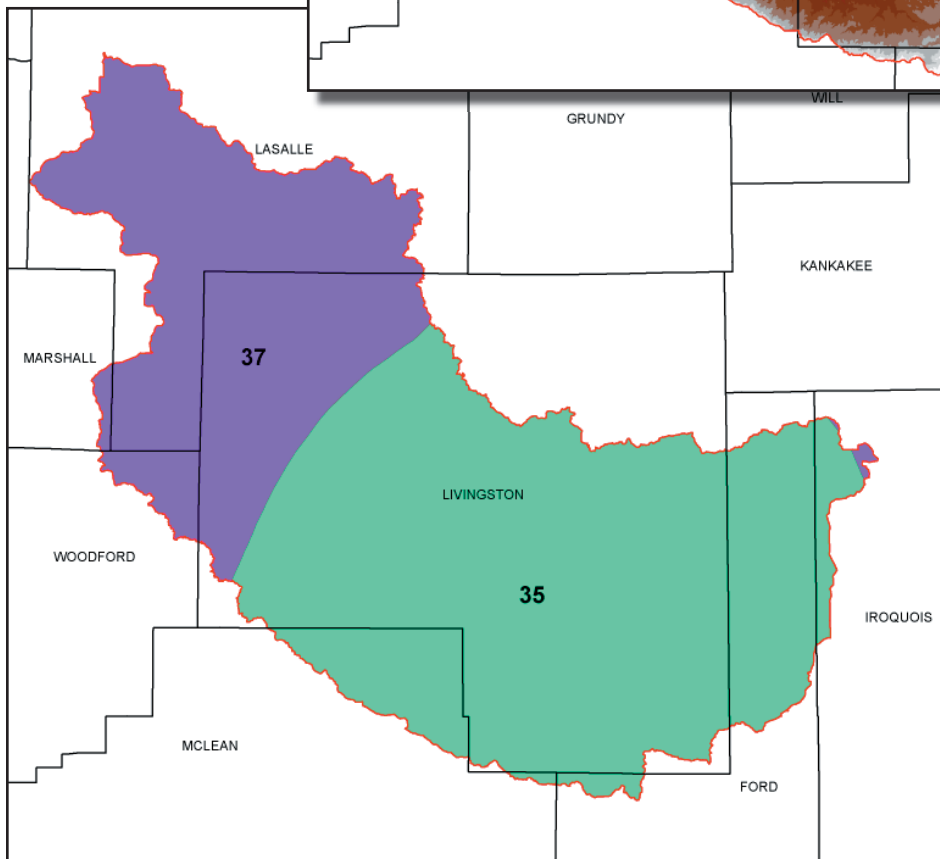
Total Acres: 853,606

Vermilion River Watershed

Elevation Map



170m	558 Ft
175m	575 Ft
180m	590 Ft
185m	607 Ft
190m	623 Ft
195m	640 Ft
200m	656 Ft
205m	673 Ft
210m	689 Ft
215m	705 Ft
220m	722 Ft
225m	738 Ft
230m	755 Ft
235m	771 Ft
240m	787 Ft
245m	804 Ft
250m	820 Ft



Vermilion River Watershed
**Annual Average
Precipitation Map**
(inches)

1/ See endnote, pg. 25.

Common 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 A.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 in the rolling areas associated with glacial moraines.

110.1 Central Corn Belt Heavy Till Plain

Nearly level to gently sloping, moderately well drained to somewhat poorly drained soils formed in clayey till overlain by silty or loamy material. Primarily cash grain crop with scattered livestock operations, deciduous forest crops, lakes and wetlands. Land use is influenced by urban and suburban development around larger communities. Primary resource concerns are cropland erosion, surface water quality, construction site erosion and storm water management, and wetland protection and restoration.

110.2 Northern Illinois Heavy Till Plain

Morainal and intermorainal uplands. Moderately well drained to somewhat poorly drained soils formed in clayey till overlain by silty or loamy material. Primarily cash grain crops with scattered livestock operations, deciduous forest, lakes and wetlands. Land use is influenced by extensive urban and suburban development around southern suburbs of Chicago and larger communities. Primary resource concerns are cropland erosion, surface water quality, construction site erosion and storm water management, and wetland protection and restoration.

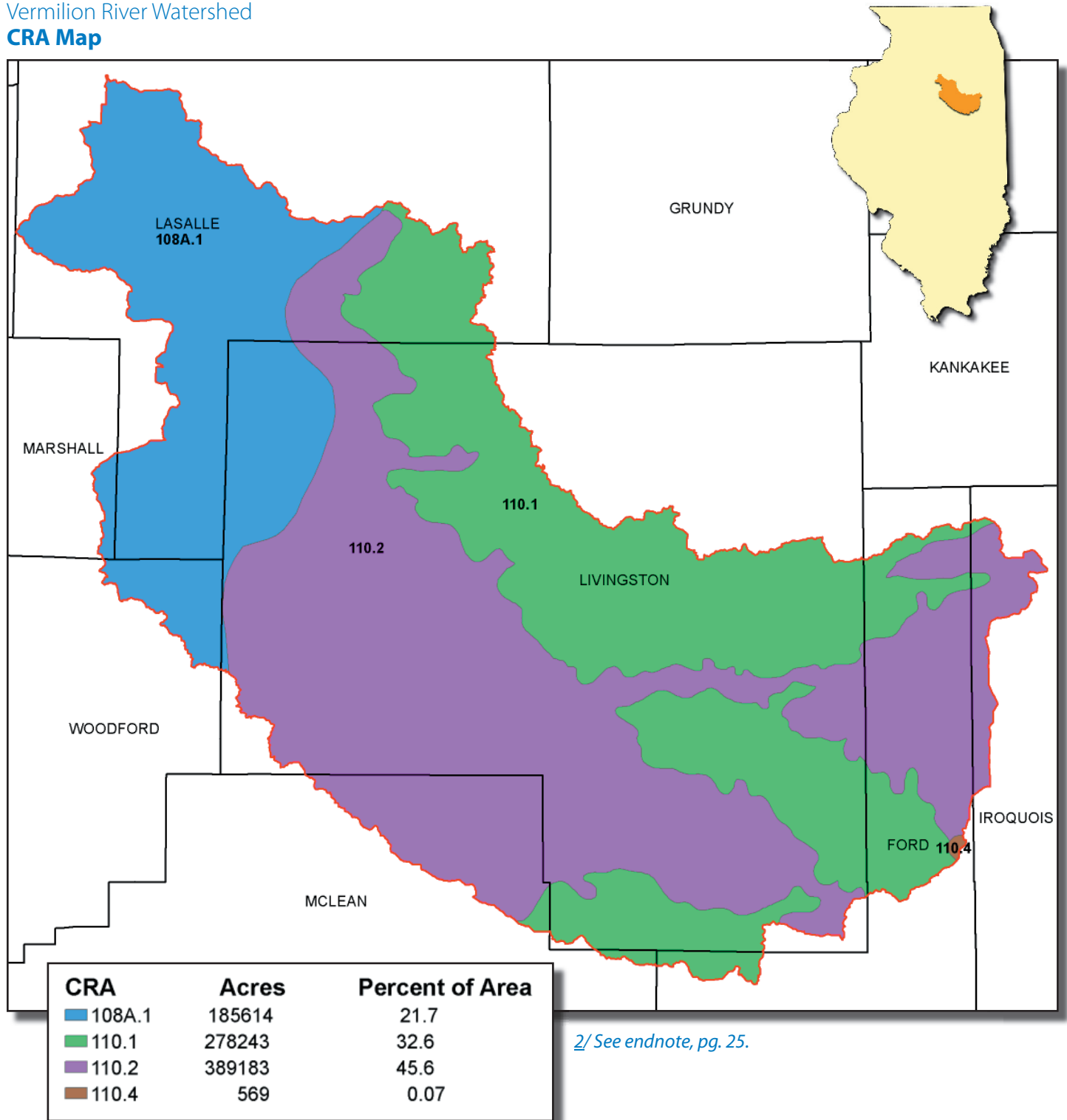
110.4 Northern Illinois Heavy Drift Plain — Lacustrine

Nearly level and gently sloping, dark colored, poorly drained and somewhat poorly drained soils formed in clayey and fine-textured lacustrine deposits. Corn and soybean production is the main land use. The poorly drained areas are extensively drained. More diverse agriculture and the few remaining woodlands are located in the more rolling areas associated with small- to medium-sized streams. Primary resource concerns are drainage maintenance, nutrient management, water quality, and wetland preservation and restoration.

Common Resource Areas *(Continued)*

Vermilion River Watershed
 (IL) HUC: 07130002
 Total Acres: 853,606

Vermilion River Watershed
CRA Map



Land Cover

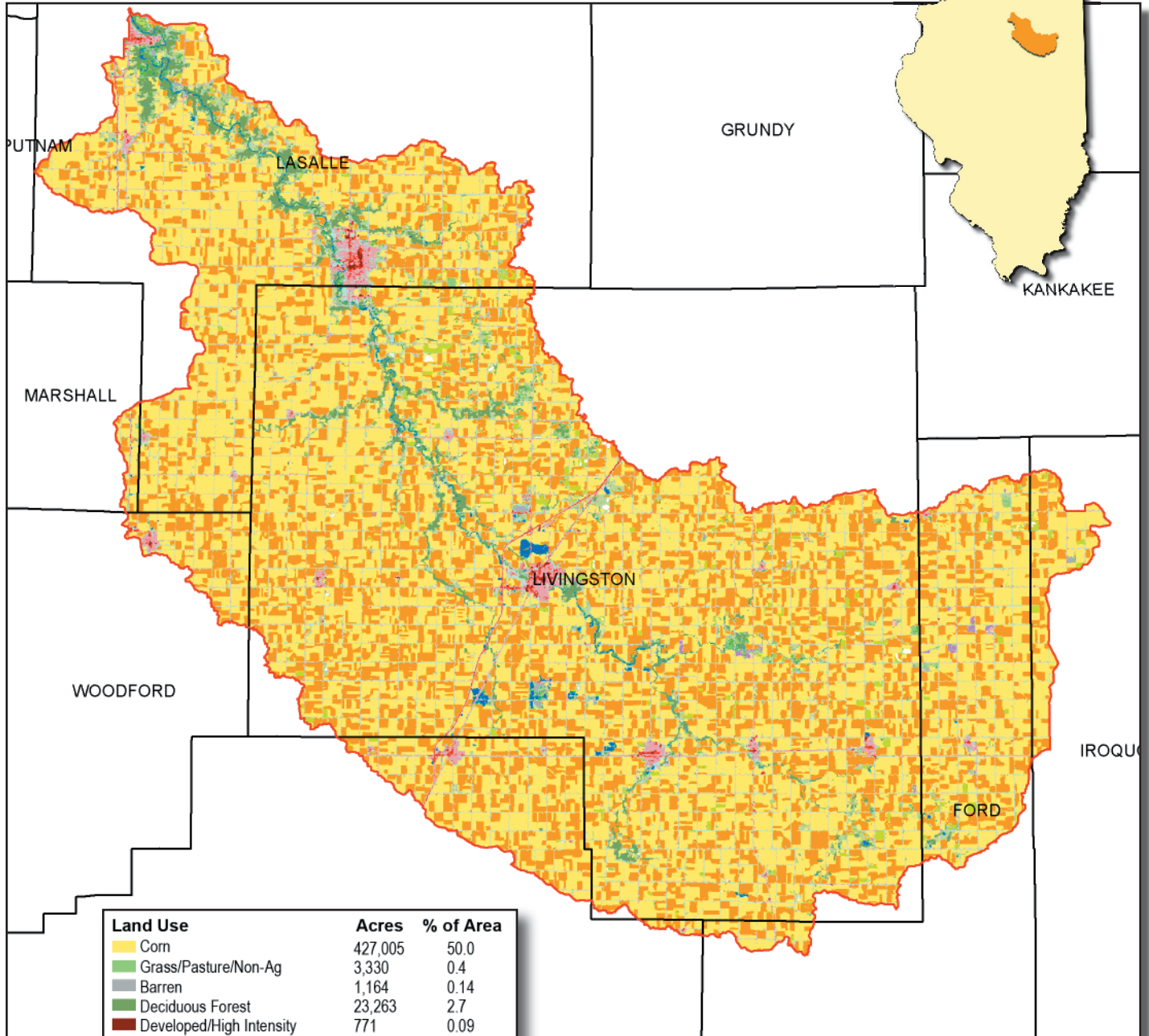
Vermilion River Watershed

(IL) HUC: 07130002

Total Acres: 853,606

Vermilion River Watershed

Land Cover Map



Land Use	Acres	% of Area
Corn	427,005	50.0
Grass/Pasture/Non-Ag	3,330	0.4
Barren	1,164	0.14
Deciduous Forest	23,263	2.7
Developed/High Intensity	771	0.09
Developed/Low Intensity	30,628	3.6
Developed/Medium Intensity	3,336	0.4
Developed/Open Space	51,102	6.0
Grassland Herbaceous	3,287	0.4
Open Water	3,267	0.4
Pasture/Hay	24,334	2.8
Wood Wetlands	305	0.04
Oats	239	0.03
Soybeans	270,219	31.7
Wetlands	1,360	0.16
Winter Wheat	8,054	0.95

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

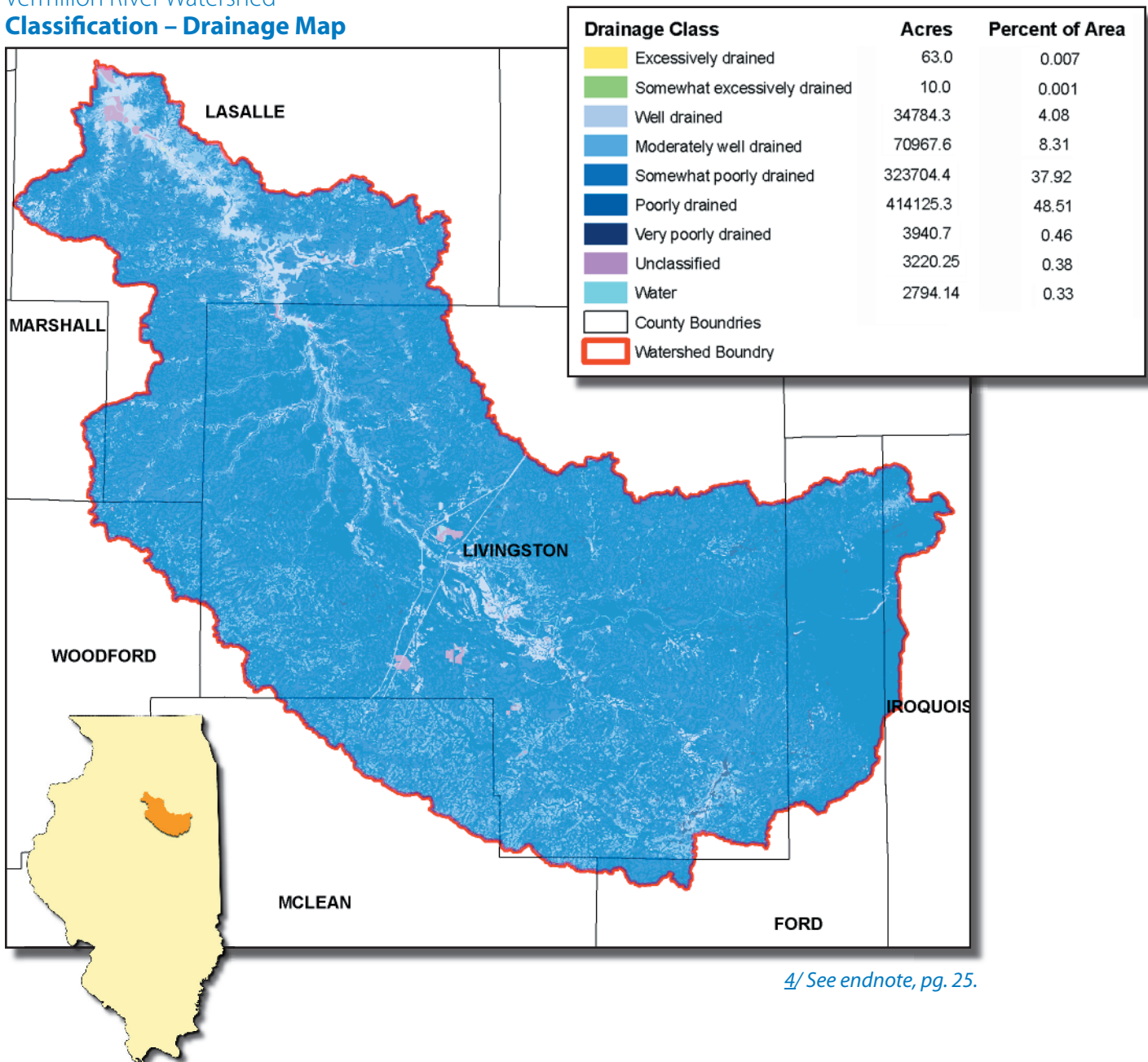
Classification

Drainage

Vermilion River Watershed
(IL) HUC: 07130002
Total Acres: 853,606

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

Vermilion River Watershed Classification – Drainage Map



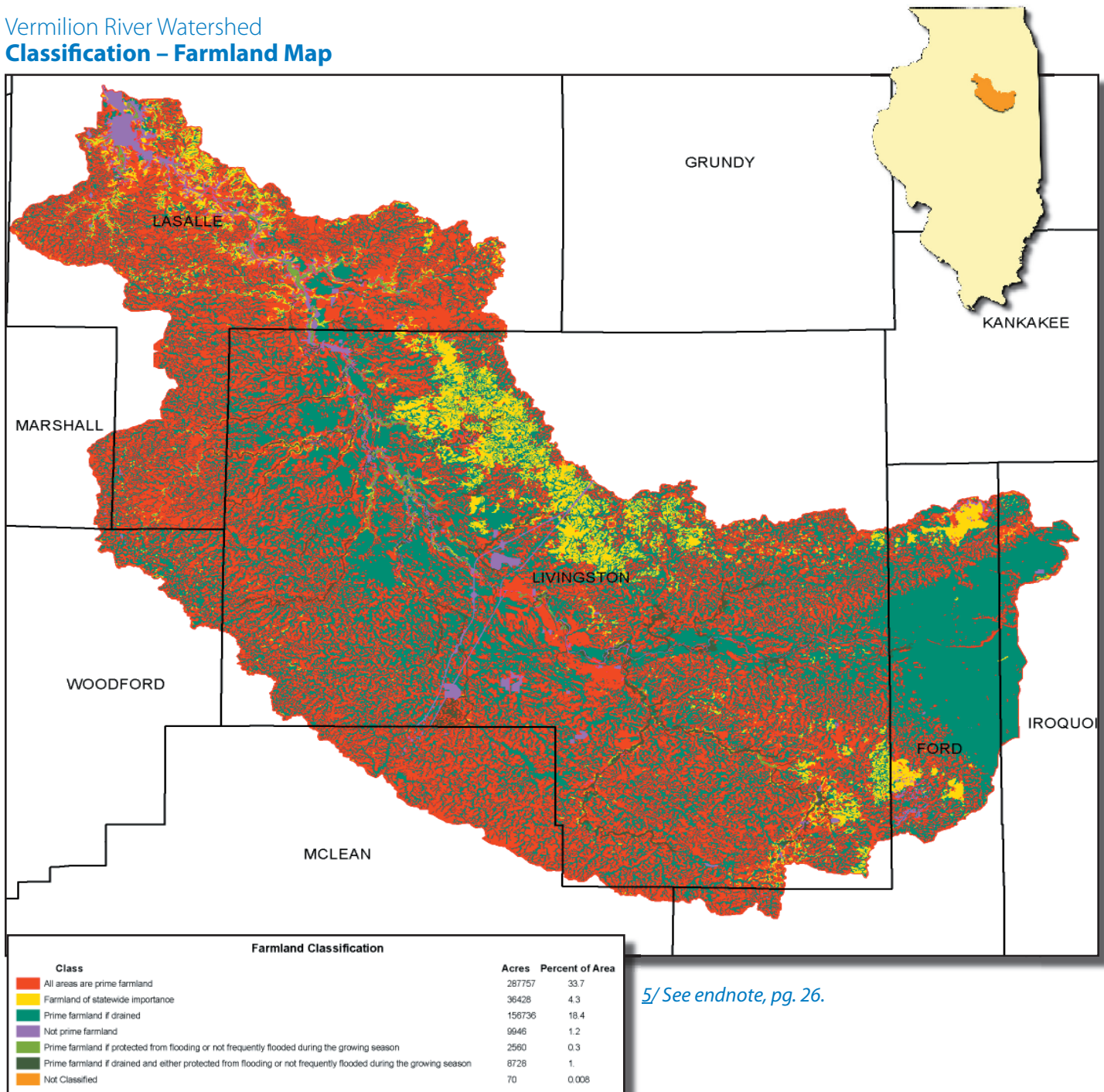
Classification

Farmland

Vermilion River Watershed
 (IL) HUC: 07130002
 Total Acres: 853,606

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 7CFR657. The website is: www.access.gpo.gov/nara/cfr/waisidx_00/7cfr657_00.html

Vermilion River Watershed Classification – Farmland Map

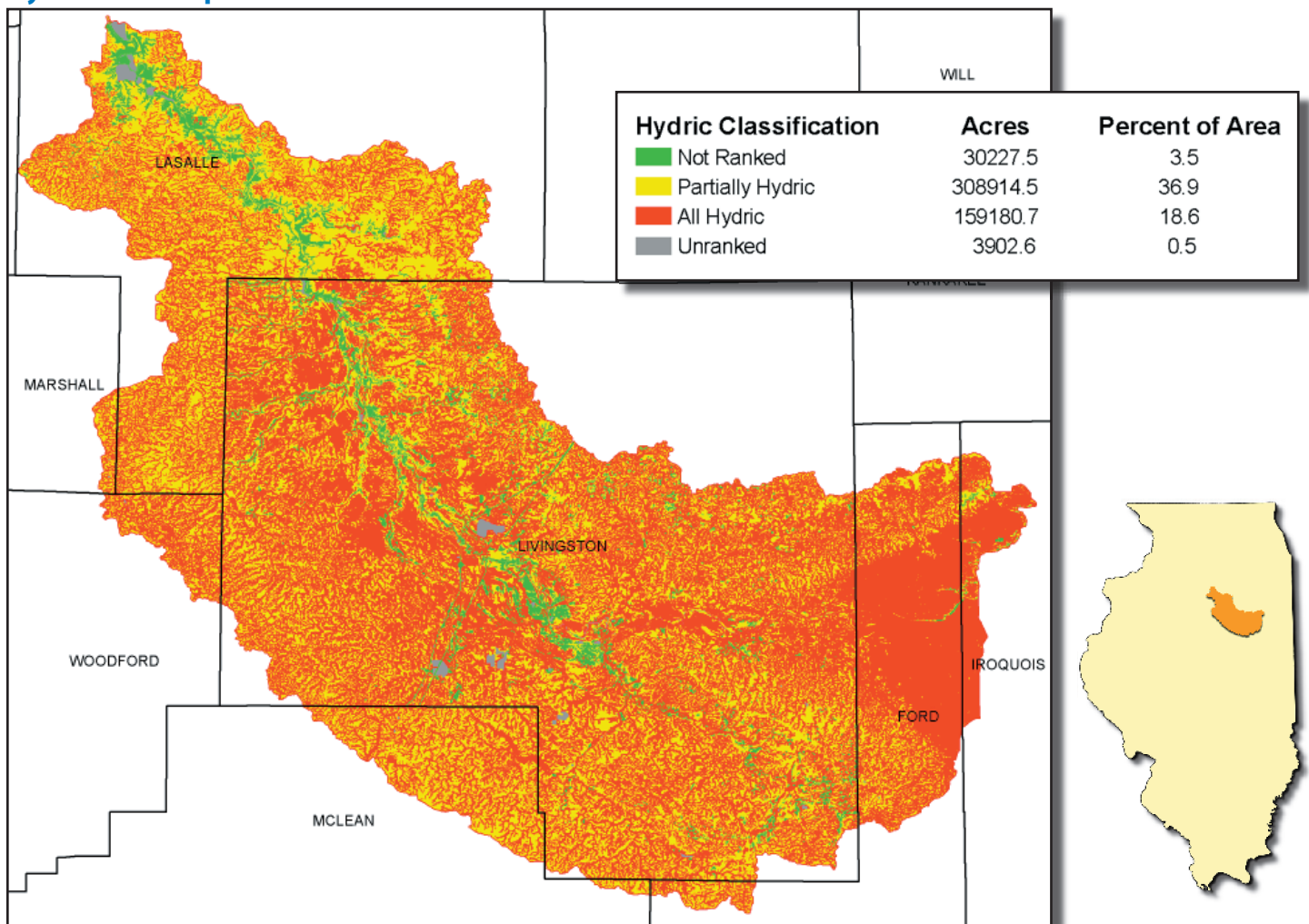


5/ See endnote, pg. 26.

This rating provides an indication of the proportion of the map unit that meets criteria for hydric soils within the watershed. 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).

Vermilion River Watershed Hydric Soils Map



6/ See endnote, pg. 26.

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.

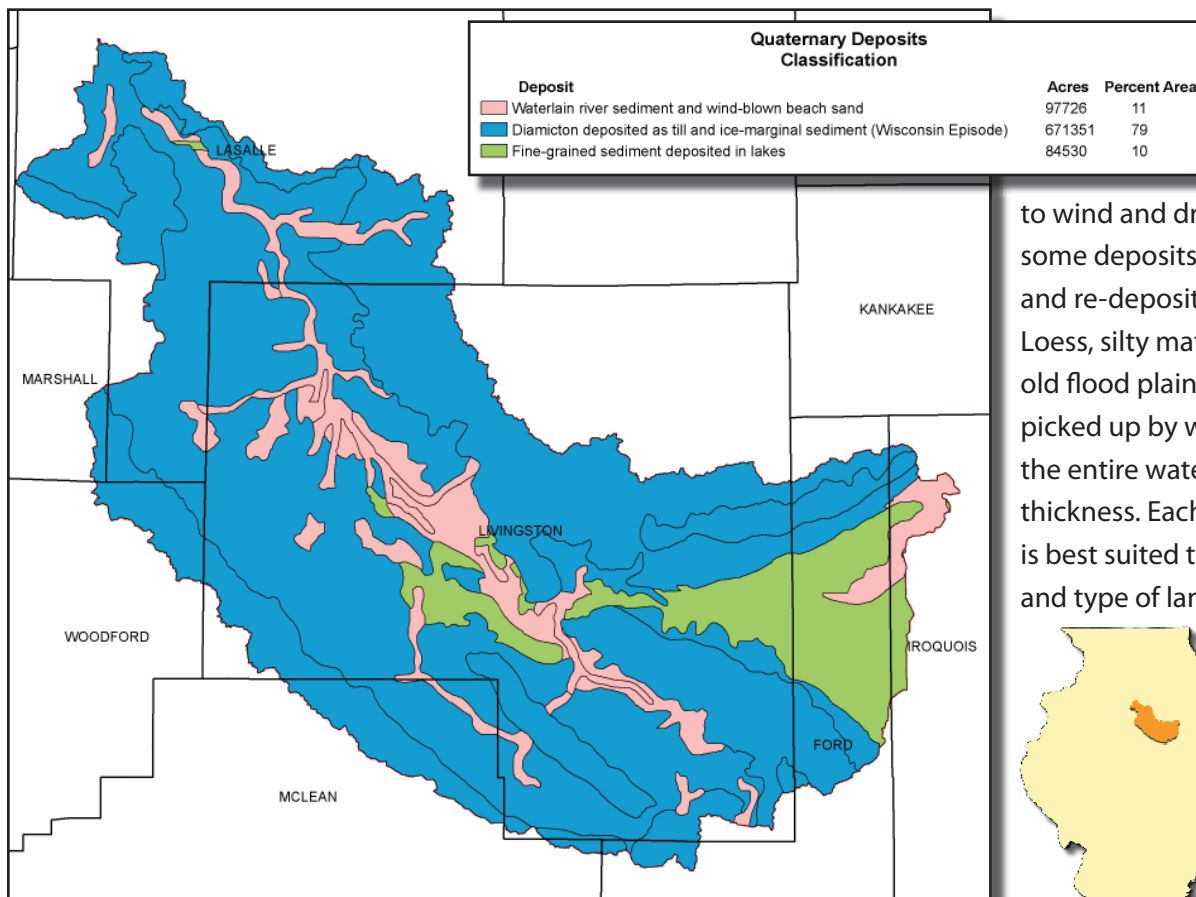
Quaternary deposits are those unconsolidated, more recent, deposits that overlie Illinois glacial bedrock. Distribution of these materials across the landscape

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.

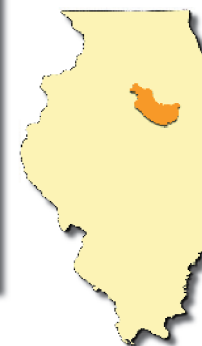
Glacial till is a dense, relatively impermeable material deposited directly by glaciers that covered Illinois. It is an unsorted mixture of stone, sand, gravel, silt and clay. The lacustrine material, or fine-textured sediments deposited in pro-glacial lakes, is homogeneous in nature and composed mainly of smaller silt- and clay-size particles. River deposits are most often sand and sometimes gravel deposited by flowing streams

Vermilion River Watershed

Quaternary Deposits Classification Map



that originated within or in front of glaciers. As these sands were exposed to 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 wind and covers the entire watershed in varying thickness. Each of these materials is best suited to different intensity and type of land use.



2/ See endnote, pg. 26.

Public Lands and Natural Areas

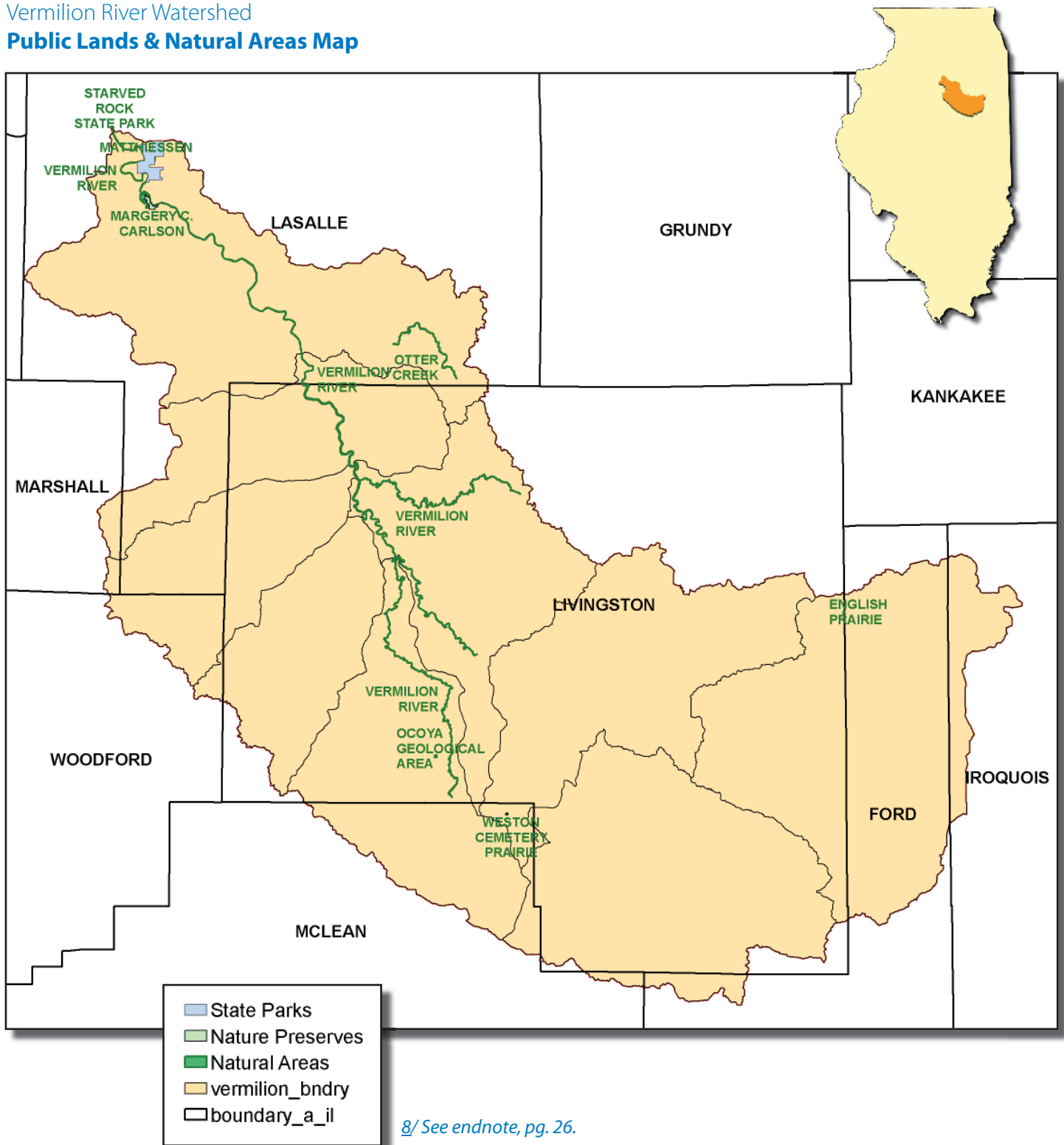
Vermilion River Watershed

(IL) HUC: 07130002

Total Acres: 853,606

Vermilion River Watershed

Public Lands & Natural Areas Map



Aquifer Sensitivity to Nitrate Leaching

Vermilion River Watershed

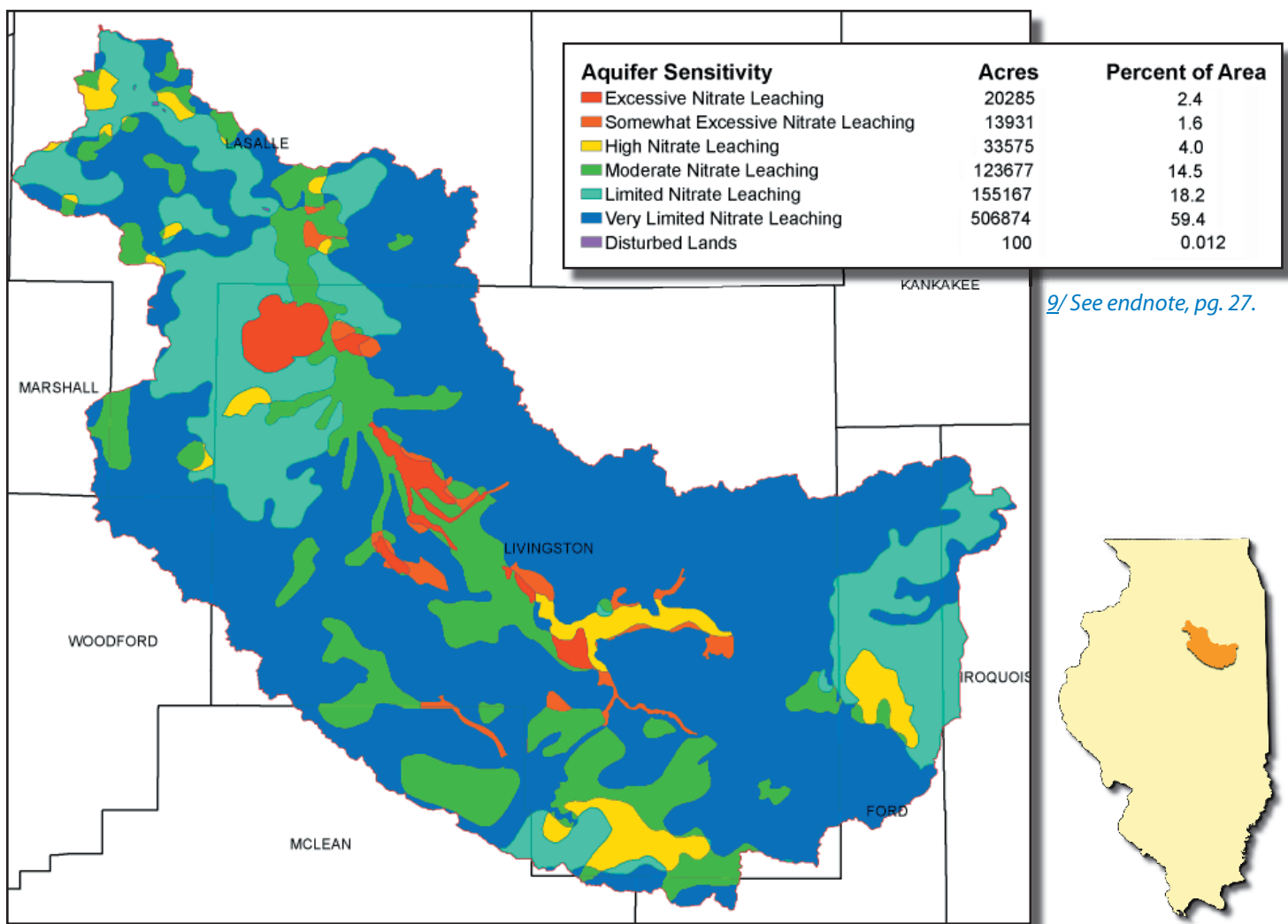
(IL) HUC: 07130002

Total Acres: 853,606

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.

Vermilion River Watershed Aquifer Sensitivity to Nitrate Leaching Map



Aquifer Sensitivity to Pesticide Leaching

Potential of Agricultural Chemical Contamination of Aquifers

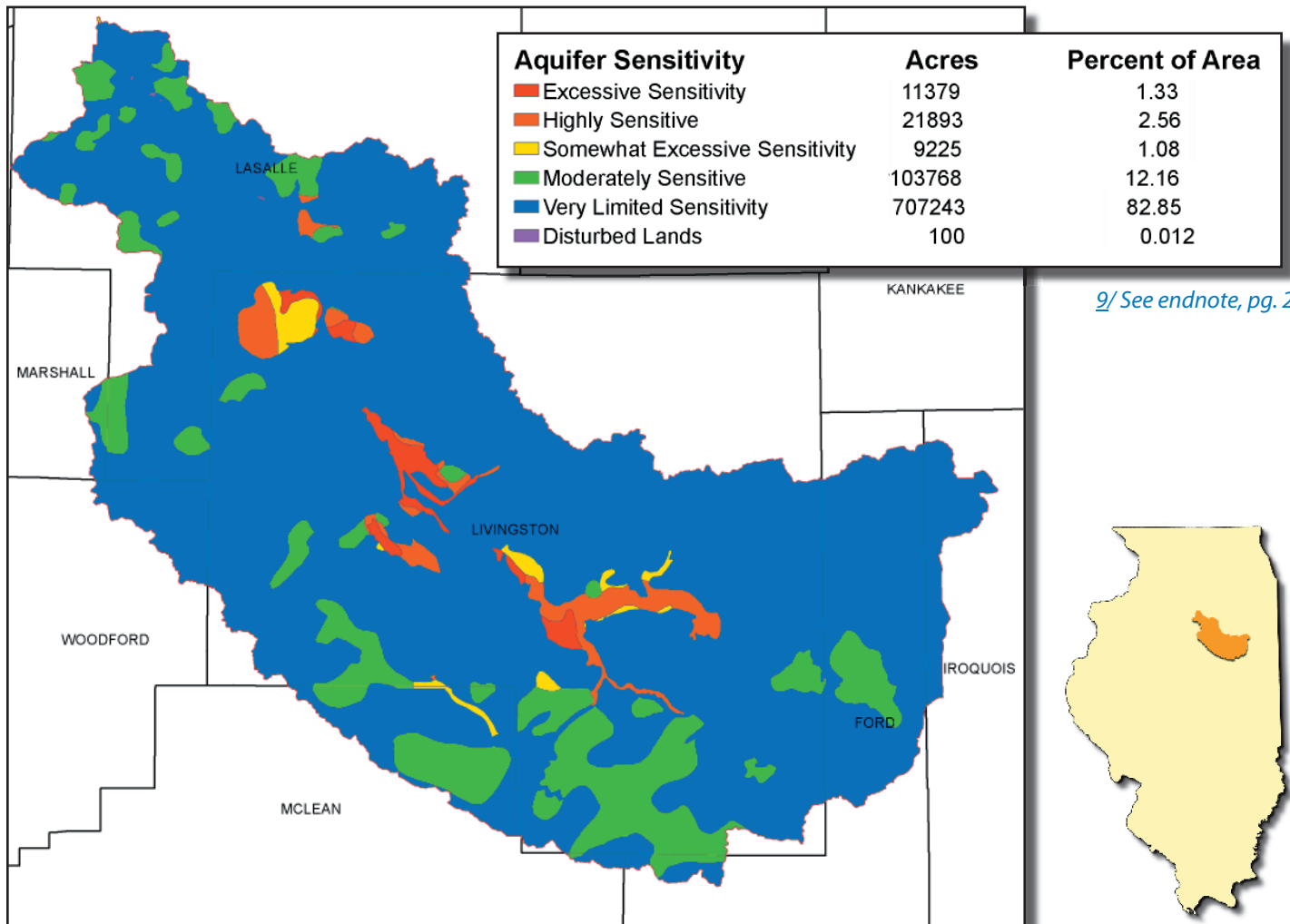
Vermilion River Watershed
 (IL) HUC: 07130002
 Total Acres: 853,606

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.](#)

Vermilion River Watershed Aquifer Sensitivity to Pesticide Leaching Map



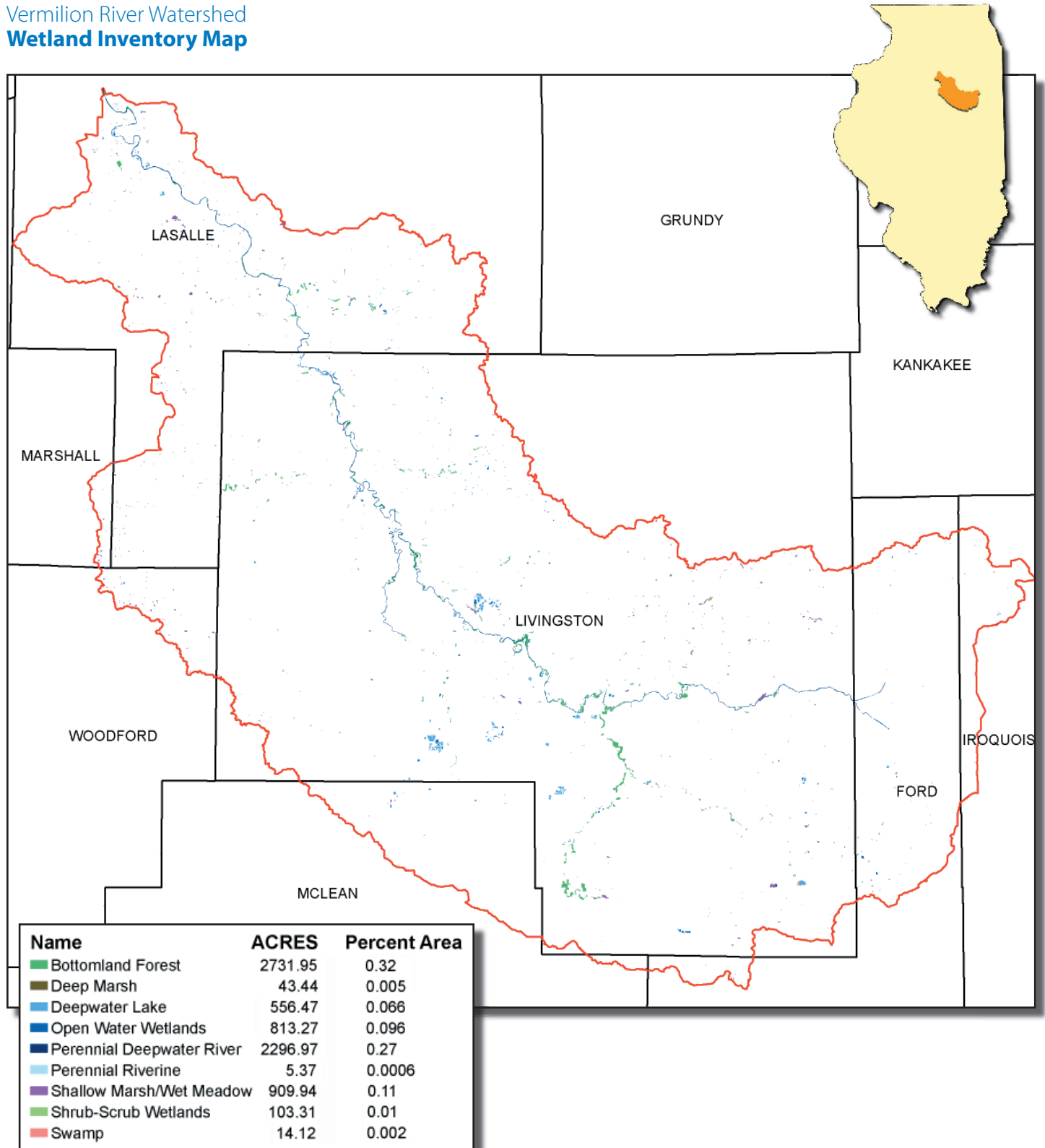
National Wetland Inventory

Vermilion River Watershed

(IL) HUC: 07130002

Total Acres: 853,606

Vermilion River Watershed Wetland Inventory Map



[10/ See endnote, pg. 27.](#)

303(d) Impaired Waters

303D Designations for Streams in Vermilion River Watershed

Vermilion River Watershed
(IL) HUC: 07130002
Total Acres: 853,606

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 stream, 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. For detailed listing of all designations and more detailed information please refer to: www.epa.state.il.us./water/.

Vermilion River Watershed 303(d) Impaired Waters List

HUC 8(10)	Segment ID	Name	Miles/Acres	Priority	Designated Use	Potential Causes
07130002(01)	IL_DSQ-03	Vermilion River, North Fork	29.95 Mi.	Medium	Aquatic Life	Sedimentation/Siltation, Total Suspended Solids
07130002(01)	IL_DSQC-01	Kelly Creek	11.11 Mi.	Medium	Aquatic Life	Sedimentation/Siltation, Total Suspended Solids
07130002(03)	IL_DS-06	Vermilion River	14.14 Mi.	Low	Primary Contact Recreation	Fecal Coliform
07130002(06)	IL_DS-14	Vermilion River	17.33 Mi.	Medium	Public Water Supply	Nitrogen, Nitrate
07130002(06)	IL_DSLC	North Creek	5.43 Mi.	Medium	Aquatic Life	Cause Unknown, Dissolved Oxygen (Nonpollutant)
07130002(07)	IL_DSFA	Mole Creek	16.58 Mi.	Medium	Aquatic Life	Sedimentation/Siltation
07130002(07)	IL_DSF-01	Long Point Creek	25.60 Mi.	Medium	Aquatic Life	Cause Unknown, Dissolved Oxygen (Nonpollutant)
07130002(08)	IL_DSG-01	Mud Creek	18.91 Mi.	Medium	Aquatic Life	Sedimentation/Siltation, Total Suspended Solids
07130002(08)	IL_DS-10	Vermilion River	15.44 Mi.	Medium	Public Water Supply	Nitrogen, Nitrate
07130002(09)	IL_DS-07	Vermilion River	25.81 Mi.	Medium	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 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.

303(d) Impaired Waters *(Continued)*

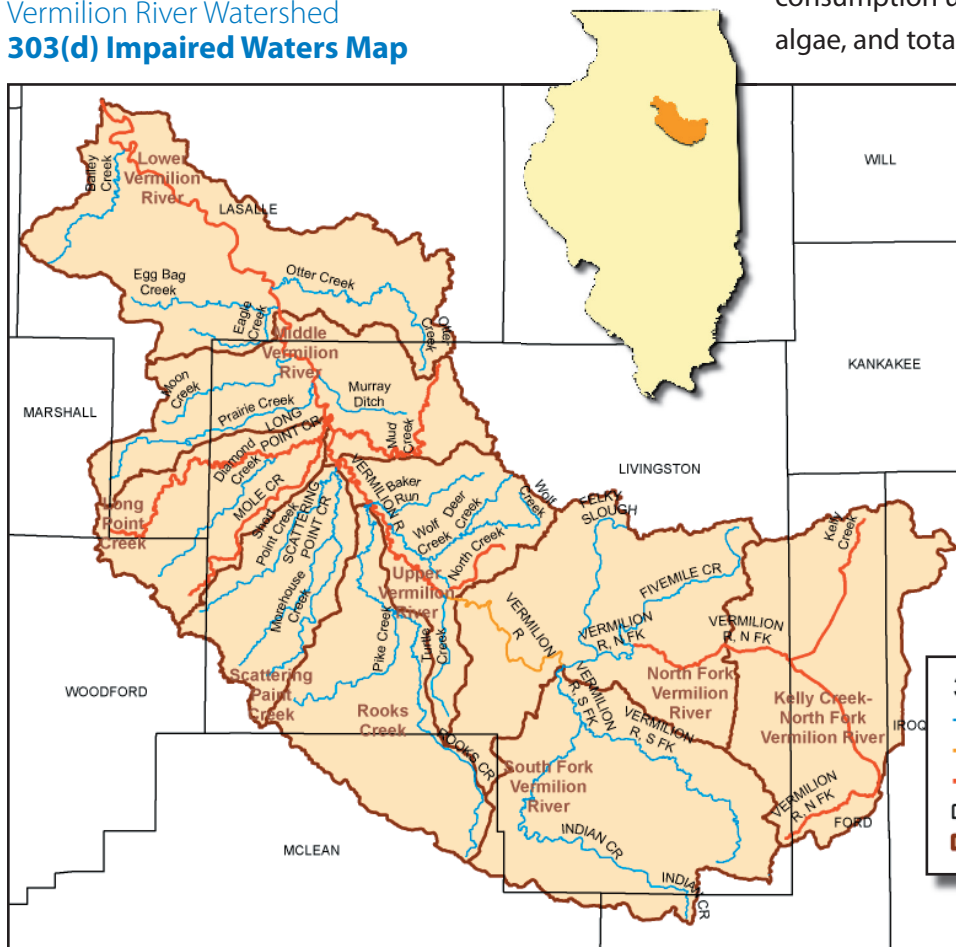
Following the requirements of the Clean Water Act, the Illinois Environmental Protection Agency (IEPA) assesses and reports on the quality of the surface water (e.g., lakes, streams, and wetlands) and groundwater resources in the state. Streams and lakes are analyzed using biological, physiochemical, 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.

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).

Vermilion River Watershed
303(d) Impaired Waters Map



303(d) Listed Streams

- Not Listed
- Low
- Medium
- boundary_a_il
- ▭ Subwatersheds

[11/ See endnote, pg. 27.](#)

Biologically Significant Streams Map

Vermilion River Watershed

(IL) HUC: 07130002

Total Acres: 853,606

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.

Vermilion River Watershed Biologically Significant Streams Map



Conservation on the Ground

Practice Summary

Vermilion River Watershed
(IL) HUC: 07130002
Total Acres: 853,606

The major resource concerns from working lands in the watershed include flooding, streambank erosion, soil erosion, and water quality. Stabilization is needed in many creeks and tributaries due to bank erosion caused by flows redirected by logjams. Logjam removal may reduce flood damages. During some times of the year, there are elevated nitrate levels in the river. Many culverts and ditches are plugged with sediment. Some Best Management Practice (BMPs) well-suited to address these concerns include clearing and snagging, buffer strips, nutrient management, conservation tillage, drainage water management, prescribed grazing, water and sediment control basins, terraces, grassed waterways, grade stabilization structures, and streambank stabilization restoration projects.

Vermilion River Watershed PRS Summary

Fiscal Year	2005	2006	2007	2008 (3 Qtr.)
0.10 - Conservation plans written (Ac.)	9,385	8,750	14,231	7,806
0.20 - Watershed or area-wide conservation plans developed (No.)	0	0	1	0
1.10 - Cropland with conservation applied to improve soil quality (Ac.)	8,726	7,944	6,048	5,329
2.10 - Land with conservation applied to improve water quality (Ac.)	0	0	5,037	5,266
2.11 - CNMP written (No.)	12	5	9	5
2.12 - CNMP applied (No.)	3	3	4	6
3.10 - Grazing and forest land with conservation applied to protect and improve the resource base (Ac.)	96	0	58	89
3.20 - Non-federal land with conservation applied to improve fish and wildlife habitat quality (Ac.)	4,537	2,270	3,089	965
3.30 - Wetlands created, restored or enhanced (Ac.)	376	302	52	0

Conservation on the Ground

PRS Performance Measures

Vermilion River Watershed
(IL) HUC: 07130002
Total Acres: 853,606

Vermilion River Watershed

Conservation Practices Planned/Applied FY04 - FY08

Summary Conservation Practices	Planned/Applied				
	FY08 (3 Qtr.)	FY07	FY06	FY05	FY04
Access Road (560) (ft)	0/0	200/500	0/0	950/0	0/0
Composting Facility (317) (no)	1/0	1/3	0/0	5/0	0/0
Comprehensive Nutrient Mgmt Plan (100) (no)	2/6	6/4	1/3	13/3	0/0
Conservation Cover (327) (ac)	208/33	1,201/753	174/50	47/44	271/31
Conservation Crop Rotation (328) (ac)	6,029/3,394	11,223/4,507	6,923/8,117	7,950/9,219	6,716/1,585
Critical Area Planting (342) (ac)	0/0	7/4	6/6	7/28	220/4
Diversion (362) (ft)	0/0	0/0	0/0	60/60	0/0
Drainage Water Mgmt (554) (ac)	0/0	155/0	0/0	0/0	0/0
Early Successional Habitat Development/Mgmt (647) (ac)	1,242/0	1,518/11	316/0	0/0	0/0
Fence (382) (ft)	0/0	0/0	0/0	0/0	8,526/0
Field Border (386) (ft)	105,336/40,605	256,117/224,314	193,739/87,268		10,290/0
Filter Strip (393) (ac)	438/106	319/213	292/223	162/171	169/30
Firebreak (394) (ft)	0/0	0/10,769	19,477/0	0/0	0/0
Grade Stabilization Structure (410) (no)	2/2	73/13	2/1	1/0	10/4
Grassed Waterway (412) (ac)	43/19	2/4	65/47	56/38	214/117
Nutrient Management (590) (ac)	739/1,774	3,267/149	866/147	5,781/1,748	1,002/50
Pasture & Hay Planting (512) (ac)	0/0	0/0	0/0	96/96	0/0
Pest Mgmt (595) (ac)	2/0	6/6	12/0	0/0	0/0
Prescribed Burning (338) (ac)	132/0	186/13	537/23	48/0	0/0
Prescribed Forestry (409) (ac)	45/0	0/0	0/0	0/0	0/0

[more >](#)

Conservation on the Ground

PRS Performance Measures (Continued)

Vermilion River Watershed
(IL) HUC: 07130002
Total Acres: 853,606

Vermilion River 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)	0/69	0/40	73/0	180/96	0/0
Residue/Tillage Mgmt, Mulch Till (345) (ac)	4,803/2,479	7,285/671	299/2,440	0/0	0/0
Residue/Tillage Mgmt, No/Strip Till/Direct Seed (329) (ac)	1,716/1,178	3,961/2,813	416/3,022	0/0	0/0
Residue Mgmt, Mulch/Ridge/No-Till (346,329 A & B) (ac)	181/816	0/445	6,093/3,639	7,586/9,297	6,054/1,584
Residue Mgmt, Seasonal (344) (ac)	0/0	0/0	307/0	156/156	0/0
Restoration & Mgmt Rare/Declining Habitats (643) (ac)	0/0	19/74	154/0	0/03	0/0
Riparian Forest Buffer/Herbaceous Cover (390&391) (ac)	27/0	19/19	13/6	3/0	0/0
Shallow Water Development & Mgmt (646) (ac)	7/0	0/0	3/3	0/0	0/0
Subsurface Drain (606) (ft)	7,391/681	1,000/0	3,500/0	3,000/12,950	104,426/12,850
Terrace (600) (ft)	7,350/6,660	1,100/0	5,000/0	0/0	23,950/0
Tree/Shrub Establishment (612) (ac)	5/0	24/24	0/0	0/0	3/3
Underground Outlet (620) (ft)	445/0	0/0	0/0	20/0	7,500/0
Upland Wildlife Habitat Mgmt (645) (ac)	1,182/847	4,488/3,089	3,211/2,257	6,271/2,963	499/197
Use Exclusion (472) (ac)	406/250	262/96	130/2	0/0	0/0
Waste Storage Facility (313) (no)	1/1	3/0	0/0	0/0	0/0
Waste Utilization (633) (ac)	378/616	998/44	258/0	179/0	382/0
Well Decommissioning (351) (no)	0/1	3/0	0/0	0/0	0/0
Wetland Create/Enhance/Restore (658/659/657) (ac)	8/0	44/52	21/19	14/14	22/18
Wetland Wildlife Habitat Mgmt (644) (ac)	9/1	0/0	3/3	42/86	0/0
Windbreak/Shelterbelt Establishment (380) (ft)	11,085/0	4,053/1,840	5,634/3,516	10,431/10,431	6,066/0

Census and Social Data

Vermilion River Watershed
(IL) HUC: 07130002
Total Acres: 853,606

There are 1,293 farms in the Vermilion River Watershed, covering a total of 588,761 acres. Average farm size in the watershed is 455 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.

Farm Census Data

Agricultural Operation	Ford	Iroquois	LaSalle	Livingston	Marshall	McLean	Woodford
Farms (number)	48	26	297	819	2	74	17
Land in farms (acres)	25,975	12,831	116,291	391,899	765	35,298	5,696
Total cropland (acres)	25,112	12,255	109,731	376,825	683	33,828	5,216
Irrigated land (farms)	10	0	4	4	0	1	0
Principal operator by primary occupation-farming (no.)	36	20	218	610	1	51	11
Farms by size:							
1 to 9 acres	2	1	13	30	0	4	1
10 to 49 acres	67	4	44	110	0	12	3
50 to 179 acres	11	5	69	179	1	15	5
180 to 499 acres	10	7	89	211	1	17	4
500 to 999 acres	11	5	53	179	0	15	3
1,000 acres or more	8	4	30	111	0	11	1
Livestock and poultry:							
Cattle & calves inventory (farms)	5	4	43	94	0	4	4
Beef cows (farms)	3	3	34	59	0	3	3
Milk cows (farms)	0	0	0	7	0	0	0
Hogs & pigs inventory (farms)	3	1	9	54	0	1	2
Sheep & lambs inventory (farms)	1	1	10	15	0		1
Layers 20 weeks old & older inventory (farms)	1	0	8	13	0	1	1
Broilers & other meat-type chickens sold (farms)	0	0	1	6	0	0	0
Selected crops harvested:							
Corn for grain (acres)	12,109	6,050	54,220	180,569	345	7,748	2,541
Corn for silage/greenchop (acres)	2	25	441	382	3	1	4
Wheat for grain, All (acres)	206	68	306	3,003	4	13	42
Winter wheat for grain (acres)	206	68	306	3,003	4	13	42
Oats for grain (acres)	0	13	152	643	2	10	13

Social Census for 1990

Total Population	White	Af_Amer	Native	Asian	Other	Hispanic	PCAP Income
78,915	76,052	1,865	128	208	662	1,610	\$10,760.88

Social Census for 2000

Total Population	White	Black	Amer_ES	Asian	Hawn_PI	Other	Multi_Race	Hispanic	PCAP Income
83,120	78,731	2,396	116	261	12	873	731	2,590	\$18,519.10

Related Watershed Activities

Current resource planning efforts in the Vermilion River Watershed include creation of the Vermilion Watershed Task Force (VWTF), which meets quarterly. Planning efforts within this group was conducted during 2004 – 2006. These activities were headed and funded by Illinois Department of Natural Resources.

An effort to address Illinois Environmental Protection Agency's Total Maximum Daily Load (TMDL), water quality work includes current activities to conduct a TMDL study of the watershed. That initial report should be completed by calendar year 2008.

A local Eco-System Partnerships was developed as a result of progress with the Vermilion Watershed Task Force and was officially established in the late 1990's.

Recently the NRCS' program, Environmental Quality Incentives Program (EQIP), deemed Nutrient Management on private lands as an Illinois EQIP Priority Area. The Five-mile Creek Watershed EQIP Priority Area (Nutrient Mgt.) was completed in early 2000's offering technical and financial assistance to support the needs of local landowners in the area. A new EQIP Special Project Area was submitted in August, 2008 for the entire Vermilion River Watershed. This will no doubt result in more landowners who realize the need for better water quality management and more conservation on the ground.

In ongoing partnership efforts with local landowners, NRCS, Soil and Water Conservation Districts (SWCDs), Association of Illinois Soil and Water Conservation Districts (AISWCD), and the State of Illinois, technical and financial assistance and success in the Conservation Reserve Enhancement Program (CREP) continues to be well used and successful in the entire watershed.



1 Elevation & 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. 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 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 Common Resource Area. 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), 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; and 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 at <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.

[more >](#)

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. The data 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 and www.isgs.uiuc.edu/nsdihome/outmeta/IL_Quat_Units_2500K_1996.html.

8 Public Lands and Natural Areas — (Page 13)

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)

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 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 is 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 is 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. Visit www.isgs.uiuc.edu/nsdihome/webdocs/st-hydro.html and www.isgs/uiuc.edu/nsdihome/outmeta/IL_Aquifer_Agri_Contam_Potent.htm to learn more.

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.

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 coverage's 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/. 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 United States Department of Agriculture – Natural Resource Conservation Service's (USDA-NRCS) Carbondale Major Land Resource Area Soil Survey Office.

11 **303(d) Impaired Waters** — *(Page 18)*

Reference: Illinois EPA. 2006. Illinois Integrated Water Quality Report and Section 303(d) List-2006. Bureau of Water, Watershed Management Section, Springfield, IL www.epa.state.il.us/water/tmdl/303d-list.html.

12 **Biologically Significant Streams** — *(Page 19)*

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.