



MACKINAW RIVER

The most significant feature of this RRA is the Mackinaw River and its tributary, Panther Creek. The waters flow clear in a series of pools and riffles over a sand-gravel-silt substrate. The banks are generally forested and the surrounding area is agricultural.

LANDCOVER ♦ Cropland is the predominant landcover (66% of the area); this site has the fourth largest percentage of cropland of the RRAs. The rankings for percentage of upland woods, nonforested wetlands, bottomland woods, and Natural Areas acreage are relatively low.

NATURAL AREAS ♦ There are four Natural Areas in this RRA. The two largest sites are a wooded tract along the river and the Mackinaw River itself. Two small sites include a hill prairie and a geological area.

BIOLOGICALLY SIGNIFICANT STREAMS ♦ Three stream segments totalling 27 miles are designated as BSS streams in this RRA, including a 16 mile portion of the Mackinaw River and 8.5 miles of Panther Creek.

HERITAGE SITES ♦ Seven Heritage sites occur in the RRA. One significant community, two plant species, and one animal species are recognized.

STATE AND FEDERAL LAND ♦ The Mackinaw River Fish and Wildlife Area is the only state land. There is no federal land within this RRA.

NATURE PRESERVES ♦ Two Nature Preserves are located in the RRA. Parklands Nature Preserve was established to protect a species of aquatic vegetation in the Mackinaw River and its surrounding forest. Mehl's Bluff is a diverse site of upland and bottomland forest, seep, and creek communities located on a bluff of the Mackinaw River.

NATURAL DIVISIONS ♦ The Mackinaw River RRA lies within the Grand Prairie Division.

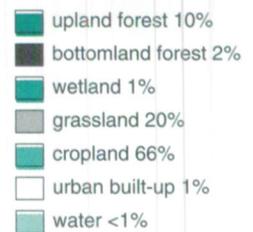
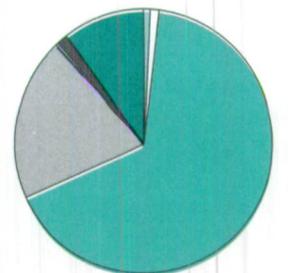
SUMMARY OF SITE CHARACTERISTICS: SIZE, BIOLOGIC RESOURCES, AND PUBLIC LANDS

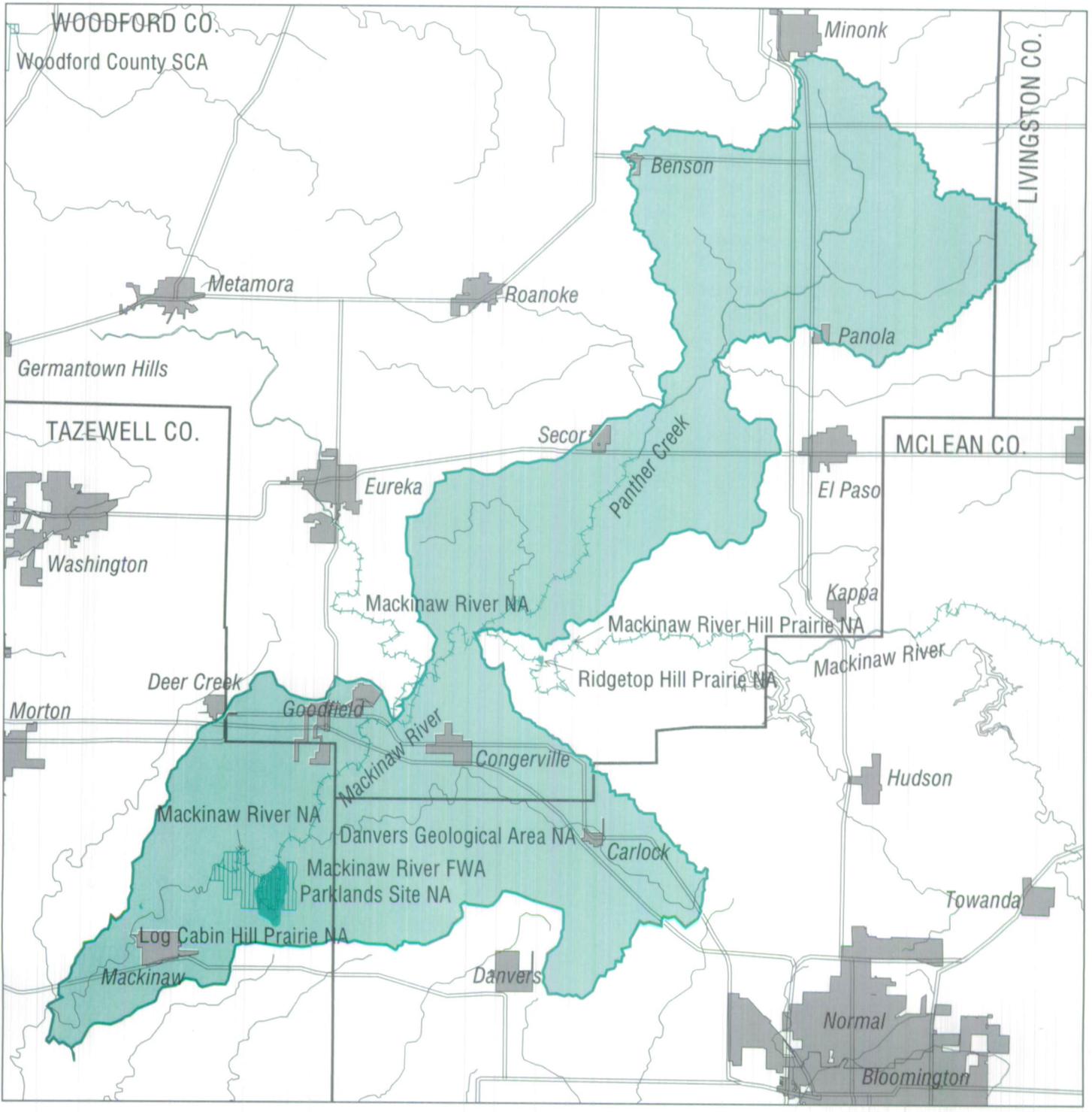
Total Acreage	125,008
Natural Areas	
Acreage	1,139
Number	4
Biologically Significant Stream Mileage	26.9
Natural Heritage Sites	7
State Land	
State Parks	0
State Conservation Areas	0
State Forests	0
State Fish & Wildlife Areas	1
Acreage	1,397
Percentage of RRA	1.1
Federal Land	
Acreage	0

Size:
125,008 acres
195 square miles

Location:
Central Illinois;
Livingston, McLean,
Tazewell, and
Woodford counties

Landcover at a Glance





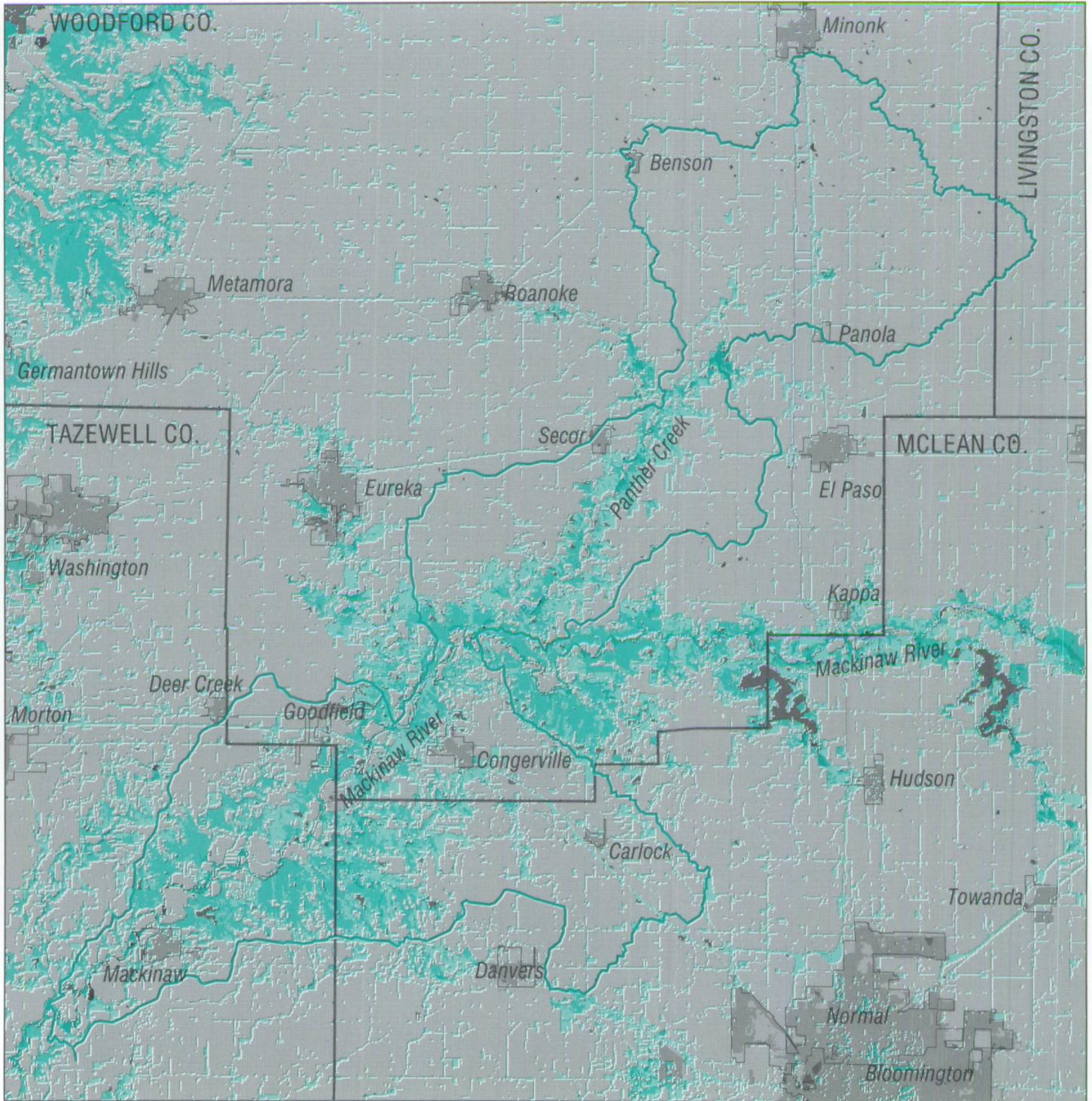
Mackinaw River

-  Natural Area
-  Town
-  State Land
-  Federal Land

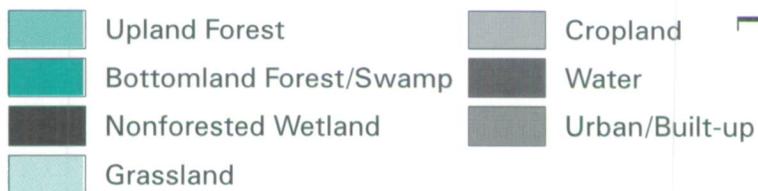
-  Stream
-  Significant Stream
-  Highway
-  County

4 Miles



Mackinaw River



4 Miles




Significant portions of the Mackinaw River and some of its tributaries are considered outstanding aquatic resources in Illinois. The Mackinaw River is characterized by a series of pools and fast riffles flowing over predominantly sand and gravel substrate and by banks which are largely forested. Water quality is high and mussel populations are diverse. Heartleaf plantain, an endangered plant in Illinois, is found here. This species occurs in gravelly streambeds and groundwater seeps and springs adjacent to streams.

Federal Land (<i>continued</i>)			
Percentage of RRA			0.0
LANDCOVER	<u>Acres</u>	<u>% of RRA</u>	
Upland forest	12,641.40	10.11	
Bottomland forest	1,924.99	1.54	
Wetland- nonforested	253.29	0.20	
Grassland	24,501.65	19.60	
Cropland	82,789.90	66.23	
Urban/Built-up	1,672.10	1.34	
Water	<u>1,228.53</u>	<u>0.98</u>	
TOTAL	125,011.86	100.00	
ILLINOIS NATURAL AREAS INVENTORY SITES		<u>Acres</u>	
Danvers Geological Area		2	
Log Cabin Hill Prairie		7	
Mackinaw River		484	
Parklands Site		645	
BIOLOGICALLY SIGNIFICANT STREAMS		<u>Miles</u>	
Mackinaw River, Alloway Creek to Mclean Co. line		15.8	
Panther Creek, Rte 24 to Mackinaw River		8.5	
unnamed, Mackinaw Twp, Tazewell County		2.6	
NATURAL HERITAGE CATEGORIES		<u>Occurrences</u>	<u>Types/Species</u>
Communities		1	1
Prairie			
Threatened and Endangered Animals		1	1
Bird			
Threatened and Endangered Plants		2	1
Plant-Dicot			
Plant-Monocot		1	1
Geological Feature		2	1
Geological Feature			
Other			
STATE AND FEDERAL LAND		<u>Acres</u>	
State Parks		0	
State Conservation Areas		0	
State Forests		0	
State Fish and Wildlife Areas			
Mackinaw River		1,397	
Federal Land		0	
ILLINOIS NATURE PRESERVES		<u>Acres</u>	
Mehl's Bluff		27	
Parklands		40	
NATURAL DIVISIONS	<u>Acres</u>	<u>% of</u>	<u>% of</u>
	<u>in RRA</u>	<u>RRA</u>	<u>Division</u>
Grand Prairie	125,009	100.0	1.0





MIDDLE ILLINOIS RIVER

The Middle Illinois River RRA incorporates floodplain and upland landscapes along the Illinois River from just below Peoria to Florence. The Middle Illinois River site is the third largest of the RRAs. The boundary was modified for this site to include watersheds with sand prairies. Significant amounts of state land occur in this RRA.

LANDCOVER ♦ Cropland is the predominant land cover, accounting for half the land area in this RRA. Approximately 22% of the Middle Illinois River RRA is either upland or bottomland woods. This site has the third highest acreages of nonforested wetlands and bottomland forest.

NATURAL AREAS ♦ Thirty-eight Natural Area sites are located in the RRA, totalling the sixth highest percentage of natural area acreage among the RRAs. Prominent natural features include sand prairies, hill prairies, springs, seeps, savannas, ponds, lakes, woods, and habitats for herons, eagles, and the Illinois Mud Turtle. Forty-three percent of the total acreage occurs at Meredosia Refuge Natural Area.

BIOLOGICALLY SIGNIFICANT STREAMS ♦ There are no BSS streams within this RRA.

HERITAGE SITES ♦ There are 134 Heritage sites within this RRA. Nine significant community types, 19 plant species, 22 animal species occur here. Three large forest tracts and three rookeries are located in this RRA.

STATE AND FEDERAL LAND ♦ Approximately 9% (53,129 acres) of the RRA is in state (5.5%) or federal (3.7%) ownership. This site ranks first for acreage in state ownership. There are nine state holdings—one state park, five conservation areas, one forest, and two fish and wildlife areas. Emiquon, Chautauqua and Meredosia National Wildlife Refuges are federal lands located here.

NATURE PRESERVES ♦ The six Nature Preserves located in the Middle Illinois River RRA protect sand prairie, hill prairie, wet prairie, and savanna communities. The largest is the Sand Prairie-Scrub Oak Nature Preserve, an approximately 1,400 acre site of sand prairie, sand savanna, and sand forest.

NATURAL DIVISIONS ♦ The site encompasses five natural divisions. Most of the RRA is comprised of the Upper Mississippi and Illinois River Bottomlands (42%), Illinois and Mississippi River Sand Areas (26%), and Western Forest-Prairie (24%) Divisions.

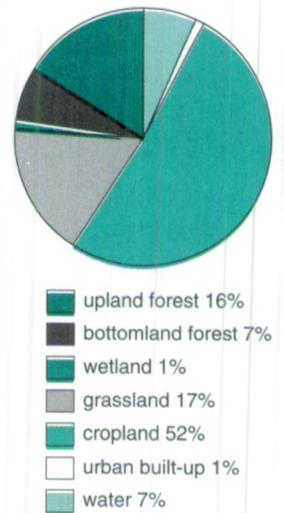
SUMMARY OF SITE CHARACTERISTICS: SIZE, BIOLOGIC RESOURCES, AND PUBLIC LANDS

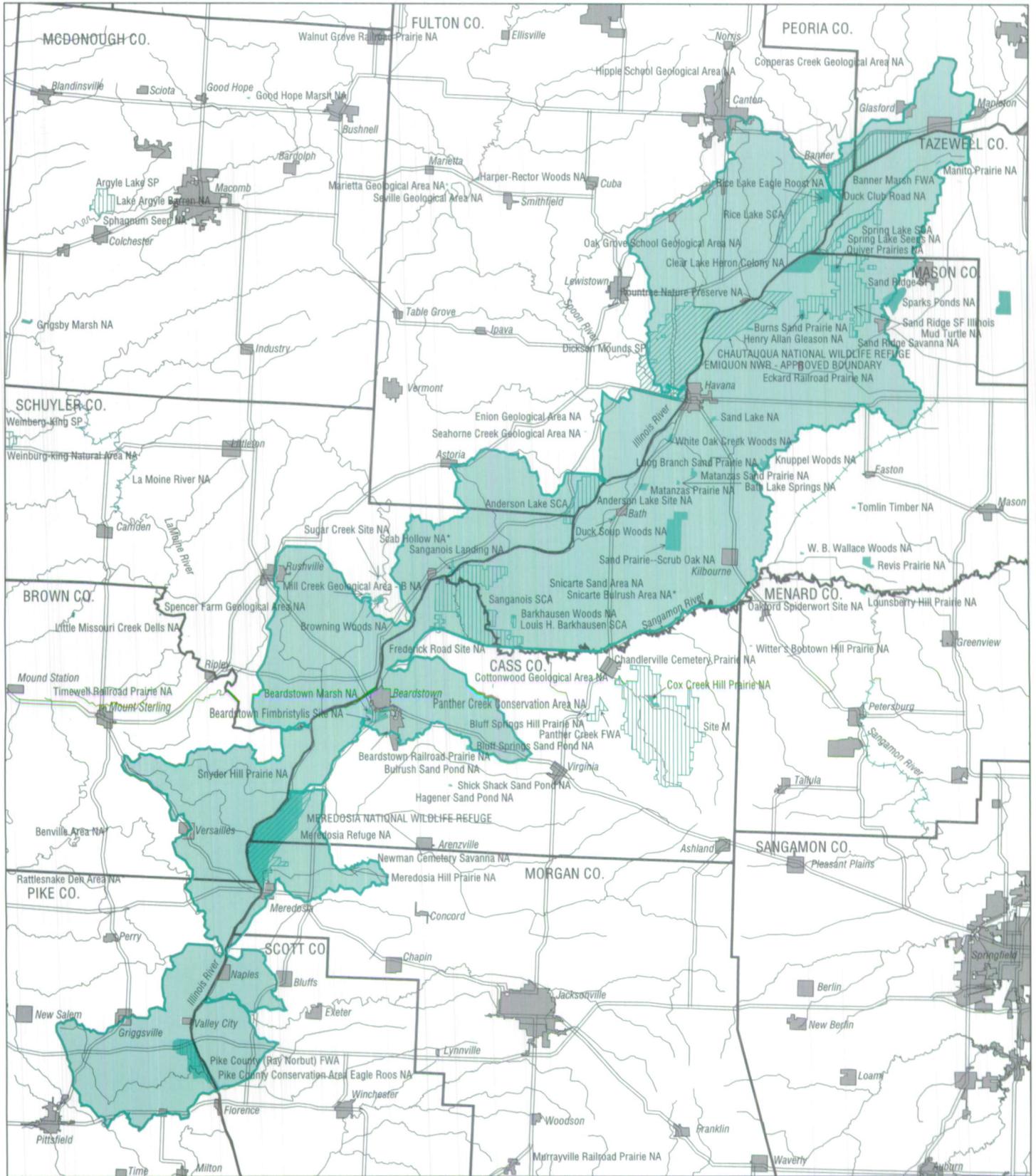
Total Acreage	575,515
Natural Areas	
Acreage	13,474
Number	38
Biologically Significant Stream Mileage	0
Natural Heritage Sites	134

Size:
575,515 acres
899 square miles

Location:
Central Illinois, the Illinois River from Peoria to Florence; Brown, Cass, Fulton, Mason, Morgan, Pike, Peoria, Schuyler, Scott, and Tazewell counties.

Landcover at a Glance



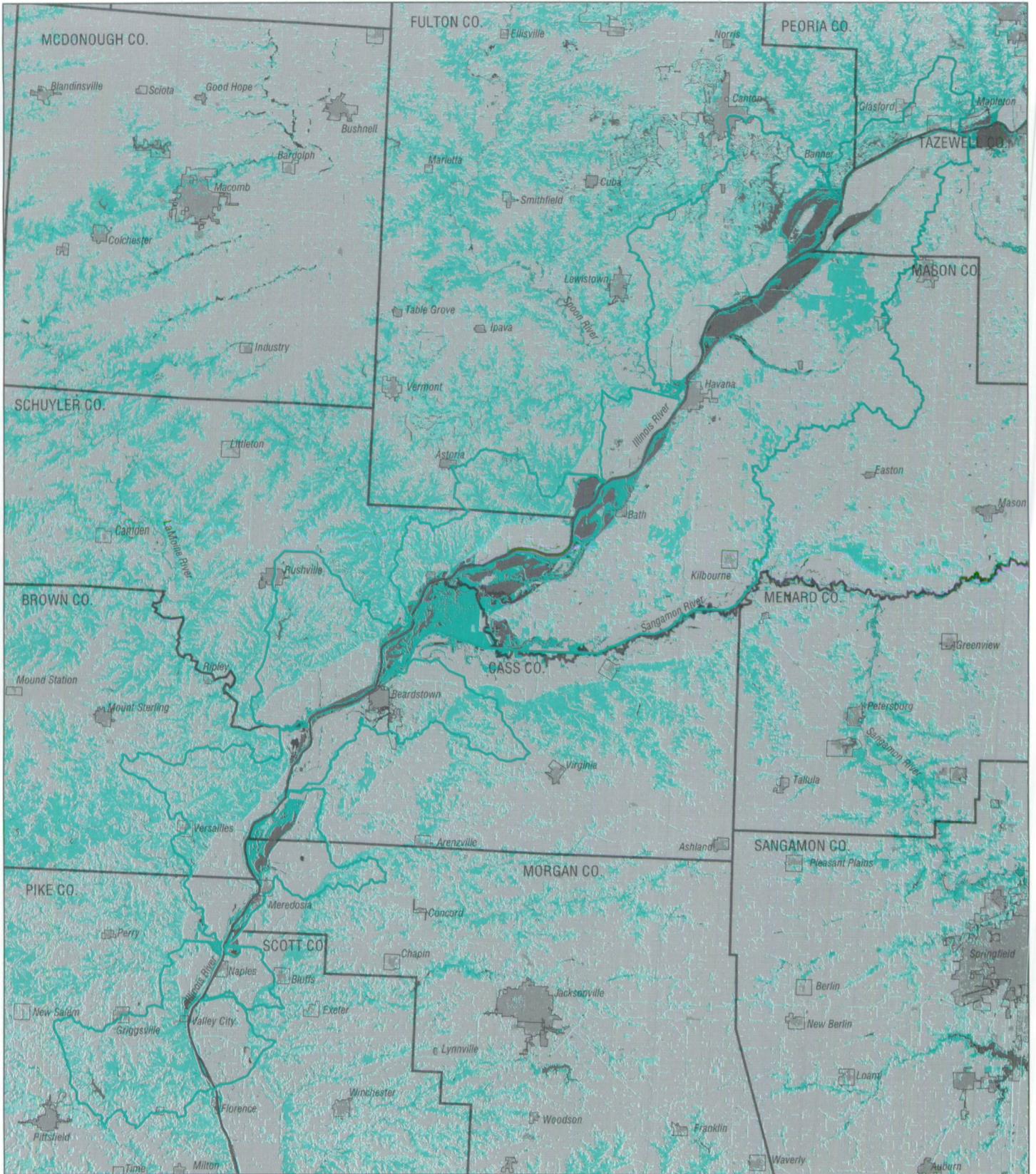


Middle Illinois River

- | | | | |
|---|--------------|---|--------------------|
|  | Natural Area |  | Stream |
|  | Town |  | Significant Stream |
|  | State Land |  | Highway |
|  | Federal Land |  | County |

8 Miles





Middle Illinois River

- | | | | |
|---|-------------------------|---|----------------|
|  | Upland Forest |  | Cropland |
|  | Bottomland Forest/Swamp |  | Water |
|  | Nonforested Wetland |  | Urban/Built-up |
|  | Grassland | | |

8 Miles



The plant communities of the sand prairies are a mix of native tallgrass species and plants more commonly associated with the western U.S. The sand deposited by glacial meltwaters favors survival of plants that can tolerate dry and sometimes shifting environments. One such plant is the prickly pear cactus. This native cactus is found in several habitats in Illinois, but is most abundant in sand prairies.

SUMMARY OF SITE CHARACTERISTICS (continued)

State Land		
State Parks		1
State Conservation Areas		5
State Forests		1
State Fish & Wildlife Areas		2
Acreage		31,630
Percentage of RRA		5.5
Federal Land		
Acreage		21,499
Percentage of RRA		3.7
LANDCOVER	<u>Acres</u>	<u>% of RRA</u>
Upland forest	89,583.27	15.57
Bottomland forest	37,775.68	6.56
Wetland	5,911.26	1.03
Grassland	95,049.35	16.52
Cropland	298,972.80	51.95
Urban/Built/up	6,095.51	1.06
Water	<u>42,106.16</u>	<u>7.32</u>
TOTAL	575,494.03	100.01
ILLINOIS NATURAL AREAS INVENTORY SITES		<u>Acres</u>
Anderson Lake Site		2
Barkhausen Woods		45
Bath Lake Springs		4
Beardstown Fimbristylis Site		1
Beardstown Marsh		468
Beardstown Railroad Prairie		3
Bluff Springs Hill Prairie		5
Bluff Springs Sand Pond		<1
Burns Sand Prairie		59
Clear Lake Heron Colony		1,405
Duck Club Road		7
Duck Soup Woods		38
Eckard Railroad Prairie		3
Frederick Road Site		14
Henry Allan Gleason		98
Knuppel Woods		134
Long Branch Sand Prairie		110
Manito Prairie		13
Matanzas Prairie		158
Matanzas Sand Prairie		33
Meredosia Hill Prairie		<1
Meredosia Refuge		5,735
Oakford Spiderwort Site		5
Pike County Conservation Area Eagle Roost		2,263
Quiver Prairies		200
Rice Lake Eagle Roost		443
Rountree Nature Preserve		27
Sand Lake		72
Sand Prairie--Scrub Oak		1,530
Sand Ridge Savanna		58
Sand Ridge State Forest Illinois Mud Turtle		5
Sanganois Landing		12

Snicarte Bulrush Area	*
Snicarte Sand Area	3
Snyder Hill Prairie	5
Sparks Ponds	227
Spring Lake Seeps	186
White Oak Creek Woods	105

* = point location, map not available

BIOLOGICALLY SIGNIFICANT STREAMS

None

NATURAL HERITAGE CATEGORIES

Middle Illinois River

Communities

	<u>Occurrences</u>	<u>Types/Species</u>
Wetland	2	1
Forest	3	2
Savanna	3	1
Prairie	9	5

Threatened and Endangered Animals

Amphibian	9	1
Bird	29	13
Fish	2	1
Mammal	4	3
Reptile	5	2
Insect	3	2

Threatened and Endangered Plants

Plant-Dicot	30	13
Plant-Monocot	28	6

Geological Feature

Geological Feature	1	1
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Other

Forest Block >500 Acres	3	1
Rookery	3	1

STATE AND FEDERAL LANDS

State Parks

	<u>Acres</u>
Dickson Mounds	26

State Conservation Areas

Anderson Lake	2,096
Louis H. Barkhausen	1,176
Rice Lake	5,249
Sanganois	8,779
Spring Lake	1,785

State Forests

Sand Ridge	7,428
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State Fish and Wildlife Areas

Banner Marsh	4,203
Pike County (Ray Norbut)	888

Federal Land

Chautauqua National Wildlife Refuge	4,809
Emiquon NWR -Approved Boundary	9,859
Emiquon NWR -Current Holdings	92
Meredosia National Wildlife Refuge	6,739

ILLINOIS NATURE PRESERVES

	<u>Acres</u>
Henry Allen Gleason Nature Preserve	93

Historically, the Illinois River Valley has been one of the most important migration areas for waterfowl in North America. During spring and fall migrations, waterfowl are attracted to the abundance of food available in the shallow bottomland lakes, sloughs, marshes, ponds, and forests. Early accounts of the area describe vast numbers of waterfowl. The Illinois River Valley has been greatly altered by drainage of the wetlands and sedimentation of the river. Aquatic vegetation has disappeared from the lakes and the numbers of some waterfowl species began to decline in the 1950s.

The Illinois chorus frog is restricted to sandy floodplains, and the sand prairies adjacent to the Illinois River provide ideal habitat. In Illinois, this frog is found exclusively in three widely separated regions. A state-threatened species, it is dependent on the protection of its habitat. The chorus frog has the unusual habit of burrowing into the sand with its front feet (the vast majority of frogs use their hind feet). It also feeds underground, a behavior unknown in any other frog species. The Illinois chorus frog can only be seen in the spring, when it comes out of the ground to mate.

ILLINOIS NATURE PRESERVES (continued)

Long Branch Sand Prairie			92
Manito Prairie			25
Matanzas Prairie			38
Meredosia Hill Prairie			<1
Sand Prairie-Scrub Oak			1,377
NATURAL DIVISIONS	Acres in RRA	% of RRA	% of Division
Upper Mississippi R and Illinois R Bottomlands	238,406	41.4	20.2
Illinois R and Mississippi R Sand Areas	151,631	26.33	9.4
Western Forest-Prairie	136,059	23.6	3.0
Middle Mississippi Border	39,876	6.9	2.5
Grand Prairie	9,543	1.7	0.1





VERMILION RIVER

The Vermilion River RRA is located on a level glacial plain originally covered with prairie vegetation with occasional savannas on the uplands and forests along the streams. This RRA is comprised of two nonadjoining watersheds. The upstream watershed, the Middle Fork of the Vermilion River, is separated from the lower Vermilion River watershed by the city of Danville.

LANDCOVER ♦ The site is 69% cropland and ranks fifth in percentage of cropland. Grassland accounts for 18% and woods for 9% of the area. This RRA ranks low in upland woods, bottomland woods, and nonforested wetlands percentages.

NATURAL AREAS ♦ Fourteen sites cover nearly 2,000 acres of this RRA. Communities considered significant in the RRA include numerous seeps, prairies, savannas, forests, and aquatic systems. The beech-maple forests in this area are significant in the state because they represent the western edge of this community type in the U.S.

BIOLOGICALLY SIGNIFICANT STREAMS ♦ This site ranks sixth in terms of the total miles of BSS streams. The lower 46 miles of the Middle Fork and 12 miles of the Vermilion River below Danville are recognized as high quality streams.

HERITAGE SITES ♦ There are 44 Heritage sites within this RRA representing six significant communities, three plant species, 18 animal species, and a rookery.

STATE AND FEDERAL LAND ♦ Kickapoo State Park and the Middle Fork State Fish and Wildlife Area are located in this RRA. There is no federal land within this site.

NATURE PRESERVES ♦ Important natural features in the nine Nature Preserves within this RRA include seeps, savannas, prairies, and beech-maple forests.

NATURAL DIVISIONS ♦ The Vermilion River RRA is approximately two-thirds Grand Prairie Division and one-third Wabash Border Division.

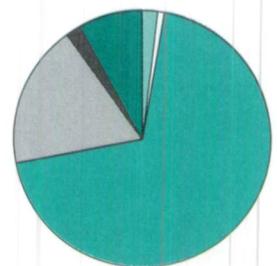
SUMMARY OF SITE CHARACTERISTICS: SIZE, BIOLOGIC RESOURCES, AND PUBLIC LANDS

Total Acreage	132,252
Natural Areas	
Acreage	1,998
Number	14
Biologically Significant Stream Mileage	58.0
Natural Heritage Sites	44
State Land	
State Parks	1
State Conservation Areas	0
State Forests	0
State Fish & Wildlife Areas	1
Acreage	5,944
Percentage of RRA	4.5

Size:
132,252 acres,
207 square miles

Location:
East-central Illinois
bordering Indiana;
Champaign, Ford,
and Vermilion
counties

Landcover at a Glance



- upland forest 8%
- bottomland forest 2%
- wetland <1%
- grassland 18%
- cropland 69%
- urban built-up 1%
- water 2%

The clear, gravel-bottomed Middle Fork of the Vermilion River is a high quality stream which supports a rich diversity of aquatic species. Numerous species of fish, mussels, and other invertebrates occur in its boulder riffles, sand and gravel raceways, and clear pools. A segment of the Middle Fork is Illinois' only stream designated as a National Wild and Scenic River. Unusual terrestrial features of this area include seeps, beech-maple forests, and hill prairies.

Federal Land		
Acreage		0
Percentage of RRA		0.0
LANDCOVER	<u>Acres</u>	<u>% of RRA</u>
Upland forest	8,639.28	7.77
Bottomland forest	1,891.27	1.70
Wetland- nonforested	321.74	0.29
Grassland	19,744.46	17.77
Cropland	77,140.77	69.41
Urban/Built-up	1,445.70	1.30
Water	<u>1,947.67</u>	<u>1.75</u>
TOTAL	111,130.89	99.99
ILLINOIS NATURAL AREAS INVENTORY SITES		<u>Acres</u>
Fairchild Cemetery Prairie and Savanna		2
Forest Glen Seep		12
Harmattan Stripmine		3
Kennekuk Cove County Park		858
Kinney's Fork Seeps		*
Middle Fork Seeps		*
Middle Fork of the Vermilion River		558
Middlefork Woods		66
Orchid Hill		143
Prospect Cemetery Prairie		7
Russell M. Duffin Nature Preserve		193
Vermilion River		146
Willow Creek Seep		1
Windfall Prairie		10
* = point location, map not available		
BIOLOGICALLY SIGNIFICANT STREAMS		<u>Miles</u>
Middle Fork Vermilion River		46.1
Salt Fork Vermilion R., Co line to Middle Fork		0.0
Vermilion River		11.9
NATURAL HERITAGE CATEGORIES		
Communities	<u>Occurrences</u>	<u>Types/Species</u>
Wetland	5	2
Forest	1	1
Savanna	1	1
Prairie	2	2
Threatened and Endangered Animals		
Amphibian	1	1
Bird	17	10
Fish	4	3
Mammal	1	1
Insect	1	1
Mollusk	4	1
Threatened and Endangered Plants		
Plant-Monocot	4	3
Geological Feature		
Geological Feature	2	1
Other		
Rookery	1	1

STATE AND FEDERAL LAND

State Parks	<u>Acres</u>
Kickapoo	2,269
State Conservation Areas	0
State Forests	0
State Fish and Wildlife Areas	
Middle Fork	3,675
Federal Land	0

ILLINOIS NATURE PRESERVES

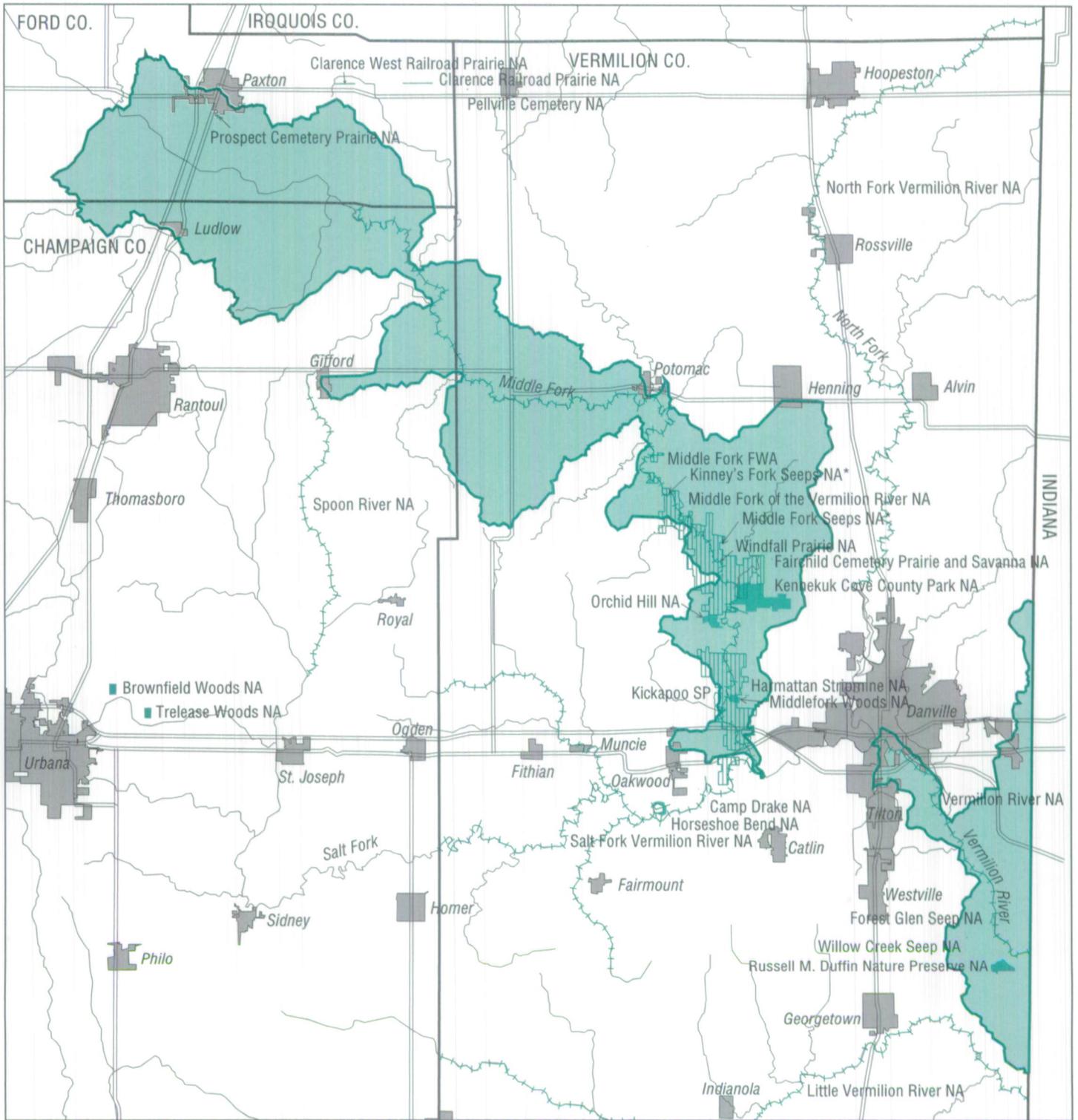
Fairchild Cemetery Savanna	<u>Acres</u>
Forest Glen Seep	4
Horseshoe Bottom	9
Howard's Hollow Seep	38
Middle Fork Woods	29
Prospect Cemetery	61
Russell M. Duffin	7
Tomlinson Pioneer Cemetery Prairie	191
Windfall Prairie	5
	35

NATURAL DIVISIONS

	<u>Acres</u>	<u>% of</u>	<u>% of</u>
	<u>in RRA</u>	<u>RRA</u>	<u>Division</u>
Grand Prairie	82,463	62.8	0.6
Wabash Border	48,819	37.2	2.8



Notable among the abundant and diverse fish fauna of the Vermilion basin is the bluebreast darter. The breeding male has a colorful olive-green body with a bright blue breast, orange dorsal fins, and red spots along the sides. The bluebreast darter lives in fast riffles of large, clear streams. Adults are almost always found near large boulders. Illinois is on the western edge of its range. The only known location of this species in Illinois is in the Vermilion River basin.



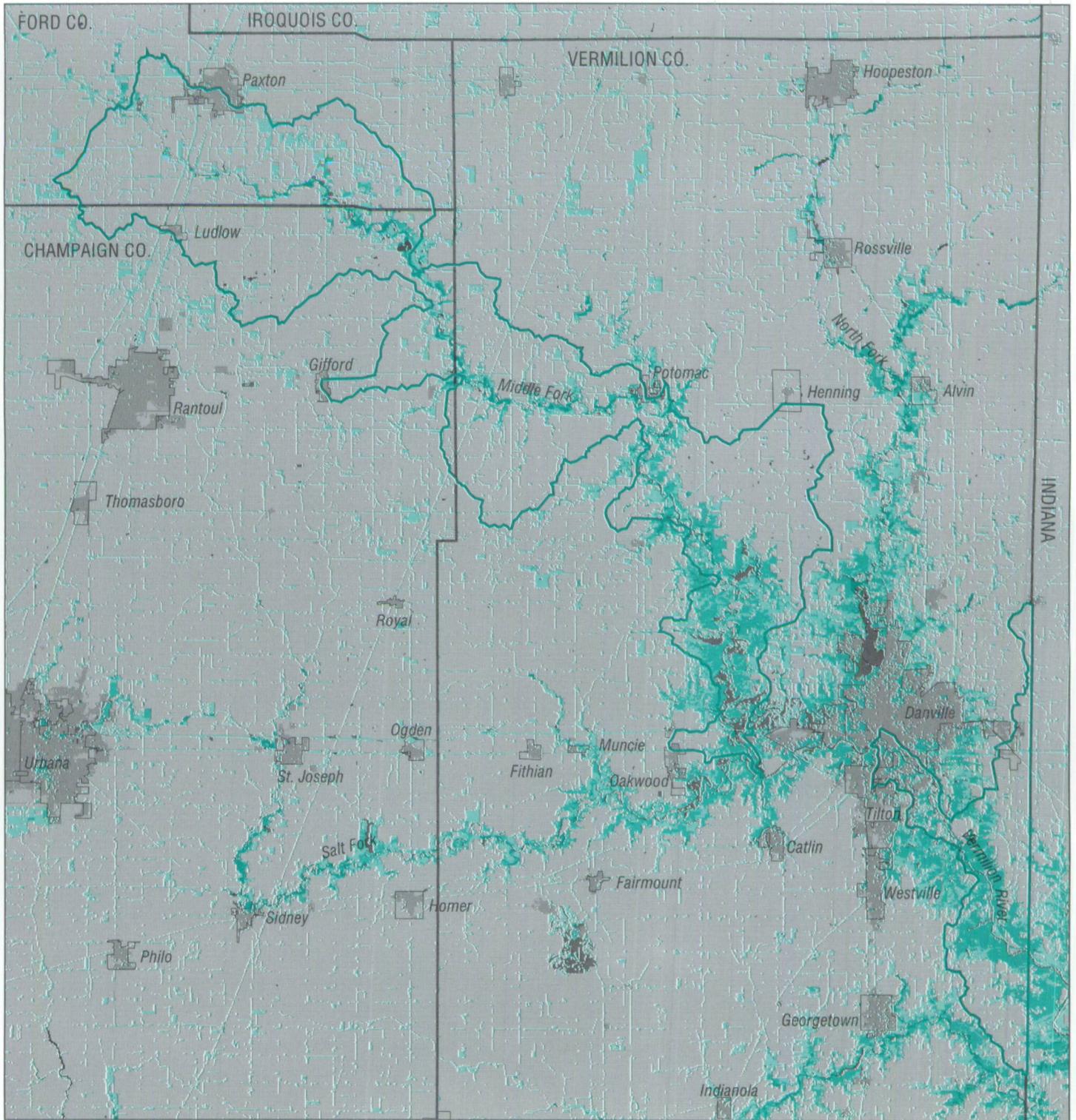
Vermilion River

- Natural Area
- Town
- State Land
- Federal Land

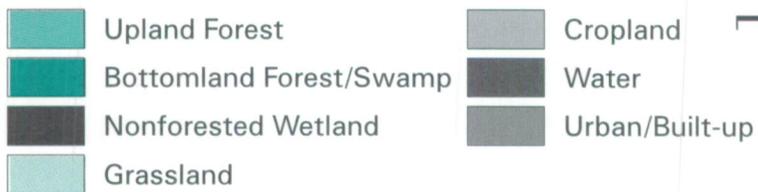
- Stream
- Significant Stream
- Highway
- County

5 Miles





Vermilion River



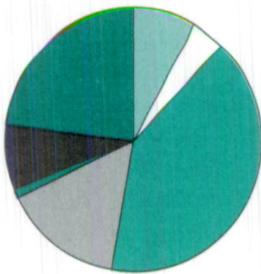
5 Miles



Size:
 626,795 acres
 979 square miles

Location:
 Western Illinois,
 upriver of the
 confluence of the
 Illinois and
 Mississippi rivers;
 Adams, Calhoun,
 Greene, Jersey,
 Madison, Pike, and
 Scott counties

Landcover at a Glance



- upland forest 24%
- bottomland forest 8%
- wetland <1%
- grassland 15%
- cropland 42%
- urban built-up 4%
- water 8%

BIG RIVERS

Big Rivers is the largest of the RRAs. The area is characterized by a narrow band of bluffs and rugged topography that borders the floodplains of the Mississippi and Illinois Rivers. Forest is the predominant natural vegetation; hill prairies are common on western facing bluffs. Sinkholes and sinkhole ponds occur here.



LANDCOVER ♦ Cropland is the predominant landcover type (42%) of the site, followed by upland woods (24%). Big Rivers has the highest bottomland woods acreage and the third highest upland woods acreage among the RRAs; it ranks seventh in percentages of both bottomland and upland woods. It has moderate nonforested wetlands resources.

NATURAL AREAS ♦ Sixty-one Natural Areas, totaling 10,514 acres, are located in this RRA. The largest is Gardner Woods with 4,468 acres. Significant features include hill prairies, aquatic systems, woods, geological areas, glades, and caves.

BIOLOGICALLY SIGNIFICANT STREAMS ♦ Twenty miles of Hadley Creek and nine miles of the Mississippi River are designated BSS.

HERITAGE SITES ♦ There are 150 Heritage sites within this RRA representing seven significant community types, 11 plant species, 23 animal species, and eight rookeries.

STATE AND FEDERAL LAND ♦ The state and federal governments own 47,448 acres. Most is federal land divided among Mark Twain National Wildlife Refuge and the pools of the rivers. Pere Marquette State Park and Calhoun County Conservation Area are state land located in this RRA.

NATURE PRESERVES ♦ There are five Nature Preserves in this RRA. Communities protected in the preserves are bluffs, sink holes, ravines, bedrock outcrops, upland forest, and hill prairie.

NATURAL DIVISIONS ♦ This site contains five natural divisions, predominantly the Middle Mississippi Border and Upper Mississippi and Illinois River Bottomlands.

SUMMARY OF SITE CHARACTERISTICS: SIZE, BIOLOGIC RESOURCES, AND PUBLIC LAND

Total Acreage	626,795
Natural Areas	
Acreage	10,514
Number	61
Biologically Significant Stream Mileage	28.9
Natural Heritage Sites	150
State Land	
State Parks	1
State Conservation Areas	1
State Forests	0
State Fish & Wildlife Areas	0

Acreage	9,547
Percentage of RRA	1.5
Federal Land	
Acreage	37,901
Percentage of RRA	6.0

LANDCOVER	<u>Acres</u>	<u>% of RRA</u>
Upland forest	147,380.80	23.51
Bottomland forest	48,335.94	7.71
Wetland- nonforested	3,943.51	0.63
Grassland	90,915.57	14.51
Cropland	263,995.60	42.12
Urban/Built-up	23,125.79	3.69
Water	<u>49,085.98</u>	<u>7.83</u>
TOTAL	626,783.19	100.00

ILLINOIS NATURAL AREAS INVENTORY SITES

	<u>Acres</u>
Alton Geological Area	7
Atlas South Geological Area	7
Beebe Creek Site	*
Bellevue Site	8
Brainerd Cave	3
Brewster Hill Prairie	3
Browning Hill Prairie	45
Cap Au Gris	98
Chautauqua Prairie	126
Cincinnati Landing Site	164
Clarksville Island	820
Deer Lick Hollow Geological Area	7
Del Air Area	*
Distillery Hollow Glade	40
Drift Island	541
Eldred Caves	12
Emma Brown Hill Prairie	3
Gardner Woods	4,468
Gilbert Lake	11
Golden Eagle Geological Area	2
Grubb Hollow Prairie	14
Hadley Creek	202
Hamburg Southeast Geological Area	1
Horton Creek Hill Prairie	4
Jennings Hill Prairie	2
Jimtown Branch Geological Area	5
John Craig Hill Prairie	8
Kamp's Glade	214
Kinderhook Hill Prairie	5
Krause Woods	81
Lead Hollow Glade	22
McAdams Peak Hill Prairie	252
McNabb Hollow	28
Mississippi River -Cap Au Gris	1,431
Mississippi River -Pike	*
Monterey School Geological Area	17
Mortland Glade	101

The three areas in Illinois that were not covered by glaciers are the northwest corner, the far south, and the area where the Illinois River joins the Mississippi River. Glaciers did, however, influence these nonglaciated areas. In addition to rock and sand, melt-water deposited a finely ground silt which dried to a dust called loess. Windblown loess deposits along the lower Illinois River are among the thickest in the state. Several loess hill prairies occur in Big Rivers. A layer of loess, sometimes 150-feet thick, forms steep slopes and vertical cliffs.

Overlooking the Mississippi River north of Alton is a forested tract that includes three nature preserves: John M. Olin, Oblate Father's Woods, and Mississippi Sanctuary. Limestone bluffs, bedrock outcrops, sink holes, dry-to-mesic upland forest, and loess hill prairie characterize this area. Bald eagles have used the area as a winter roosting site.

ILLINOIS NATURAL AREAS INVENTORY SITES (*continued*)

	<u>Acres</u>
Motley Hill Prairie	6
Mozier Slough	34
North New Canton Hill Prairie	20
Olin Tract	244
Osterman Hill Prairie	13
Pearl Limestone Quarry	11
Pearl Prairie Geological Area	4
Pere Marquette Bald Eagle Habitat	492
Pilot Knob Limestone Glade	4
Pleasant Hill Hill Prairie	1
Principia Hill Prairies East	480
Principia Hill Prairies West	101
Quincy Geological Area	4
Riprap Landing Woods	179
Royal Landing	30
Shaffer Hollow Hill Prairie	36
Shewhart Hollow Hill Prairie	23
Swarnes Hill Prairie	39
Teneriffe School Geological Area	4
Twin Culvert Cave	4
Two Branch Hollow Hill Prairie	10
Walnut Grove Hill Prairies	3
West Point Landing Geological Area	15
Wildcat Hollow North Geological Area	5
* = point location, map not available	

BIOLOGICALLY SIGNIFICANT STREAMS

	<u>Miles</u>
Hadley Creek, upstream of McCraney Creek	19.9
Mississippi River, below L&D 25	9.0

NATURAL HERITAGE CATEGORIES

	<u>Occurrences</u>	<u>Types/Species</u>
Communities		
Floodplain Forest	6	2
Cave	4	2
Forest	1	1
Prairie	24	1
Primary	5	1
Threatened and Endangered Animals		
Amphibian	1	1
Bird	24	8
Fish	4	2
Mammal	15	4
Reptile	6	2
Insect	2	2
Mollusk	9	4
Threatened and Endangered Plants		
Plant-Dicot	19	8
Plant-Monocot	8	3
Geological Feature		
Geological Feature	14	1
Other		
Rookery	8	1

STATE AND FEDERAL LAND			
State Parks			<u>Acres</u>
Pere Marquette			8,168
State Conservation Areas			
Calhoun County (Rip Rap Landing)			1,379
State Forests			0
State Fish and Wildlife Areas			0
Federal Land			
Mark Twain NWR -Gilbert Lake Division			789
Mark Twain NWR			1,876
Mark Twain NWR -Gardner Division			5,013
Mark Twain NWR -Calhoun Division			2,130
Pool No. 21			3,019
Pool No. 22			4,418
Pool No. 24			3,372
Pool No. 25 (Inc. Reds Landing and Batchtown FWMA)			5,208
Pool No. 26 -Calhoun Point			2,317
Pool No. 26 -Fuller Lake			1,702
Pool No. 26 -Glades Hembold			954
Pool No. 26 -Godar Diamond			2,808
Pool No. 26 -Stump Lake			4,295
ILLINOIS NATURE PRESERVES			<u>Acres</u>
Grubb Hollow Prairie			45
John M. Olin			230
Mississippi Sanctuary			38
Oblate Father's Woods			19
Pere Marquette			179
NATURAL DIVISIONS	<u>Acres</u>	<u>% of</u>	<u>% of</u>
	<u>in RRA</u>	<u>RRA</u>	<u>Division</u>
Middle Mississippi Border	325,172	52.3	21.0
Upper Mississippi R			
and Illinois R Bottomlands	209,421	33.7	17.8
Western Forest-Prairie	35,421	5.7	0.8
Major Water Bodies	34,200	5.5	3.0
Lower Mississippi R Bottomlands	11,348	1.8	3.1
Illinois R and Mississippi R Sand Areas	5,912	1.0	1.5



Large tracts of mature, bottom-land forest for nesting, interspersed with openings for foraging, are habitat requirements of the state-endangered Mississippi kite. Formerly common in some localities in the large river valleys of Illinois, the current population of this bird is small, with as few as 60 nesting pairs. These are limited to a few areas in southern Illinois and along the Mississippi River, including the Big Rivers area.



Big Rivers

-  Natural Area
-  Town
-  State Land
-  Federal Land

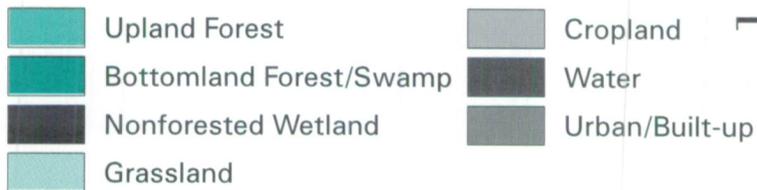
-  Stream
-  Significant Stream
-  Highway
-  County

10 Miles





Big Rivers



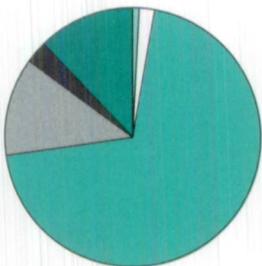
10 Miles



Size:
 447,925 acres
 700 square miles

Location:
 East-central Illinois; Champaign, Clark, Coles, Crawford, Cumberland, Douglas, Jasper, Lawrence, and Richland counties.

Landcover at a Glance



- upland forest 12%
- bottomland forest 3%
- wetland <1%
- grassland 12%
- cropland 69%
- urban built-up 2%
- water <1%

EMBARRAS RIVER

The Embarras River RRA includes the entire length of the river from the headwaters south of Champaign-Urbana to its confluence with the Wabash River near Lawrenceville. The Embarras River itself is the predominant natural resource responsible for this area's inclusion in the Resource Rich Area inventory. Rich species diversity and a wide variety of habitats such as gravel bars, gravel-sand raceways, sandbars, riffles, and deep pools are the outstanding features of the river, particularly the middle sections. The area is one of the most agricultural among the RRAs. The Embarras River RRA shares common boundaries with the Upper Wabash River and Southern Till Plain RRAs.



LANDCOVER ♦ Cropland occupies 69% of the land area at this site. The Embarras River RRA has the second highest cropland acreage and the second highest percentage of cropland. Approximately 15% of the RRA is wooded. Nonforested wetland resources are relatively low.

NATURAL AREAS ♦ Fifteen Natural Areas cover 5,009 acres, or approximately 1%, of this RRA. These sites include prairie chicken habitat, marshes, aquatic features, and hill prairies.

BIOLOGICALLY SIGNIFICANT STREAMS ♦ This site ranks second in terms of BSS stream mileage with 112.5 miles of the Embarras River so designated.

HERITAGE SITES ♦ There are 50 Heritage sites within this RRA including five community types, three plant species, and 14 animal species.

STATE AND FEDERAL LAND ♦ State land consists of three state parks; no federal land occurs in this RRA.

NATURE PRESERVES ♦ Significant natural features in the three Nature Preserves that occur here are marsh, prairie, bottomland forest, old growth forest, and grasslands that support prairie chickens and other grassland-dependant species.

NATURAL DIVISIONS ♦ This RRA traverses three Natural Divisions—Grand Prairie (40%), Southern Till Plain (39%), and Wabash Border (21%).

SUMMARY OF SITE CHARACTERISTICS: SIZE, BIOLOGIC RESOURCES, AND PUBLIC LANDS

Total Acreage	447,925
Natural Areas	
Acreage	5,009
Number	15
Biologically Significant Stream Mileage	112.5
Natural Heritage Sites	50
State Land	
State Park	3
State Conservation Areas	0
State Forests	0

State Fish & Wildlife Areas	0
Acreage	3,226
Percentage of RRA	0.7
Federal Land	
Acreage	0
Percentage of RRA	0.0

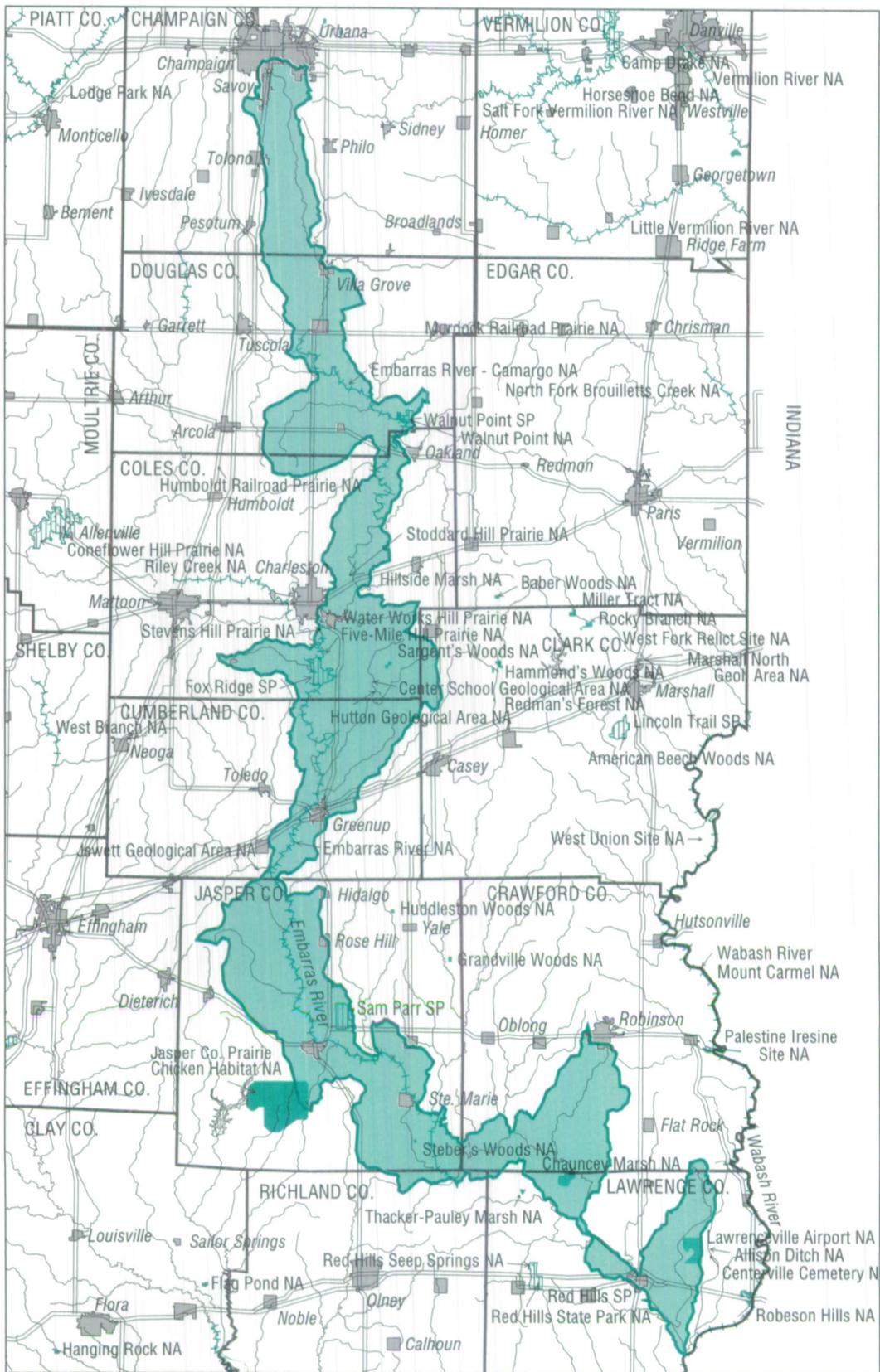
LANDCOVER	Acres	% of RRA
Upland forest	55,777.59	12.45
Bottomland Forest	14,086.30	3.14
Wetland- nonforested	1,160.49	0.26
Grassland	52,677.86	11.76
Cropland	310,970.20	69.43
Urban-Built Up	9,040.50	2.02
Water	4,204.43	0.94
TOTAL	447,917.37	100.00

ILLINOIS NATURAL AREAS INVENTORY SITES	Acres
Center School Geological Area	6
Chauncey Marsh	720
Embarras River	934
Embarras River -Camargo	480
Five-Mile Hill Prairie	5
Hillside Marsh	7
Hutton Geological Area	3
Jasper County Prairie Chicken Habitat	1,094
Lawrenceville Airport	1,389
Sargent's Woods	95
Steber's Woods	37
Stevens Hill Prairie	7
Stoddard Hill Prairie	9
Walnut Point	219
Water Works Hill Prairie	4

BIOLOGICALLY SIGNIFICANT STREAMS	Miles
Embarras River, Lake Charleston to Jasper/Richland	80.0
Embarras River, Rte 36 to Little Embarras River	32.5

NATURAL HERITAGE CATEGORIES	Occurrences	Types/Species
Communities		
Floodplain Forest	1	1
Wetland	2	2
Forest	2	1
Prairie	4	1
Threatened and Endangered Animals		
Bird	7	4
Fish	4	2
Reptile	2	1
Insect	1	1
Mollusk	16	6
Threatened and Endangered Plants		
Plant-Dicot	4	2
Plant-Monocot	5	1
Geological Feature		
Geological Feature	2	1
Other		

A 100-mile stretch of the midsection of the Embarras River is designated as a Biologically Significant Stream. The extensive sand-and-gravel substrate of the midsection of the river provides habitat for a number of rare species, such as the harlequin darter, eastern sand darter, bigeye shiner, and blue sucker. Mussel diversity is high and historically the river has supported eleven state-threatened or state-endangered species.

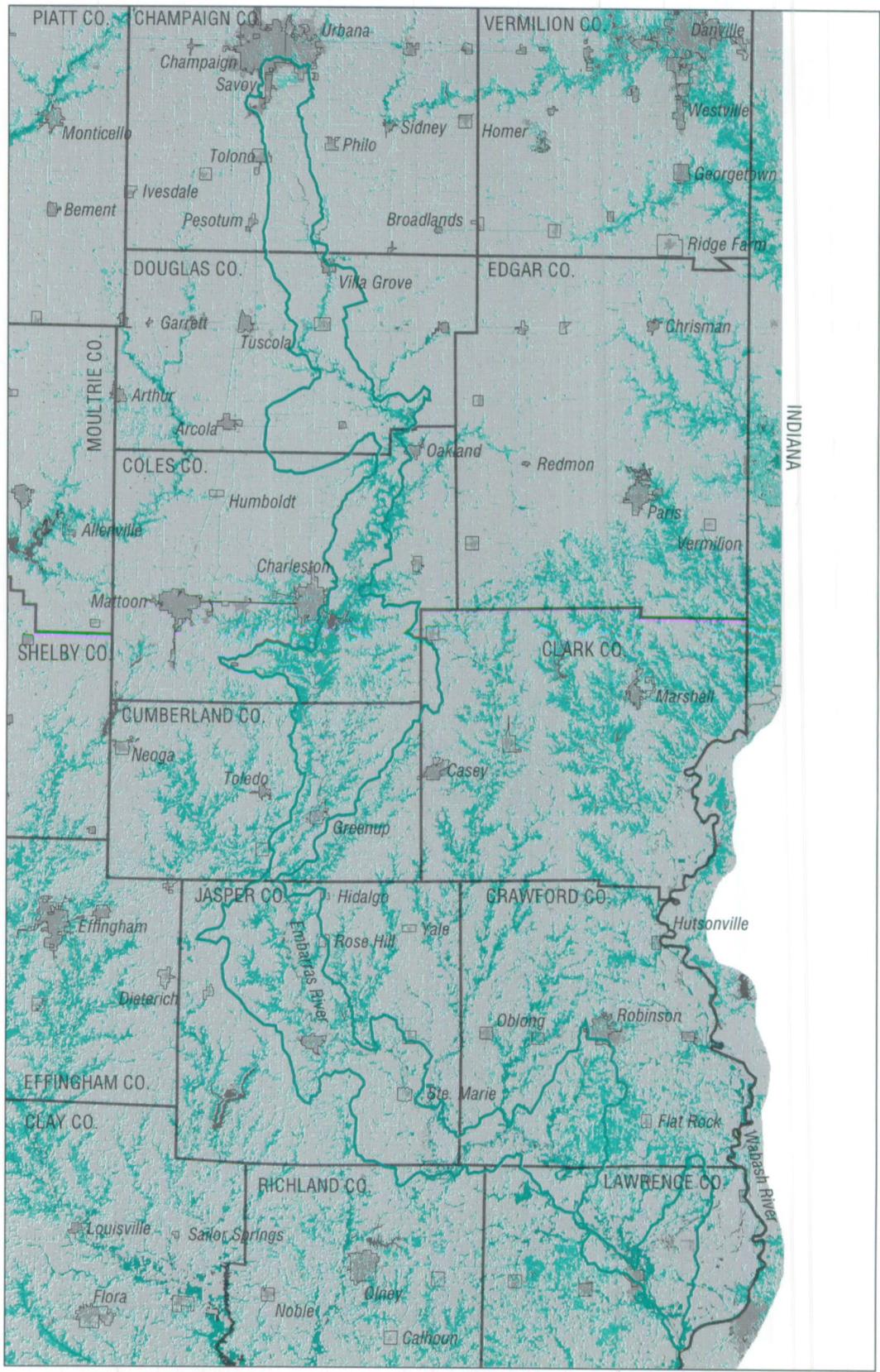


Embarras River

- | | | | |
|---|--------------|---|--------------------|
|  | Natural Area |  | Stream |
|  | Town |  | Significant Stream |
|  | State Land |  | Highway |
|  | Federal Land |  | County |

9 Miles





INDIANA

Embarras River



9 Miles



Millions of prairie chickens existed in Illinois in the mid to late 1800s. In the spring of 1994, the native population numbered about 50. Two sanctuaries were established in east-central Illinois to provide grassland habitat for the remaining birds. The restored grassland ecosystem has benefitted other rare grassland birds as well, including Henslow's sparrow, grasshopper sparrow, dickcissel, upland sandpiper, short-eared owl, and northern harrier.

STATE AND FEDERAL LAND

State Parks	<u>Acres</u>
Fox Ridge	1,544
Sam Parr	1,153
Walnut Point	529
State Conservation Areas	0
State Forests	0
State Fish and Wildlife Areas	0
Federal Land	0

ILLINOIS NATURE PRESERVES

Chauncey Marsh	<u>Acres</u>
Jasper Co. Prairie Chicken Sanctuary	116
Upper Embarras Woods	53
	68

NATURAL DIVISIONS

	Acres <u>in RRA</u>	% of <u>RRA</u>	% of <u>Division</u>
Grand Prairie	180,445	40.3	1.4
Southern Till Plain	173,344	38.7	2.4
Wabash Border	94,137	21.0	5.4





SANGAMON RIVER

The major natural features of the Sangamon River RRA are the forest tract at Robert Allerton Park and the Sangamon River. The area is highly agricultural. This RRA is relatively small.

LANDCOVER ♦ Nearly three-fourths of the Sangamon River RRA is cropland, the highest percentage among the RRAs. Fourteen percent of the RRA is grassland and 10% is wooded. Upland and bottomland wood percentages are moderately low. This site has the lowest acreage and lowest percentage of nonforested wetlands of the RRAs; there are only 49 acres of

nonforested wetland identified in this site.

NATURAL AREAS ♦ The two Natural Areas are Robert Allerton Park and the Sangamon River.

BIOLOGICALLY SIGNIFICANT STREAMS ♦ A 15.5 mile stretch of the Sangamon River is designated as a BSS stream.

HERITAGE SITES ♦ There are eight Heritage sites in this RRA representing four communities types, three animal species, and one large forest tract.

STATE AND FEDERAL LAND ♦ No state or federal land occurs in this RRA.

NATURE PRESERVES ♦ No Nature Preserves occur in this RRA.

NATURAL DIVISIONS ♦ This RRA lies entirely within the Grand Prairie Natural Division.

SUMMARY OF SITE CHARACTERISTICS: SIZE, BIOLOGIC RESOURCES, AND PUBLIC LANDS

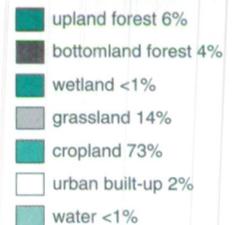
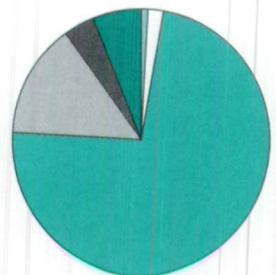
Total Acreage	53,734
Natural Areas	
Acreage	880
Number	2
Biologically Significant Stream Mileage	15.5
Natural Heritage Sites	8
State Land	
State Parks	0
State Conservation Areas	0
State Forests	0
State Fish & Wildlife Areas	0
Acreage	0
Percentage of RRA	0.0
Federal Land	
Acreage	0
Percentage of RRA	0.0

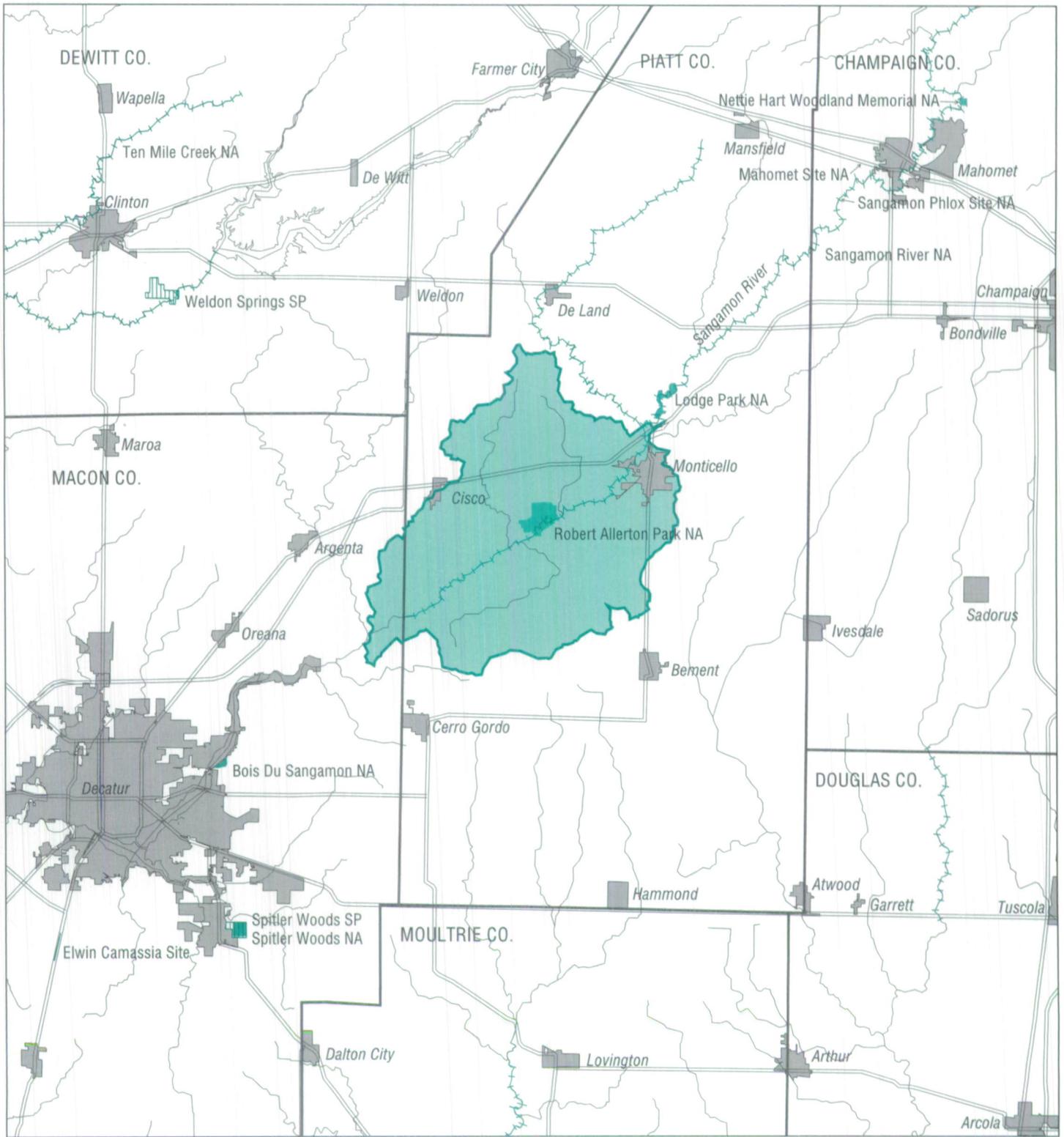
LANDCOVER	<u>Acres</u>	<u>% of RRA</u>
Upland forest	3,212.53	5.98
Bottomland forest	1,892.48	3.52
Wetland- nonforested	29.30	0.05

Size:
53,734 acres
84 square miles

Location:
Central Illinois;
Macon and Piatt
counties.

Landcover at a Glance





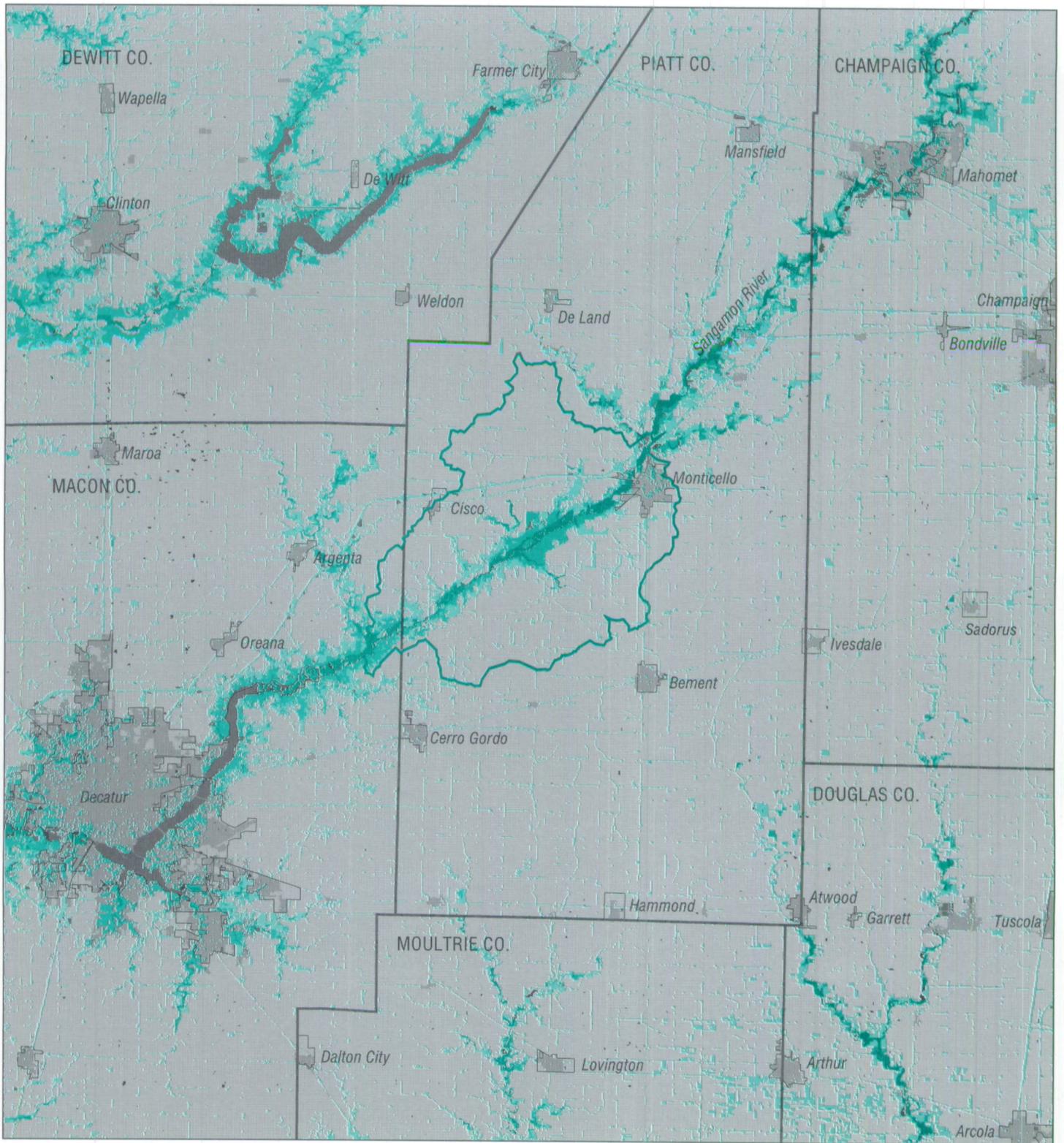
Sangamon River

-  Natural Area
-  Town
-  State Land
-  Federal Land

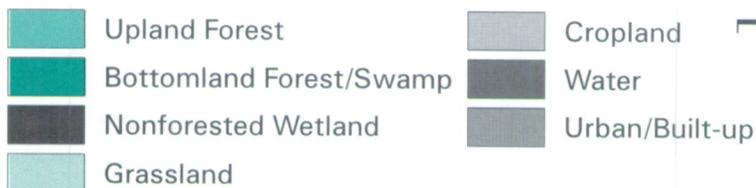
-  Stream
-  Significant Stream
-  Highway
-  County

5 Miles



Sangamou River



5 Miles



At the center of the forested corridor along the Sangamon River in this area is Allerton Park. The natural area is an example of a relatively undisturbed stream-valley ecosystem. It includes bottomland forest, upland forest, reclaimed prairie, and wetlands.

LANDCOVER <i>(continued)</i>			
	<u>Acres</u>	<u>% of RRA</u>	
Grassland	7,604.83	14.15	
Cropland	39,445.37	73.41	
Urban/Built-up	1,213.08	2.26	
Water	<u>337.19</u>	<u>0.63</u>	
TOTAL	53,734.78	100.00	
ILLINOIS NATURAL AREAS INVENTORY SITES			
Robert Allerton Park		<u>Acres</u>	
Sangamon River		719	
		161	
BIOLOGICALLY SIGNIFICANT STREAMS			
Goose Creek		<u>Miles</u>	
Sangamon River, source to Piatt/Macon county line		0.0	
		15.5	
NATURAL HERITAGE CATEGORIES			
Communities	<u>Occurrences</u>	<u>Types/Species</u>	
Floodplain Forest	2	2	
Forest	2	2	
Threatened and Endangered Animals			
Bird	2	2	
Reptile	1	1	
Threatened and Endangered Plants			
Geological Feature			
Other			
Forest Block >500 Acres	1	1	
STATE AND FEDERAL LAND			
State Parks		<u>Acres</u>	
State Conservation Areas		0	
State Forests		0	
State Fish and Wildlife Areas		0	
Federal Land		0	
ILLINOIS NATURE PRESERVES			
None			
NATURAL DIVISIONS			
	<u>Acres</u>	<u>% of</u>	<u>% of</u>
	<u>in RRA</u>	<u>RRA</u>	<u>Division</u>
Grand Prairie	53,735	100.0	0.4





UPPER WABASH RIVER

The Upper Wabash River RRA encompasses the Wabash River mainstem from where it enters Illinois south to just above Lawrenceville and the narrow band of small tributaries to the river. The Wabash River is wide and slow flowing with sand-gravel substrate in this area. This is one of the last relatively unaltered big rivers in the Midwest.

LANDCOVER ♦ This RRA is predominantly agricultural (63%), followed by wooded (22%). Moderate percentages of upland and bottomland woods occur in this site. Nonforested wetlands are not abundant.

NATURAL AREAS ♦ A total of 2,212 acres comprise four Natural Areas. The largest is the 1,929 acre stretch of the Wabash River at Mount Carmel.

BIOLOGICALLY SIGNIFICANT STREAMS ♦ A 76-mile stretch of the Wabash River is designated as a BSS stream in this RRA.

HERITAGE SITES ♦ There are few Heritage sites in this RRA. One community type, one plant species, and four animal species are represented by the eight Heritage occurrences in this site.

STATE AND FEDERAL LAND ♦ Part of Lincoln Trail State Park occurs in this RRA.

NATURE PRESERVES ♦ Robeson Hills is the only Nature Preserve in this RRA. It is a remnant upland forest with a beech-maple community as its most significant feature.

NATURAL DIVISIONS ♦ This RRA lies almost entirely within the Wabash Border Division.

SUMMARY OF SITE CHARACTERISTICS: SIZE, BIOLOGIC RESOURCES, AND PUBLIC LAND

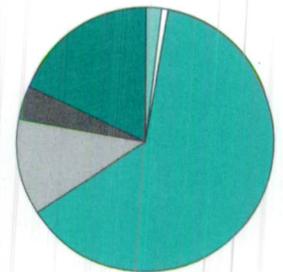
Total Acreage	170,654
Natural Areas	
Acreage	2,212
Number	4
Biologically Significant Stream Mileage	76.4
Natural Heritage Sites	8
State Land	
State Parks	1
State Conservation Areas	0
State Forests	0
State Fish & Wildlife Areas	0
Acreage	3
Percentage of RRA	0.0
Federal Land	
Acreage	0
Percentage of RRA	0.0

LANDCOVER	<u>Acres</u>	<u>% of RRA</u>
Upland forest	30,079.33	17.62
Bottomland Forest	6,753.63	3.96
Wetland- nonforested	415.27	0.24

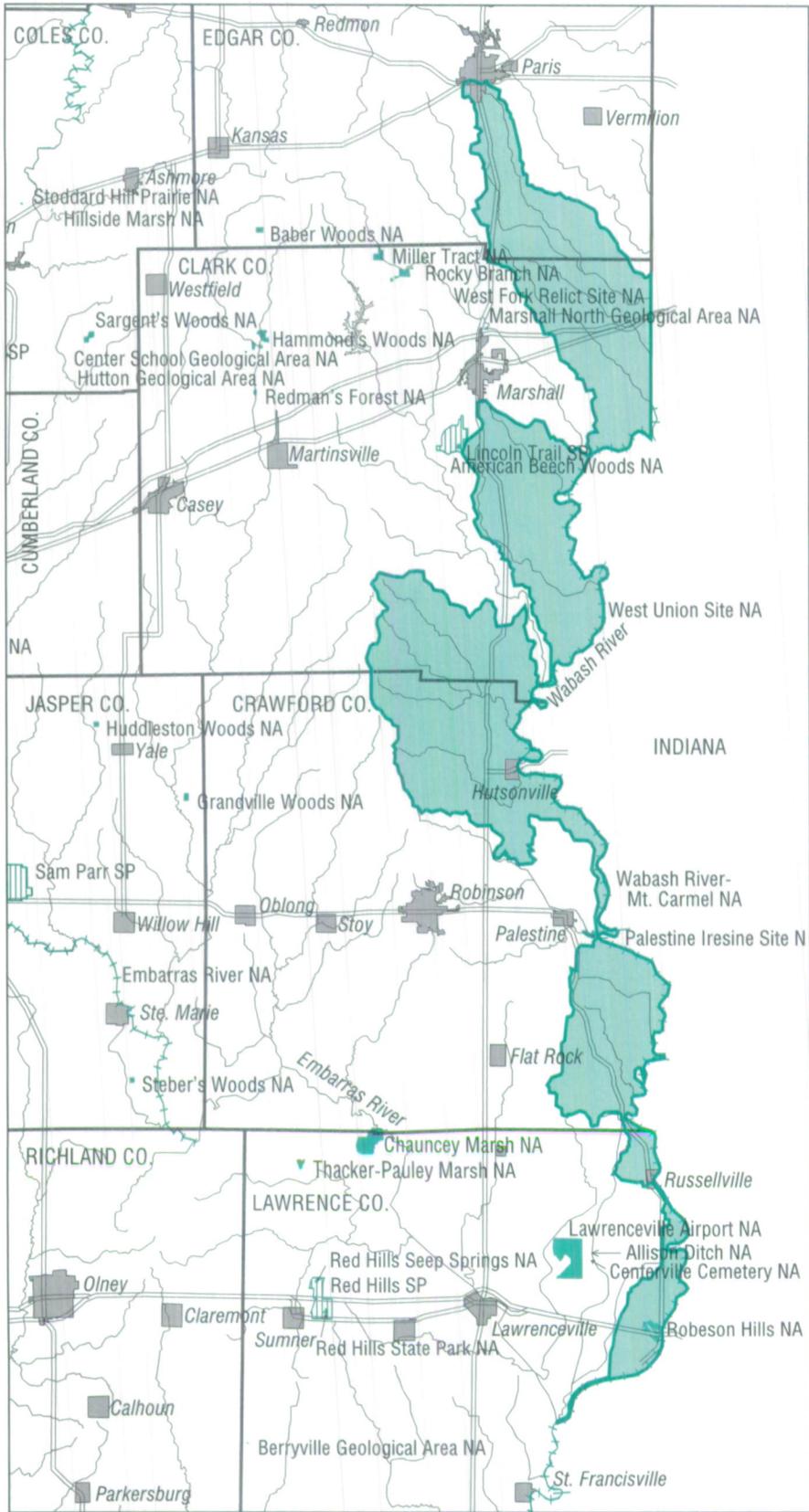
Size:
170,654 acres
267 square miles

Location:
Eastern Illinois
along the Indiana
border;
Clark, Crawford,
Edgar, and
Lawrence counties

Landcover at a Glance



- upland forest 18%
- bottomland forest 4%
- wetland <1%
- grassland 12%
- cropland 63%
- urban built-up 1%
- water 2%



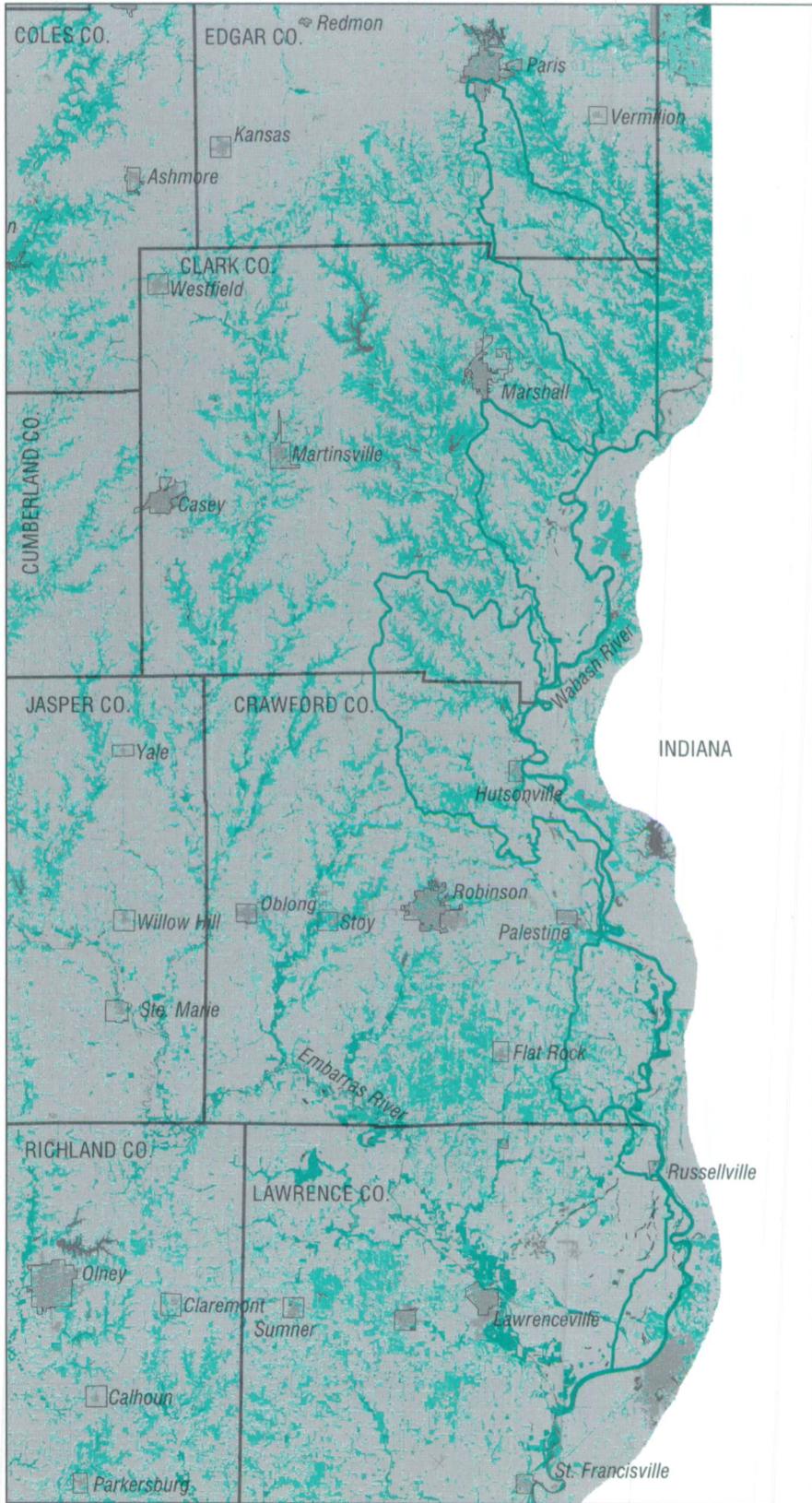
Upper Wabash River

- Natural Area
- Town
- State Land
- Federal Land

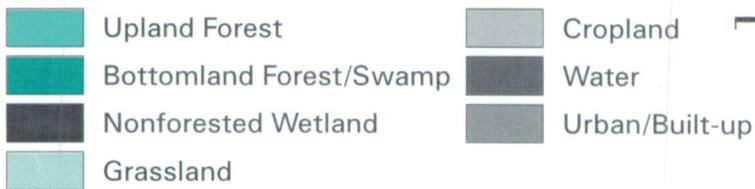
- Stream
- Significant Stream
- Highway
- County

7 Miles





Upper Wabash River



7 Miles



The transition zone between the beech-maple forests of the eastern U.S. and the prairie and oak-hickory forests of the west occurs on the eastern edge of Illinois. American beech, sugar maple, and tulip trees are common species of the eastern forests. Beech trees are distinctive with their pearl-gray bark and their tendency to occur in clumps as new trees grow from the surface roots of older trees. A mature, beech-maple forest is found in Robeson Hills Nature Preserve.

LANDCOVER (continued)		<u>Acres</u>	<u>% of RRA</u>
Grassland		20,958.54	12.28
Cropland		108,361.70	63.49
Urban-Built Up		1,155.08	0.68
Water		<u>2,940.57</u>	<u>1.72</u>
TOTAL		170,664.12	99.99
ILLINOIS NATURAL AREAS INVENTORIES SITES			<u>Acres</u>
Palestine Iresine Site			<1
Robeson Hills			279
Wabash River-Mount Carmel			1,929
West Union Site			4
BIOLOGICALLY SIGNIFICANT STREAMS			<u>Miles</u>
Wabash River, Clark Co. to White River			76.4
NATURAL HERITAGE CATEGORIES			
Communities		<u>Occurrences</u>	<u>Types/Species</u>
Forest		1	1
Threatened and Endangered Animals			
Mammal		1	1
Reptile		1	1
Mollusk		4	2
Threatened and Endangered Plants			
Plant-Dicot		1	1
Geological Feature			
Other			
STATE AND FEDERAL LAND			
State Parks			<u>Acres</u>
Lincoln Trail			3
State Conservation Areas			0
State Forests			0
State Fish and Wildlife Areas			0
Federal Land			0
ILLINOIS NATURE PRESERVES			<u>Acres</u>
Robeson Hills			108
NATURAL DIVISIONS			
	<u>Acres</u>	<u>% of</u>	<u>% of</u>
	<u>in RRA</u>	<u>RRA</u>	<u>Division</u>
Wabash Border	156,342	94.0	9.0
Southern Till Plain	7,936	4.8	0.1
Grand Prairie	1,956	1.2	0.0





SOUTHERN TILL PLAIN

The Southern Till Plain RRA is the second largest RRA. In presettlement times rolling prairies between broad woodlands following stream corridors characterized the region. The area is now largely agricultural. The soils have a high clay content and are fairly poor. Of the five watersheds that comprise this RRA, four drain to the Little Wabash River and one drains to the Kaskaskia River.

LANDCOVER ♦ The Southern Till Plain RRA is predominantly cropland (58%), followed by grassland (21%). It has the highest acreage of cropland and the second highest acreage of grassland among the RRAs, but due to its large

size, the percentages of these landcover types rank eighth and tenth, respectively. Approximately 19% of the site is wooded. There are moderate amounts of upland and bottomland woods. Bottomland woods are concentrated along the lower portion of the Little Wabash River. The acreage and percentage of nonforested wetlands are low.

NATURAL AREAS ♦ Prairie chicken habitat at three separate locations accounts for most of the Natural Area acreage in this site. Notable features at the 15 Natural Areas in this site include grasslands, prairies, aquatic systems, springs, swamps, and forests.

BIOLOGICALLY SIGNIFICANT STREAMS ♦ A single 50-mile stretch of the Little Wabash River is designated as a BSS stream.

HERITAGE SITES ♦ There are 31 Heritage sites within the Southern Till Plain RRA. This is a low number given the size of the site. Six significant community types, two plant species, and five animal species are located here.

STATE AND FEDERAL LAND ♦ A state fish and wildlife area and Carlyle Lake, an impoundment, comprise the public land within this site.

NATURE PRESERVES ♦ Miller Shrub Swamp, a spring-fed wetland, is the only Nature Preserve in this RRA.

NATURAL DIVISIONS ♦ Ninety percent of this site lies in the Southern Till Plain Division and ten percent lies in the Wabash Border Division.

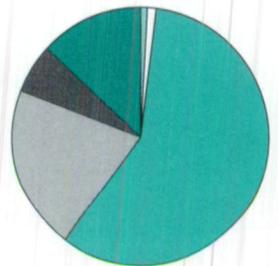
SUMMARY OF SITE CHARACTERISTICS: SIZE, BIOLOGIC RESOURCES, AND PUBLIC LAND

Total Acreage	584,788
Natural Areas	
Acreage	6,903
Number	15
Biologically Significant Stream Mileage	48.8
Natural Heritage Sites	31
State Land	
State Parks	0
State Conservation Areas	0

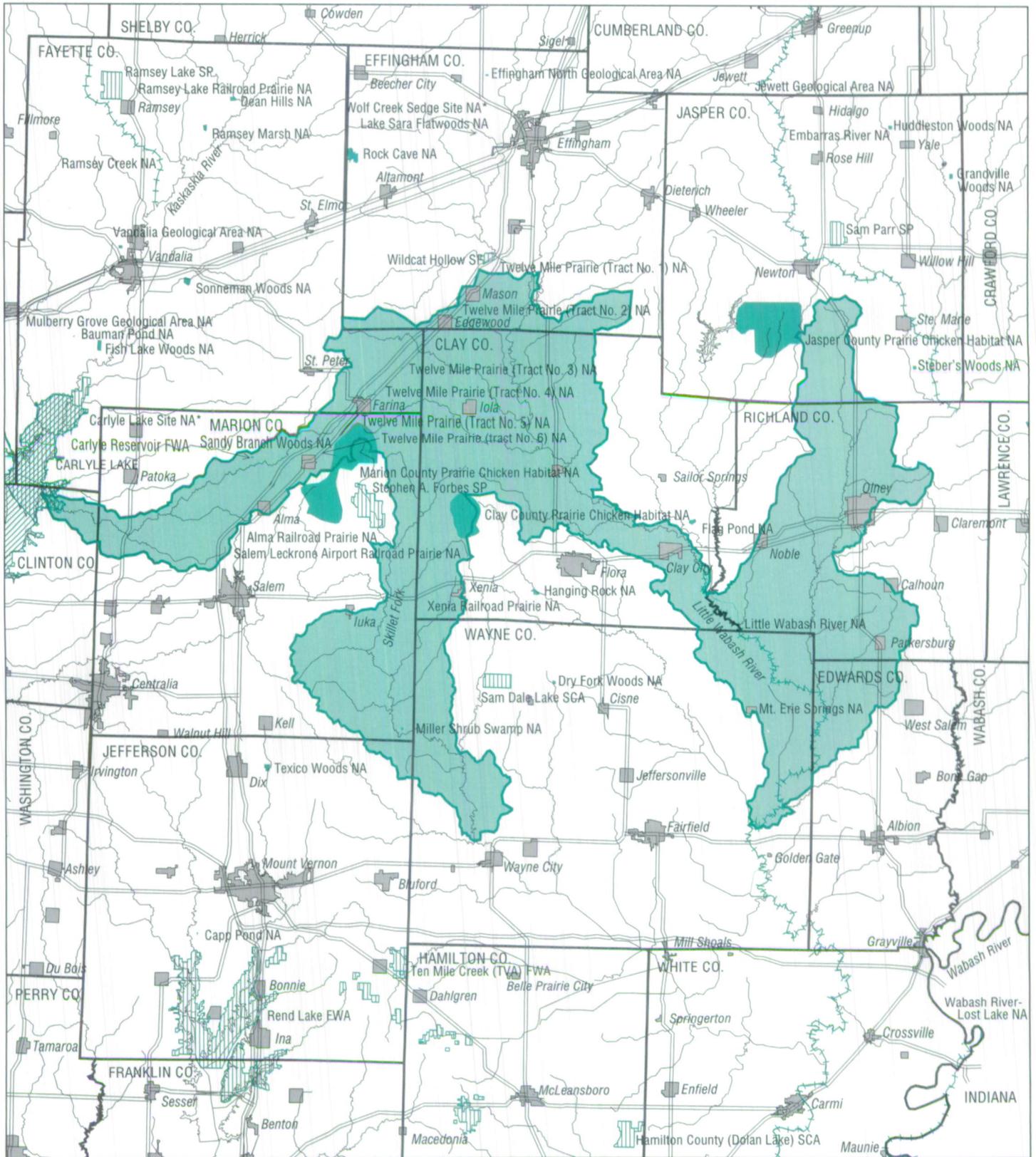
Size:
584,788 acres
914 square miles.

Location:
South-central Illinois; Clay, Clinton, Edwards, Effingham, Fayette, Jasper, Jefferson, Marion, Richland, and Wayne counties.

Landcover at a Glance



	upland forest 13%
	bottomland forest 6%
	wetland <1%
	grassland 21%
	cropland 58%
	urban built-up 1%
	water <1%



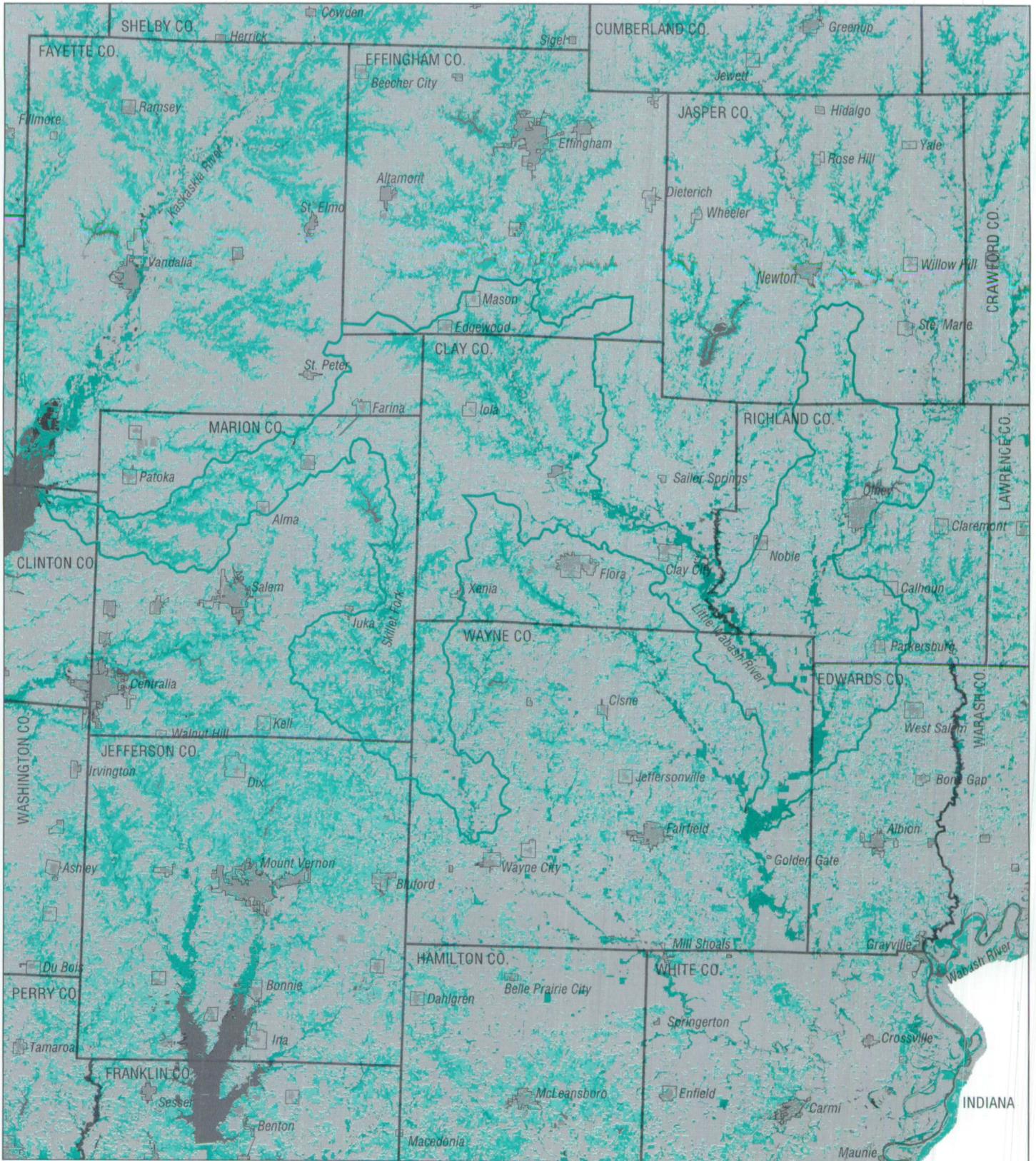
Southern Till Plain

- Natural Area
- Town
- State Land
- Federal Land

- Stream
- Significant Stream
- Highway
- County

9 Miles





Southern Till Plain

- | | | | |
|---|-------------------------|---|----------------|
|  | Upland Forest |  | Cropland |
|  | Bottomland Forest/Swamp |  | Water |
|  | Nonforested Wetland |  | Urban/Built-up |
|  | Grassland | | |

9 Miles




Today about 2,000 acres of high-quality, relatively undisturbed prairie, or about .01% of the original native prairie, exists in Illinois. Many remnants persist along railroad rights-of-way. Twelve Mile Prairie is an example of a dry-mesic prairie along a railroad line. The lack or abandonment of cultivation has helped to maintain the native prairie vegetation.

State Forests		0
SUMMARY OF SITE CHARACTERISTICS <i>(continued)</i>		
State Fish & Wildlife Areas		1
Acreage		554
Percentage of RRA		0.1
Federal Land		
Acreage		682
Percentage of RRA		0.1
LANDCOVER	<u>Acres</u>	<u>% of RRA</u>
Upland forest	77,292.91	13.22
Bottomland forest	33,609.18	5.75
Wetland- nonforested	981.86	0.17
Grassland	121,895.50	20.84
Cropland	341,724.90	58.44
Urban-Built-up	6,193.05	1.06
Water	<u>3,087.29</u>	<u>0.53</u>
TOTAL	584,784.69	100.01
ILLINOIS NATURAL AREAS INVENTORY SITES		
		<u>Acres</u>
Clay County Prairie Chicken Habitat		2,957
Jasper County Prairie Chicken Habitat		98
Little Wabash River		593
Marion County Prairie Chicken Habitat		3,032
Miller Shrub Swamp		22
Mt. Erie Springs		7
Salem Leckrone Airport Railroad Prairie		3
Sandy Branch Woods		17
Twelve Mile Prairie (Tract No. 1)		12
Twelve Mile Prairie (Tract No. 2)		15
Twelve Mile Prairie (Tract No. 3)		11
Twelve Mile Prairie (Tract No. 4)		28
Twelve Mile Prairie (Tract No. 5)		78
Twelve Mile Prairie (Tract No. 6)		26
Xenia Railroad Prairie		5
BIOLOGICALLY SIGNIFICANT STREAMS		
		<u>Miles</u>
Little Wabash River, Rte 50 to mouth		48.8
NATURAL HERITAGE CATEGORIES		
Communities	<u>Occurrences</u>	<u>Types/Species</u>
Lake	1	1
Wetland	2	2
Forest	1	1
Prairie	8	2
Threatened and Endangered Animals		
Bird	12	2
Mammal	1	1
Mollusk	2	2
Threatened and Endangered Plants		
Plant-Dicot	4	2
Geological Feature		
Other		
STATE AND FEDERAL LANDS		
		<u>Acres</u>
State Parks		0

State Conservation Areas			0
State Forests			0
State Fish and Wildlife Areas			
Carlyle Reservoir			554
Federal Land			
Carlyle Lake			682
ILLINOIS NATURE PRESERVES			<u>Acres</u>
Miller Shrub Swamp			30
NATURAL DIVISIONS	Acres	% of	% of Natural
	<u>in RRA</u>	<u>RRA</u>	<u>Division</u>
Southern Till Plain	526,041	90.0	7.4
Wabash Border	58,748	10.0	3.4

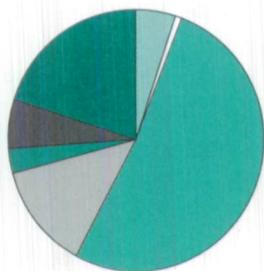


Open areas of agriculture interspersed with grasslands are the preferred habitat for the loggerhead shrike in Illinois. This species has the interesting behavior of impaling its prey—larger insects, small mammals, birds, reptiles, and amphibians—on thorns and fences. The loggerhead shrike is most numerous in the southern third of the state. Populations in north and central Illinois declined steadily and were almost eliminated by 1972 due in part to the loss of hedgerows. The loggerhead shrike is a state-threatened species.

Size:
 291,305 acres
 455 square miles

Location:
 Southwestern Illinois along the Mississippi River near St. Louis; Madison, Monroe, Randolph, and St. Clair counties.

Landcover at a Glance



- upland forest 20%
- bottomland forest 6%
- wetland 3%
- grassland 13%
- cropland 52%
- urban built-up 1%
- water 5%

KARST/CAVE AREA

The Karst/Cave Area RRA includes Mississippi bottomlands and part of the Ozark plateau. Exceptional features are its limestone bedrock, numerous caves and sinkholes, old growth forest, and unique flora and fauna. The area originally contained large areas of forest, prairie, and wetland.



LANDCOVER ♦ This RRA is half cropland and one-fourth wooded. It has relatively moderate percentages of upland and bottomland woods. This site ranks second in acreage and seventh in percentage of nonforested wetlands among the 30 RRAs.

NATURAL AREAS ♦ The Karst/Cave RRA has the second highest acreage of Natural Areas. Over nine percent of this large site is covered by Natural Area sites. Of the 27 Natural Areas, seven sites are larger than 1,000 acres. Significant natural features are caves, hill prairies, springs, marshes, herpetological areas, and rookeries.

BIOLOGICALLY SIGNIFICANT STREAMS ♦ Designated BSS streams in this RRA include a short length of the Mississippi River and a tributary to Horse Creek, which total 2.9 miles.

HERITAGE SITES ♦ A moderate number of Heritage sites (92) occurs here. Eight significant communities types occur here along with nine plant species, 18 animal species, and two rookeries. There are 14 cave occurrences.

STATE AND FEDERAL LAND ♦ Horseshoe Lake State Park and Kaskaskia State Fish and Wildlife Area are the only state or federal land in this site.

NATURE PRESERVES ♦ There are four Nature Preserves in this site. High quality terrestrial cave and aquatic cave communities, hill prairies, and old growth forest remnants are important natural features of these preserves.

NATURAL DIVISIONS ♦ Five natural divisions comprise this RRA. Most of the area is Lower Mississippi River Bottomlands (43%), Ozarks (28%), and Southern Till Plain (18%). Over a third of the state's Lower Mississippi River Bottomlands Division and 20% of the Ozark Division occurs in this RRA.

SUMMARY OF SITE CHARACTERISTICS: SIZE, BIOLOGIC RESOURCES, AND PUBLIC LANDS

Total Acreage	291,305
Natural Areas	
Acreage	26,230
Number	27
Biologically Significant Stream Mileage	2.9
Natural Heritage Sites	92
State Land	
State Parks	1
State Conservation Areas	0
State Forests	0
State Fish & Wildlife Areas	1

Acreage		3,364
Percentage of RRA		1.2
Federal Land		
Acreage		0
Percentage of RRA		0.0

LANDCOVER	<u>Acres</u>	<u>% of RRA</u>
Upland forest	38,763.36	20.37
Bottomland forest	11,214.97	5.89
Wetland- nonforested	5,383.39	2.83
Grassland	24,700.95	12.98
Cropland	99,215.85	52.15
Urban/Built-up	2,155.40	1.13
Water	<u>8,818.51</u>	<u>4.64</u>
Total	190,252.43	99.99

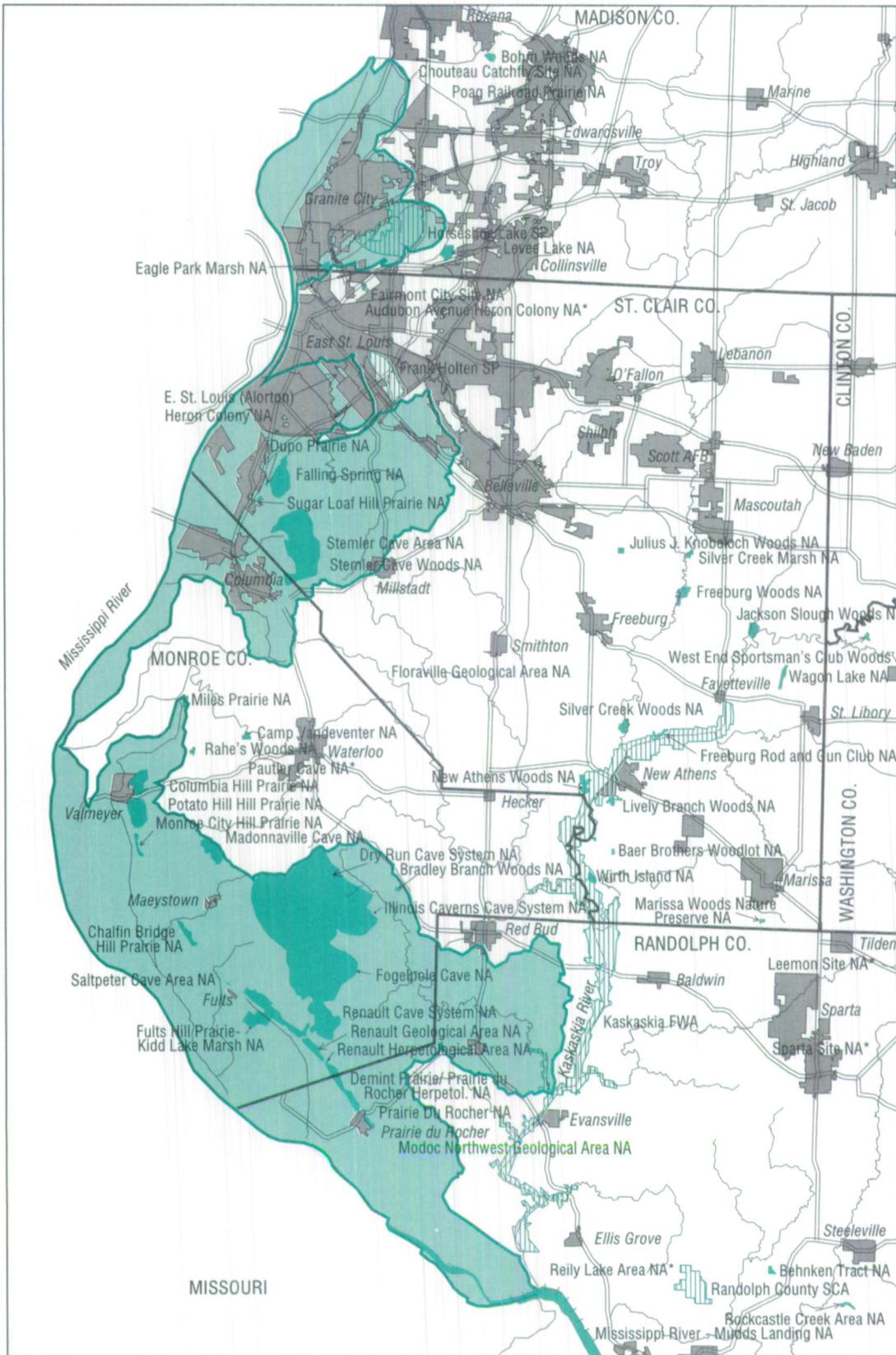
ILLINOIS NATURAL AREAS INVENTORY SITES

	<u>Acres</u>
Bradley Branch Woods	30
Chalfin Bridge Hill Prairie	220
Chouteau Catchfly Site	2
Columbia Hill Prairie	476
Demint Prairie/Prairie Du Rocher Herpetological Site	483
Dry Run Cave System	3,831
Dupo Prairie	13
Eagle Park Marsh	106
East St. Louis (Alorton) Heron Colony	2
Falling Spring	797
Fogelpole Cave	9,319
Fults Hill Prairie--Kidd Lake Marsh	1,268
Illinois Caverns Cave System	2,747
Madonnaville Cave	480
Miles Prairie	51
Mississippi River -Mudds Landing	1,075
Modoc Northwest Geological Area	3
Monroe City Hill Prairie	104
Potato Hill Hill Prairie	667
Prairie Du Rocher-south	89
Renault Cave System	1,073
Renault Geological Area	77
Renault Herpetological Area	249
Saltpeter Cave Area	27
Stemler Cave Area	2,812
Stemler Cave Woods	177
Sugar Loaf Hill Prairie	53
BIOLOGICALLY SIGNIFICANT STREAMS	<u>Miles</u>
Mississippi River, rm 114-119, Randolph Co.	1.9
Tributary to Horse Creek	1.0

NATURAL HERITAGE CATEGORIES

Communities	<u>Occurrences</u>	<u>Types./Species</u>
Cave	14	2
Forest	5	4
Prairie	11	1
Primary	4	1

More than 480 caves occur in Illinois. The caves of the Sinkhole Plain in Monroe and St. Clair counties are the most numerous and interesting in the state. In Illinois, caves are found in areas of major limestone or dolomite outcrops called karsts. A few animals have adapted to the dark, cool, and humid environment of the deep caves. Some are both blind and colorless, such as isopods, amphipods, pseudo-scorpions, and springtails.



Karst/Cave Area

- | | | | |
|---|--------------|---|--------------------|
|  | Natural Area |  | Stream |
|  | Town |  | Significant Stream |
|  | State Land |  | Highway |
|  | Federal Land |  | County |

7 Miles





Karst/Cave Area

- | | | | |
|---|-------------------------|---|----------------|
|  | Upland Forest |  | Cropland |
|  | Bottomland Forest/Swamp |  | Water |
|  | Nonforested Wetland |  | Urban/Built-up |
|  | Grassland | | |

7 Miles



Of the twelve species of bats that occur in Illinois, nine are called cave bats because they generally hibernate in caves or abandoned mines. A Monroe County cave is one of two known hibernation sites for the federally endangered Indiana bat. Gray bats, also a federally endangered species, are limited in Illinois to southern and west-central parts of the state where there are numerous caves. Two other species, the southeastern bat and Rafinesque's big-eared bat, are endangered in Illinois and are found only in the southernmost part of the state.

NATURAL HERITAGE CATEGORIES (continued)

	<u>Occurrences</u>	<u>Types/Species</u>
Threatened and Endangered Animals		
Amphibian	2	1
Bird	17	1
Fish	1	1
Mammal	1	1
Reptile	7	3
Crustacean	4	2
Threatened and Endangered Plants		
Plant-Dicot	18	8
Plant-Monocot	2	1
Geological Feature		
Geological Feature	4	1
Other		
Rookery	2	1
STATE AND FEDERAL LAND		
State Parks		<u>Acres</u>
Horseshoe Lake		3,040
State Conservation Areas		0
State Forests		0
State Fish and Wildlife Areas		
Kaskaskia		324
Federal Land		0
ILLINOIS NATURE PRESERVES		<u>Acres</u>
Armin Krueger Speleological		119
Fogelpole Cave		26
Fults Hill Prairie		427
Stemler Cave Woods		118
NATURAL DIVISIONS	<u>Acres</u>	<u>% of Natural</u>
	<u>in RRA</u>	<u>RRA</u>
Lower Mississippi R Bottomlands	124,504	43.0
Ozarks	82,675	28.5
Southern Till Plain	53,528	18.5
Middle Mississippi Border	15,275	5.3
Major Water Bodies	13,813	4.8





LOWER WABASH RIVER

The Lower Wabash River RRA includes the mainstem of the Wabash River below Lawrenceville to its confluence with the Ohio River and its small tributaries. The lower Wabash River watershed encompasses bottomland forest with wet prairie, sloughs, oxbows, and marshes. The lower reaches of the river have a sand, gravel, and rock substrate and feature pools and riffles.

LANDCOVER ♦ Cropland is the predominant landcover in this RRA; two-thirds of the area is cropland. This site has the third highest percentage of cropland among the RRAs.

Eighteen percent of this site is wooded. Bottomland forest is a significant natural resource in this RRA; this RRA ranks second in percentage of bottomland forest. Moderate amounts of nonforested wetlands are present.

NATURAL AREAS ♦ Twelve Natural Areas are located in this RRA. Most of the acreage is in Wabash River sites. Other features include woods, sloughs, and ponds.

BIOLOGICALLY SIGNIFICANT STREAMS ♦ The Lower Wabash River RRA ranks fourth in BSS streams mileage (75.5 miles), most of which is the Wabash River.

HERITAGE SITES ♦ Thirty-four Heritage sites occur here. Five community types, two plant species, and 13 animal species are represented.

STATE AND FEDERAL LAND ♦ Beall Woods State Park and Beall Woods Conservation Area are the only state or federal land which occurs in this RRA.

NATURE PRESERVES ♦ Beall Woods is the only Nature Preserve within this RRA. It is the largest and best remnant of the immense forests which originally occurred along the Wabash.

NATURAL DIVISIONS ♦ The site lies almost entirely within the Wabash Border Natural Division.

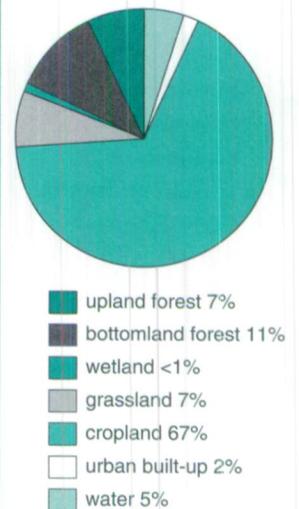
SUMMARY OF SITE CHARACTERISTICS: SIZE, BIOLOGIC RESOURCES, AND PUBLIC LANDS

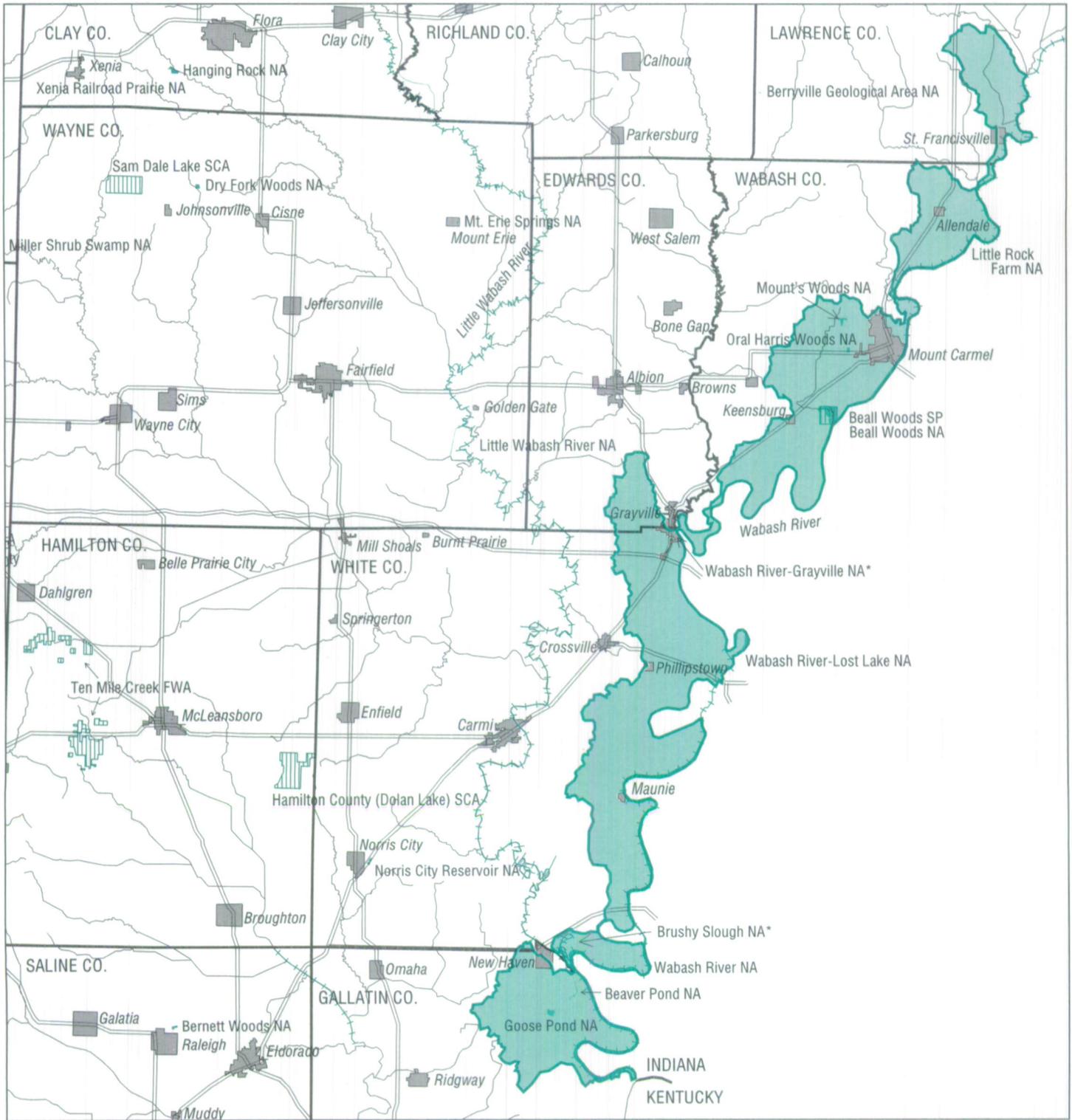
Total Acreage	163,894
Natural Areas	
Acreage	4,639
Number	12
Biologically Significant Stream Mileage	75.5
Natural Heritage Sites	34
State Land	
State Parks	1
State Conservation Areas	1
State Forests	0
State Fish & Wildlife Areas	0
Acreage	1,261
Percentage of RRA	0.8
Federal Land	
Acreage	0
Percentage of RRA	0.0

Size:
163,894 acres
256 square miles

Location:
Southeastern Illinois along the Indiana border; Edwards, Gallatin, Lawrence, Wabash, and White counties.

Landcover at a Glance





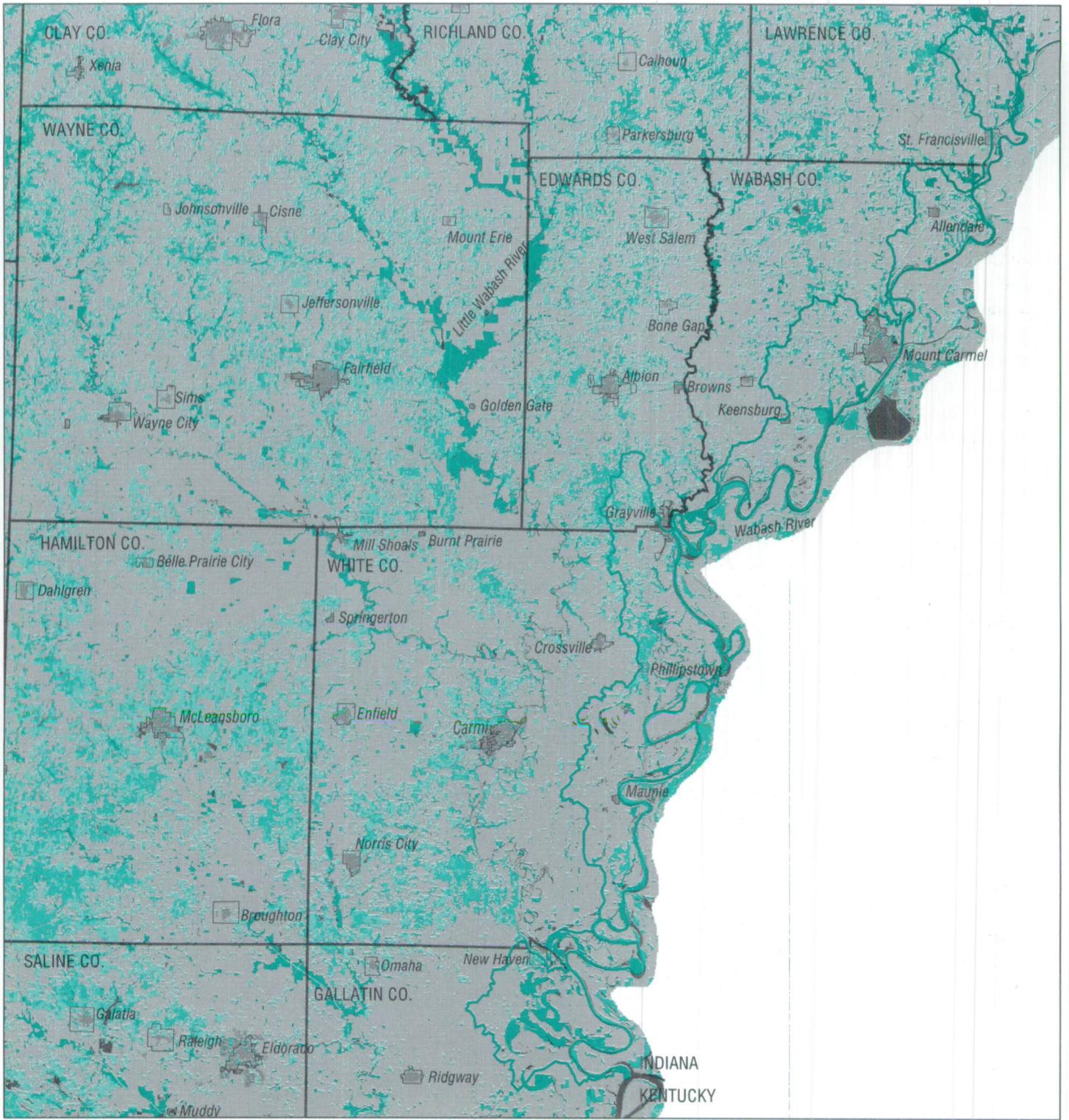
Lower Wabash River

-  Natural Area
-  Town
-  State Land
-  Federal Land

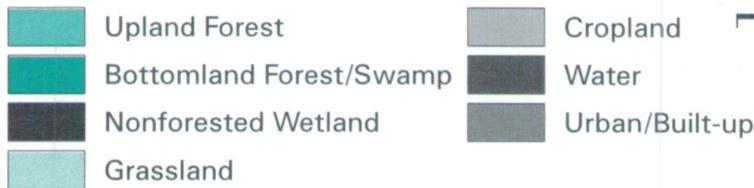
-  Stream
-  Significant Stream
-  Highway
-  County

8 Miles





Lower Wabash River



8 Miles




The bottomlands of the lower Wabash River are the last strongholds of the eastern deciduous forests in Illinois. Fertile, deep, and moist soil has promoted dense growth. The immense size of the trees (some are over 130 feet tall and six feet in diameter) as well as the diversity of species are remarkable features of the woods. Many of the trees have been harvested and the remaining forests in the area were considered remnants as early as 1876. Beall Woods Nature Preserve is the largest and best example of the original forests that occurred along the Wabash River; several state tree champions are present in this preserve.

SUMMARY OF SITE CHARACTERISTICS (continued)

	<u>Acres</u>	<u>% of RRA</u>
LANDCOVER		
Upland forest	12,030.65	7.34
Bottomland forest	17,885.50	10.91
Wetland- nonforested	1,447.51	0.88
Grassland	12,246.01	7.47
Cropland	109,717.10	66.94
Urban/Built-up	3,183.43	1.94
Water	<u>7,385.06</u>	<u>4.51</u>
TOTAL	163,895.26	99.99
ILLINOIS NATURAL AREAS INVENTORY SITES		
		<u>Acres</u>
Beall Woods		390
Beaver Pond		26
Brushy Slough		*
Goose Pond		82
Little Rock Farm		47
Little Wabash River		<1
Mount's Woods		71
Oral Harris Woods		31
Wabash River		2,297
Wabash River-Lost Lake		210
Wabash River-Mount Carmel		1,484
Wabash River-Grayville		*
* = point location, map not available		
BIOLOGICALLY SIGNIFICANT STREAMS		
		<u>Miles</u>
Brushy Slough		4.0
Little Wabash River, Rte 50 to mouth		0.0
Wabash River, Clark Co. to White River		27.4
Wabash River, New Harmony to Ohio River		44.1
NATURAL HERITAGE CATEGORIES		
Communities	<u>Occurrences</u>	<u>Types/Species</u>
Floodplain Forest	1	1
Lake	1	1
Wetland	1	1
Forest	3	1
Primary	1	1
Threatened and Endangered Animals		
Amphibian	1	1
Fish	4	2
Mammal	2	1
Reptile	3	2
Crustacean	1	1
Mollusk	14	6
Threatened and Endangered Plants		
Plant-Dicot	2	2
Geological Feature		
Other		
STATE AND FEDERAL LAND		
State Parks		<u>Acres</u>
Beall Woods		632
State Conservation Areas		
Beall Woods		629

State Forests			0
State Fish and Wildlife Areas			0
Federal Land			0
ILLINOIS NATURE PRESERVES		<u>Acres</u>	
Beall Woods			348
NATURAL DIVISIONS	<u>Acres</u>	<u>% of</u>	<u>% of</u>
	<u>in RRA</u>	<u>RRA</u>	<u>Division</u>
Wabash Border	159,587	99.6	9.2
Southern Till Plain	591	0.4	0.0

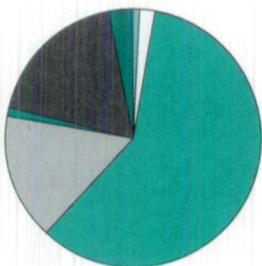


The Wabash River, the second largest tributary to the Ohio River, forms almost 200 miles of the lower border between Illinois and Indiana. Historically, the Wabash River has supported 27 state-threatened or state-endangered mussel species, including eight which are federally endangered. Mussel populations are greatly reduced in numbers of individuals and species in the Wabash, as is the case in the rest of Illinois and the U.S.

Size:
197,654 acres
309 square miles

Location:
South-central Illinois; Clinton, Monroe, St. Clair, and Washington counties.

Landcover at a Glance



- upland forest 3%
- bottomland forest 18%
- wetland <1%
- grassland 16%
- cropland 58%
- urban built-up 2%
- water 1%

KASKASKIA BOTTOMS

The predominant natural features of the Kaskaskia Bottoms RRA are the large tracts of bottomland forest associated with the river and the river itself. The river in this area is fairly wide (up to 100 feet) with a sand, gravel, cobble, and silt substrate.

LANDCOVER ♦ The principal landcover is cropland (58%), followed by bottomland woods (18%). Overall the site is 21% forested. The Kaskaskia Bottoms site ranks first in percentage of bottomland woods and last in percentage of upland forest. Moderate amounts of nonforested wetlands are present.

NATURAL AREAS ♦ Most of the ten Natural Area sites in this RRA are notable for their forest resources.

BIOLOGICALLY SIGNIFICANT STREAMS ♦ The upper portion of the Kaskaskia River is designated a BSS stream for 31 miles of its length within this RRA.

HERITAGE SITES ♦ Seven community types, one plant species, five animal species, and three large forest tracts are included in the 28 Heritage sites within this RRA.

STATE AND FEDERAL LAND ♦ State land in this RRA includes the Kaskaskia Fish and Wildlife Area (6,911 acres) and a portion of South Shore State Park (5 acres). Federal land consists of a portion of Carlyle Lake.

NATURE PRESERVES ♦ There are no Nature Preserves within this RRA.

NATURAL DIVISIONS ♦ This site lies entirely within the Southern Till Plain Natural Division.

SUMMARY OF SITE CHARACTERISTICS: SIZE, BIOLOGIC RESOURCES, AND PUBLIC LANDS

Total Acreage		197,654
Natural Areas		
Acreage		1,681
Number		10
Biologically Significant Stream Mileage		31.1
Natural Heritage Sites		28
State Land		
State Parks		1
State Conservation Areas		0
State Forests		0
State Fish & Wildlife Areas		1
Acreage		6,916
Percentage of RRA		3.5
Federal Land		
Acreage		494
Percentage of RRA		0.2
LANDCOVER	<u>Acres</u>	<u>% of RRA</u>
Upland forest	6,743.79	3.41
Bottomland forest	35,538.79	17.98



Wetland- nonforested	1,447.51	0.73
Grassland	31,688.60	16.03
Cropland	115,153.10	58.26
Urban/Built-up	4,127.76	2.09
Water	<u>2,944.99</u>	<u>1.49</u>
TOTAL	197,644.54	99.99

ILLINOIS NATURAL AREAS INVENTORY SITES

	<u>Acres</u>
Baer Brothers Woodlot	25
Eversgerd Flatwoods	53
Freeburg Rod and Gun Club	91
Jackson Slough Woods	184
Lively Branch Woods	70
Lost Creek Marsh	714
New Athens Woods	198
Sipple Slough Woods	196
West End Sportsman's Club Woods	58
Wirth Island	92

BIOLOGICALLY SIGNIFICANT STREAMS

Kaskaskia River, Rte 50 to Shoal Creek	<u>Miles</u>
	31.1

NATURAL HERITAGE CATEGORIES

Communities	<u>Occurrences</u>	<u>Types/Species</u>
Floodplain Forest	7	2
Wetland	1	1
Forest	10	4
Threatened and Endangered Animals		
Bird	1	1
Mammal	1	1
Reptile	2	2
Mollusk	1	1
Threatened and Endangered Plants		
Plant-Dicot	2	1
Geological Feature		
Other		
Forest Block >500 Acres	3	1

STATE AND FEDERAL LAND

State Parks	<u>Acres</u>
South Shore	5
State Conservation Areas	0
State Forests	0
State Fish and Wildlife Areas	
Kaskaskia	6,911
Federal Land	
Carlyle Lake	489
South Shore State Park - Carlyle Lake	5

ILLINOIS NATURE PRESERVES

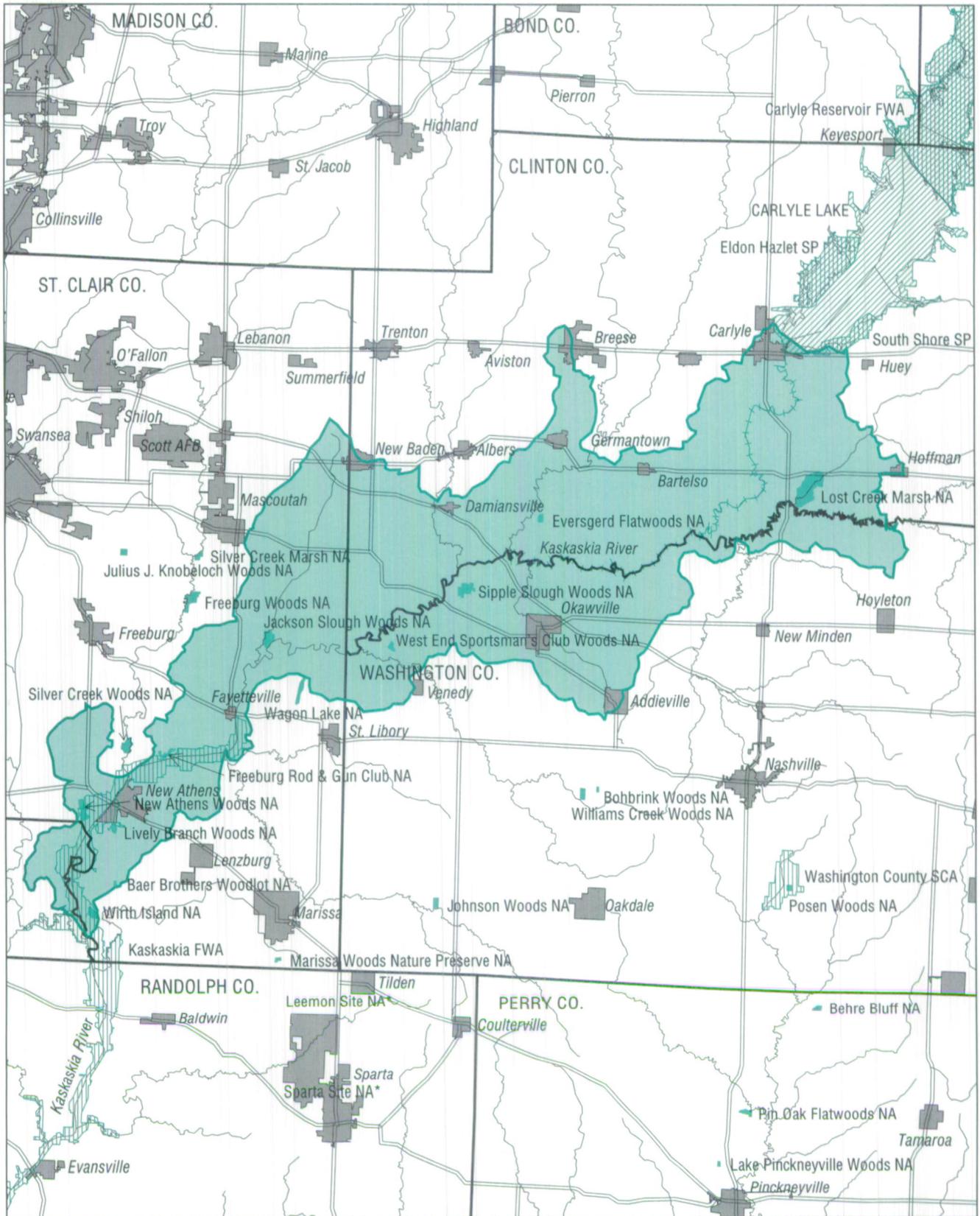
None

NATURAL DIVISIONS

	<u>Acres</u>	<u>% of</u>	<u>% of</u>
	<u>in RRA</u>	<u>RRA</u>	<u>Division</u>
Southern Till Plain	197,654	100.0	2.8

A complex of interconnected floodplain forests, wetlands, and flatwoods characterize the Kaskaskia bottomlands. Large, contiguous forest stands are rare in Illinois, and the largest tract in the state is located in this area. Large, unbroken forest is critical for the successful reproduction of many woodland bird species. Declines in population of some neotropical migratory songbirds have been attributed in part to forest fragmentation, which is widespread in the Midwest.



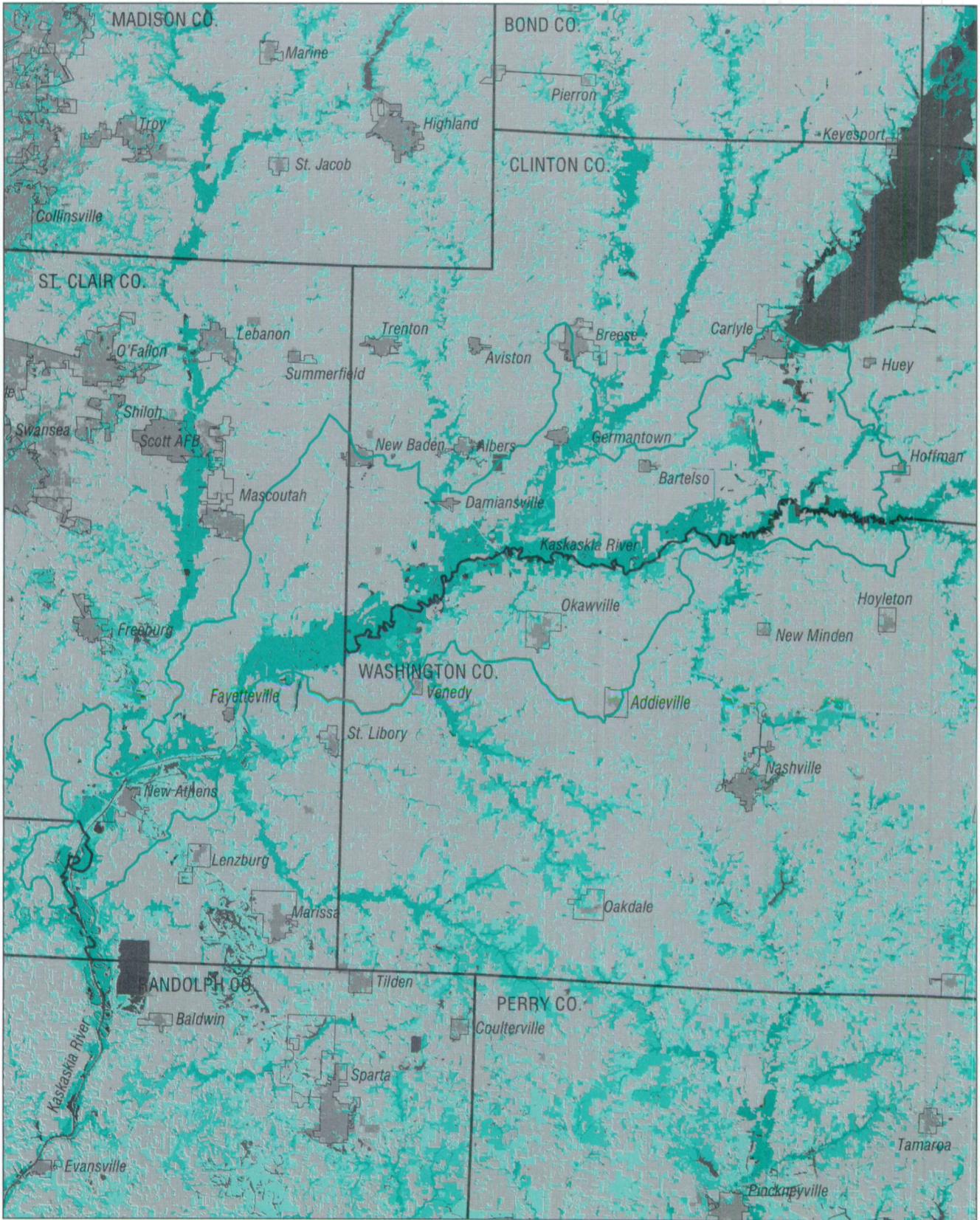


Kaskaskia Bottoms

- | | | | |
|---|--------------|---|--------------------|
|  | Natural Area |  | Stream |
|  | Town |  | Significant Stream |
|  | State Land |  | Highway |
|  | Federal Land |  | County |

7 Miles





Kaskaskia Bottoms

- | | | | |
|---|-------------------------|---|----------------|
|  | Upland Forest |  | Cropland |
|  | Bottomland Forest/Swamp |  | Water |
|  | Nonforested Wetland |  | Urban/Built-up |
|  | Grassland | | |

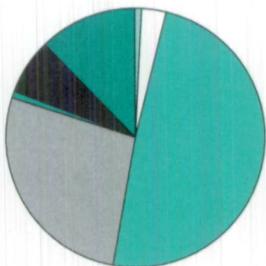
7 Miles



Size:
 114,908 acres
 180 square miles

Location:
 Southern Illinois;
 Franklin, Hamilton,
 and Jefferson
 counties.

Landcover at a Glance



- upland forest 12%
- bottomland forest 7%
- wetland <1%
- grassland 27%
- cropland 49%
- urban built-up 3%
- water <1%

MIDDLE FORK OF THE BIG MUDDY

The Middle Fork of the Big Muddy River RRA is a small, single watershed site. The significant natural features are the large tracts of forest located along the river.



LANDCOVER ♦ Approximately half the landcover in this RRA is cropland. It ranks fifth in percentage of grassland, which accounts for 27% of the land area. Nineteen percent of the area is wooded. This RRA ranks eighth for percentage of bottomland woods and 15th for percentage of nonforested wetlands.

NATURAL AREAS ♦ The Freeman Coal Company Forest is the only Natural Area.

BIOLOGICALLY SIGNIFICANT STREAMS ♦ There are no BSS streams.

HERITAGE SITES ♦ Two Heritage sites, a floodplain forest and one animal species, are located in the RRA.

STATE AND FEDERAL LAND ♦ A 22-acre site, Ten Mile Creek Fish and Wildlife Area, is the only state or federal land.

NATURE PRESERVES ♦ No Nature Preserves are located in the site.

NATURAL DIVISIONS ♦ The Middle Fork of the Big Muddy River RRA is entirely within the Southern Till Plain Division.

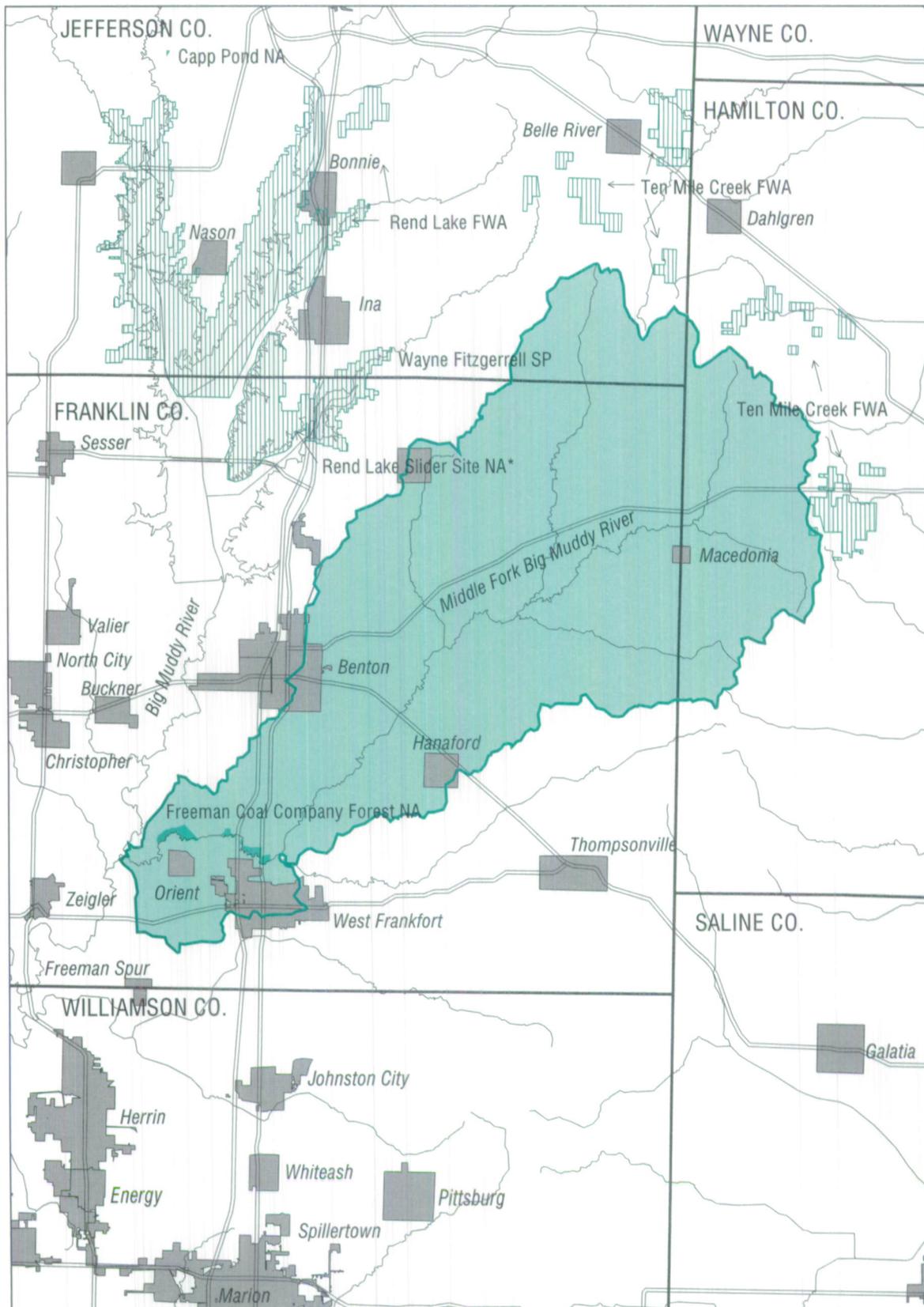
SUMMARY OF SITE CHARACTERISTICS: SIZE, BIOLOGIC RESOURCES, AND PUBLIC LANDS

Total Acreage	114,908	
Natural Areas		
Acreage	388	
Number	1	
Biologically Significant Stream Mileage	0	
Natural Heritage Sites	2	
State Land		
State Parks	0	
State Conservation Areas	0	
State Forests	0	
State Fish & Wildlife Areas	1	
Acreage	22	
Percentage of RRA	0.0	
Federal Land		
Acreage	0	
Percentage of RRA	0.0	
LANDCOVER	<u>Acres</u>	<u>% of RRA</u>
Upland forest	13,903.45	12.10
Bottomland forest	8,404.05	7.31
Wetland- nonforested	832.34	0.72
Grassland	31,218.95	27.17
Cropland	56,449.57	49.13
Urban/Built-up	3,164.97	2.75

Water	<u>934.30</u>		<u>0.81</u>
TOTAL	114,907.63		99.99
ILLINOIS NATURAL AREAS INVENTORY SITES			<u>Acres</u>
Freeman Coal Company Forest			388
BIOLOGICALLY SIGNIFICANT STREAMS			
None			
NATURAL HERITAGE CATEGORIES			
Communities	<u>Occurrences</u>		<u>Types/Species</u>
Floodplain Forest	1		1
Threatened and Endangered Animals			
Mammal	1		1
Threatened and Endangered Plants			
Geological Feature			
Other			
STATE AND FEDERAL LAND			<u>Acres</u>
State Parks			0
State Conservation Areas			0
State Forests			0
State Fish and Wildlife Areas			
Ten Mile Creek (Tva)			22
Federal Land			0
ILLINOIS NATURE PRESERVES			
None			
NATURAL DIVISIONS	Acres	% of	% of
	<u>in RRA</u>	<u>RRA</u>	<u>Division</u>
Southern Till Plain	114,908	100.0	1.6



The marsh rice rat is semiaquatic, inhabiting marshes, swamps, and shores of lakes and ponds. Because of the loss of many natural wetlands, rice rats make use of available areas of standing water with emergent, herbaceous vegetation found in areas such as roadside ditches, farm ponds, and railroad rights-of-way in Illinois. Despite its extensive range in the U.S., the rice rat is uncommon in Illinois (it is a state-threatened species) and limited to the southern part of the state.

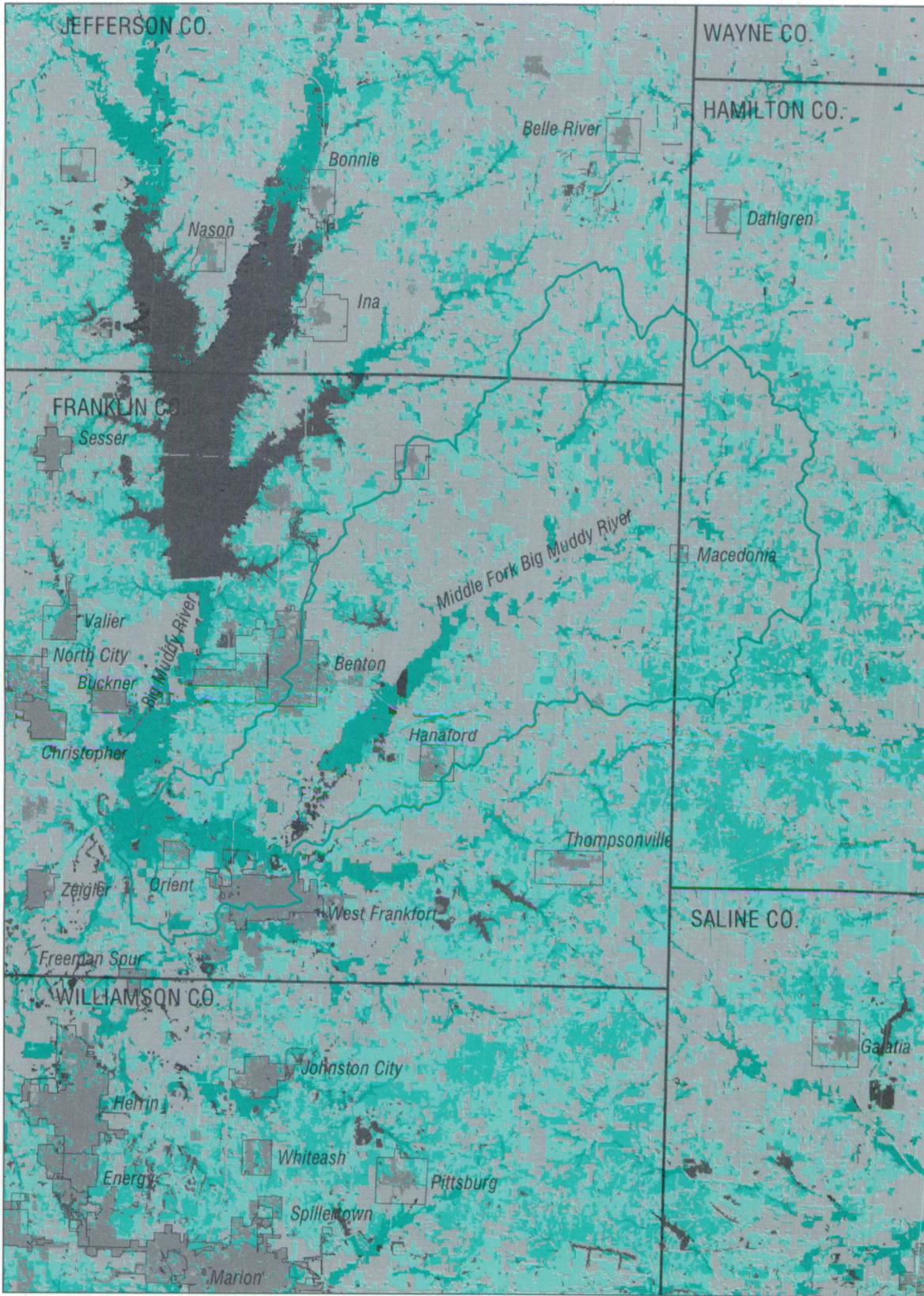


Middle Fork Big Muddy

- | | | | |
|---|--------------|---|--------------------|
|  | Natural Area |  | Stream |
|  | Town |  | Significant Stream |
|  | State Land |  | Highway |
|  | Federal Land |  | County |

4 Miles





Middle Fork Big Muddy



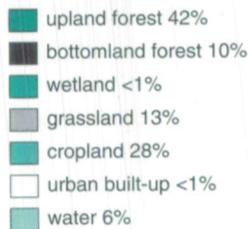
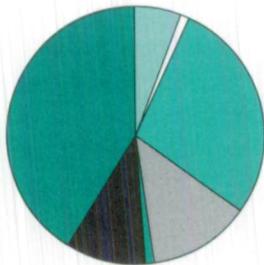
4 Miles



Size:
466,755 acres
729 square miles

Location:
Southwestern
Illinois; Alexander,
Jackson, Johnson,
Randolph, Union,
and Williamson
counties.

Landcover at a Glance



ILLINOIS OZARKS

The Illinois Ozarks RRA is one of the richest, most biologically diverse areas of the state. Many species found here are rare and limited in distribution to this area of the state. This RRA encompasses Mississippi River bottomlands, Ozark plateau, and unglaciated hill country. Originally much of the land was forested and considerable forest remains. The Illinois Ozarks RRA shares a common boundary with Cache River RRA; the large, contiguous forests along the boundary are split into the two RRAs.



LANDCOVER ♦ The predominant landcover in this RRA is woods (42% upland and 10% bottomland woods). Twenty-eight percent of the site is cropland. The Illinois Ozarks is one of the few nonurban sites where cropland is not the predominant landcover. The second highest percentage of upland woods and the fourth highest percentage of bottomland woods occurs in this RRA. It has the fifth highest acreage of nonforested wetlands.

NATURAL AREAS ♦ There are 59 Natural Areas covering a total of 17,010 acres, the fifth highest acreage among the RRAs. These sites include caves, geological features, aquatic systems, wetlands, woods, and prairies. La Rue-Pine Hills is the largest Natural Area (4,179 acres).

BIOLOGICALLY SIGNIFICANT STREAMS ♦ Six BSS designations occur in this RRA for a total of 33 miles. These include four streams and two stretches of the Mississippi River. The streams are clear with sand, gravel, and rock substrates.

HERITAGE SITES ♦ A large number of Heritage points (227) occur here. Thirteen community types, 38 plant species, and 30 animal species are located in this RRA. All eight community categories are represented. There are 17 occurrences of large forest tracts and three rookeries.

STATE AND FEDERAL LANDS ♦ Twenty-one percent (99,934 acres) of the RRA is in public ownership. State land consists of one state park, one conservation area, one state forest, and one fish and wildlife area. Most of the acreage in public ownership is in Shawnee National Forest.

NATURE PRESERVES ♦ Seven Nature Preserves are located in the RRA. Significant features are mature forests, cliffs, bedrock outcrops, swamps, and barrens.

NATURAL DIVISIONS ♦ This RRA includes six natural divisions. The Lower Mississippi River Bottomlands, Shawnee Hills, and Ozark Natural Divisions each comprise about one-third of the RRA.

SUMMARY OF SITE CHARACTERISTICS: SIZE, BIOLOGIC RESOURCES, AND PUBLIC LANDS

Total Acreage	466,755
Natural Areas	
Acreage	17,010
Number	59
Biologically Significant Stream Mileage	33.1

Natural Heritage Sites		227
State Land		
State Parks		1
State Conservation Areas		1
State Forests		1
State Fish & Wildlife Areas		1
Acreage		18,668
Percentage of RRA		4.0
Federal Land		
Acreage		81,266
Percentage of RRA		17.4
LANDCOVER	<u>Acres</u>	<u>% of RRA</u>
Upland forest	195,997.50	41.99
Bottomland Forest	44,813.91	9.60
Wetland- nonforested	4,284.72	0.92
Grassland	60,963.49	13.06
Cropland	128,720.40	27.58
Urban-Built Up	3,885.91	0.83
Water	<u>28,076.46</u>	<u>6.02</u>
TOTAL	466,742.39	100.00
ILLINOIS NATURAL AREAS INVENTORY SITES	<u>Acres</u>	
Atwood Ridge	1,000	
Backbone South Geological Area	5	
Bake Oven—Backbone North Geological Area	7	
Bald Knob Geological Area	31	
Bald Knob Sedge Site	*	
Berryville Shale Glade	11	
Black Cave	13	
Black Powder Hollow Geological Area	4	
Brown Barrens	11	
Brown's Bar	687	
Bumgard Island	1,894	
Burnham Island	1,157	
Castle Rock	2	
Cave Spring Cave	243	
Chester South Geological Area	5	
Clear Creek	124	
Clear Creek Swamp	102	
Clear Springs Geological Area	13	
Coles Mill Geological Area	2	
Crab Orchard Bead Grass Site	*	
Crab Orchard Eagle Sites	*	
Crab Orchard Sedge Site	*	
Crain Geological Area	39	
Devil's Den	90	
Devil's Island	*	
Devil's Kitchen Dam Research Natural Area	195	
Dongola Hollow Geological Area	5	
Dutch Creek Chert Woodlands	*	
Fern Rocks	179	
Fountain Bluff Geological Area	2	
Fountain Bluff North	15	
Fountain Bluff Site	*	

La Rue-Pine Hills is one of the richest and most biologically diverse areas in Illinois. The biological richness of this 2x5-mile strip of land has much to do with its unique topography of limestone bluffs that tower above a springfed swamp. Swamp, spring, cliff, forest, glade, cave, and hill prairie communities provide diverse habitat for a correspondingly diverse flora and fauna. Eastern, western, northern, and southern species are present in this area. Several rare species are found at La Rue-Pine Hills, including the golden mouse, eastern woodrat, Indiana bat, green water snake, blue-head shiner, banded pygmy sunfish, spotted sunfish, and bantam sunfish.

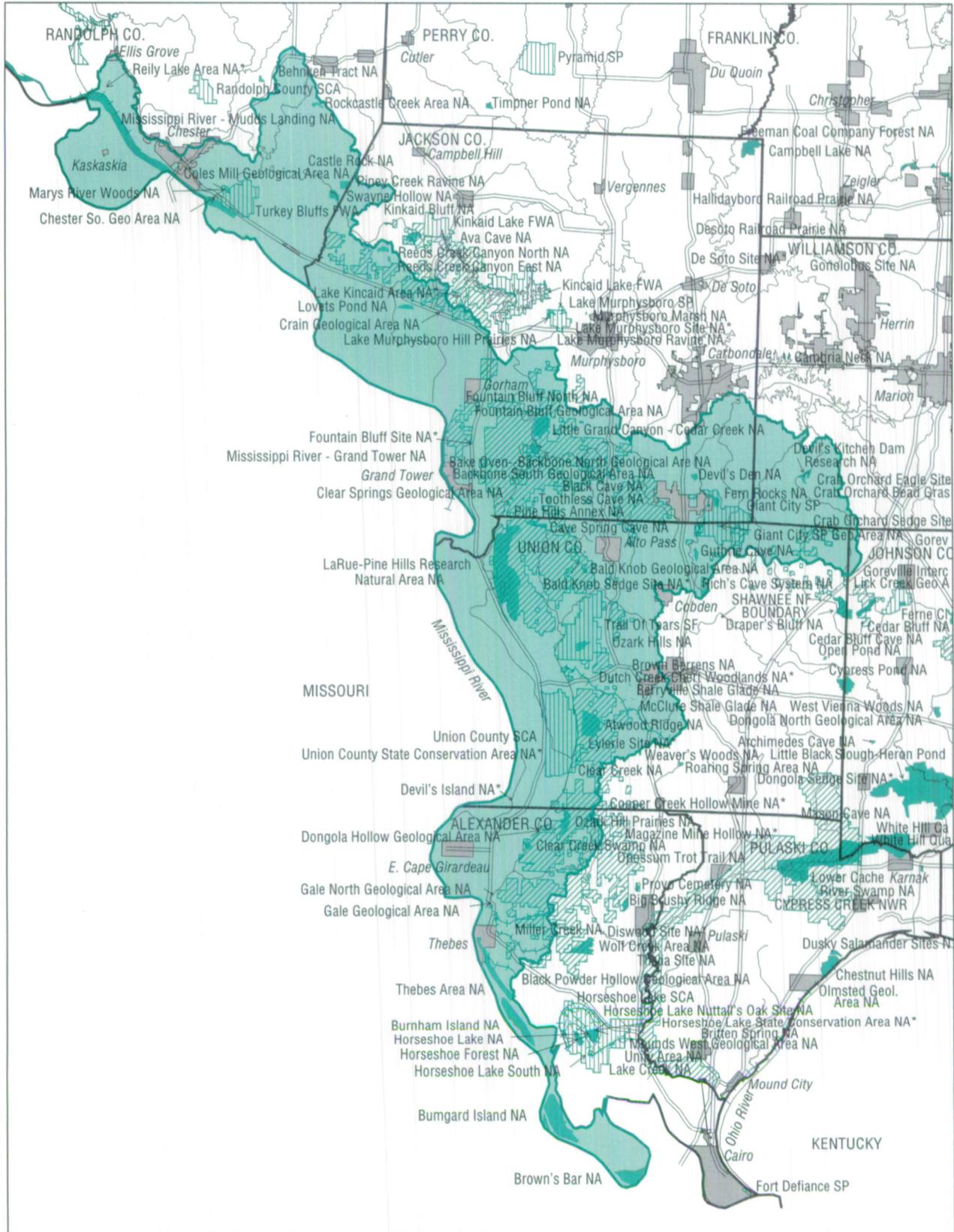
Approximately 20 species of snakes are known from La Rue-Pine Hills. In the spring and fall, snakes migrate from their winter hibernation sites in the rocky bluffs. Many cross the road which separates the bluffs from the swamp, prompting closure of the road twice a year. Venomous copperheads, timber rattlesnakes, and cottonmouths, as well as several non-poisonous snakes, such as king and rat snakes, live in La Rue-Pine Hills.

ILLINOIS NATURAL AREAS INVENTORY SITES (continued)		<u>Acres</u>
Gale Geological Area		1
Gale North Geological Area		1
Giant City State Park Geological Area		15
Guthrie Cave		109
La Rue-Pine Hills Research Natural Area		4,179
Little Grand Canyon -Cedar Creek		988
Lovets Pond		156
Lyerle Site		*
Marys River Woods		52
McClure Shale Glade		10
Miller Creek		44
Mississippi River -Grand Tower		366
Mississippi River -Mudds Landing		2,925
Ozark Hill Prairies		464
Ozark Hills		215
Pine Hills Annex		6
Piney Creek Ravine		200
Reeds Creek Canyon East		39
Reeds Creek Canyon North		131
Reily Lake Area		*
Rich's Cave System		89
Rockcastle Creek Area		76
Swayne Hollow		206
Thebes Area		886
Toothless Cave		13
Union County State Conservation Area		*
Weaver's Woods		1
* = point location, map not available		
BIOLOGICALLY SIGNIFICANT STREAMS		<u>Miles</u>
Dutch Creek		10.6
Miller Creek		5.8
Mississippi River, rm 114-119, Randolph Co.		3.7
Mississippi River, rm 78-83, Jackson Co.		4.1
Orchard Creek		3.1
Sammons Creek		5.8
NATURAL HERITAGE CATEGORIES		
Communities	<u>Occurrences</u>	<u>Types/Species</u>
Floodplain Forest	1	1
Lake	2	1
Wetland	2	2
Cave	11	2
Forest	1	1
Savanna	2	2
Prairie	2	1
Primary	5	3
Threatened and Endangered Animals		
Bird	37	12
Fish	14	7
Mammal	33	7
Reptile	14	3
Crustacean	5	1

Threatened and Endangered Plants			
Plant-Dicot	27		17
Plant-Gymnosperm	2		1
Plant-Monocot	26		17
Plant-Fern/Fern Ally	7		3
Geological Feature			
Geological Feature	16		1
Other			
Forest Block >500 Acres	17		1
Rookery	3		1
STATE AND FEDERAL LAND			
State Parks			<u>Acres</u>
Giant City			4,580
State Conservation Areas			
Union County			6,504
State Forests			
Trail of Tears			5,232
State Fish and Wildlife Areas			
Turkey Bluffs			2,352
Federal Land			
Shawnee National Forest Proclamation Boundary			204,416
Shawnee National Forest Ownership			81,266
ILLINOIS NATURE PRESERVES			
			<u>Acres</u>
Berryville Shale Glade			34
Brown Barrens			34
Fern Rocks			179
La Rue Swamp			136
Mcclure Shale Glade			53
Ozark Hills			215
Piney Creek Ravine			140
NATURAL DIVISIONS			
	<u>Acres</u>	<u>% of</u>	<u>% of</u>
	<u>in RRA</u>	<u>RRA</u>	<u>Division</u>
Lower Mississippi R Bottomlands	147,141	31.8	40.9
Shawnee Hills	144,501	31.2	15.9
Ozarks	141,298	30.5	34.8
Major Water Bodies	15,588	3.4	1.3
Coastal Plain	11,911	2.6	2.6
Southern Till Plain	2,193	0.5	0.0



One of the few remaining strongholds of the eastern woodrat in Illinois is La Rue-Pine Hills. This animal was at one time distributed across southern Illinois from the Ohio River to the Mississippi. The eastern woodrat is a true pack rat, collecting and storing nuts, acorns, pods, twigs, leaves, and other small items in their nests. The nests are added to by each successive owner.



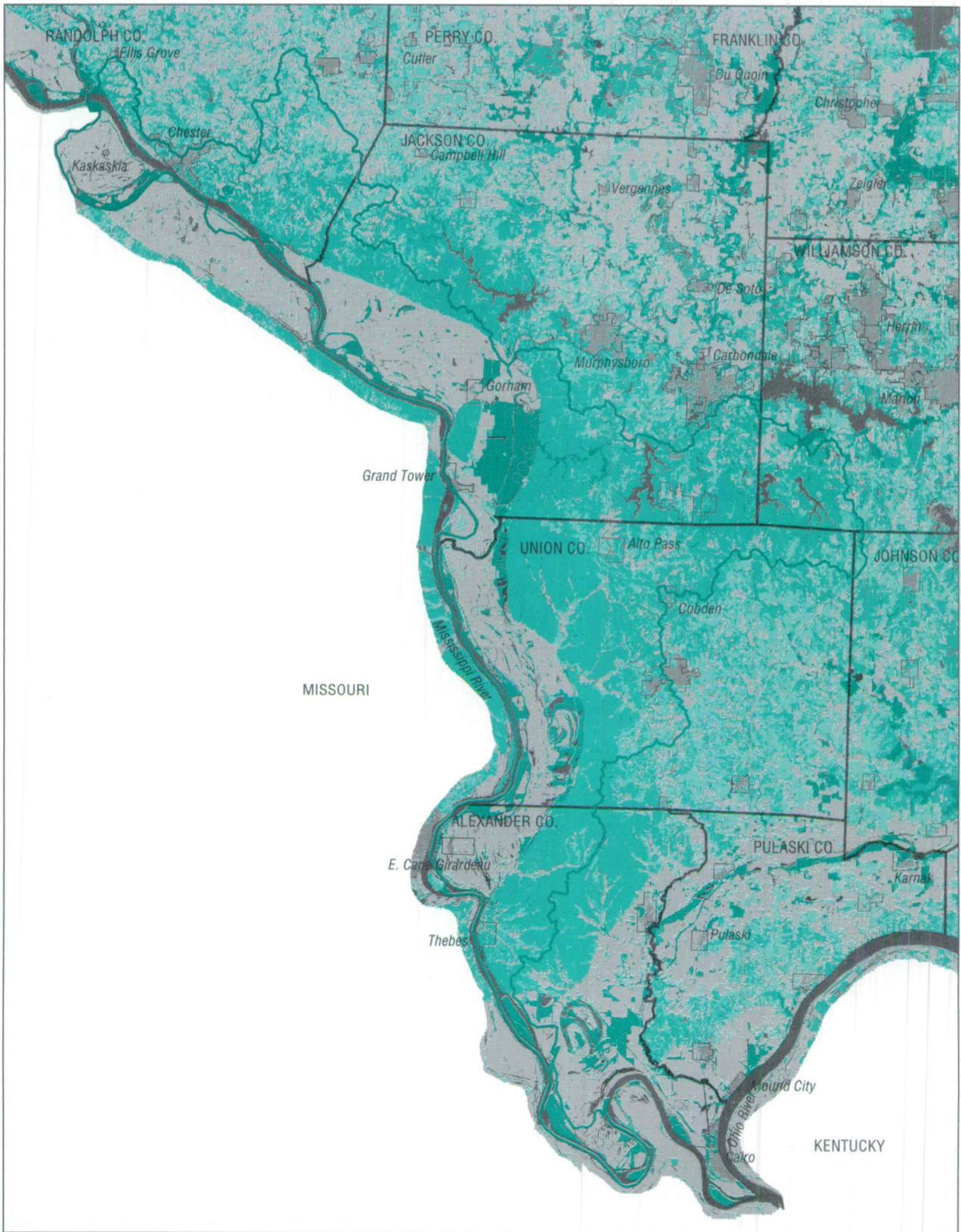
Illinois Ozarks

-  Natural Area
-  Town
-  State Land
-  Federal Land

-  Stream
-  Significant Stream
-  Highway
-  County

8 Miles





Illinois Ozarks



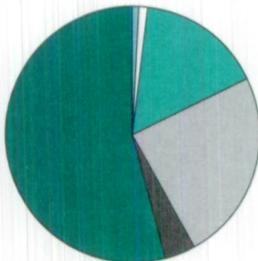
8 Miles



Size:
477,112 acres
745 square miles

Location:
Southeastern
Illinois; Gallatin,
Massac, Hardin,
Johnson, Pope,
Saline, and
Williamson counties.

Landcover at a Glance



- upland forest 54%
- bottomland forest 4%
- wetland <1%
- grassland 24%
- cropland 16%
- urban built-up <1%
- water 1%

SHAWNEE HILLS

The Shawnee Hills RRA is a scenic wooded area in an unglaciated part of the state. An escarpment of sandstone runs east to west in this area. Bluffs, rugged hills, deep ravines, and clear streams support distinctive flora and fauna. This area was originally forested, and considerable amounts of forested land remain.



LANDCOVER ♦ Woodlands cover 58% of this RRA (54% upland woods and 4% bottomland woods). It ranks first in total acreage and percentage of upland woods. Grassland and cropland account for 24% and 16% of the area, respectively. This is one of the few nonurban RRAs where cropland is not the predominant landcover. Moderate amounts of bottomland woods and low amounts of nonforested wetlands are found at this site.

NATURAL AREAS ♦ The Shawnee Hills RRA has the greatest number of Natural Areas (83) among the RRAs. Principal natural features include bluffs, springs, caves, aquatic systems, barrens, hill prairies, woods, hollows, and geological features.

BIOLOGICALLY SIGNIFICANT STREAMS ♦ The highest total BSS mileage occurs in this RRA. Seventeen streams have been given BSS designation. Most are small, clear streams which run over sand, gravel, and rock substrates.

HERITAGE SITES ♦ The Shawnee Hills RRA ranks third in number of Heritage occurrences with 255 sites. Ten community types, 49 plants species, and 25 animal species are located in the RRA. There are four large forest tracts and two rookeries.

STATE AND FEDERAL LAND ♦ The Shawnee Hills RRA has the highest percentage of state and federal ownership of the RRAs. The total acreage of state and federal land is 138,877 acres, or 29% of the RRA, most of which is in the Shawnee National Forest. State land consists of two state parks and one conservation area.

NATURE PRESERVES ♦ Lusk Creek Canyon, the only Nature Preserve in this site, is a large canyon with high sandstone cliffs and a high quality stream.

NATURAL DIVISIONS ♦ The Shawnee Hills Natural Division is the predominant division in this RRA (82% of the RRA).

SUMMARY OF SITE CHARACTERISTICS: SIZE, BIOLOGIC RESOURCES, AND PUBLIC LANDS

Total Acreage	477,112
Natural Areas	
Acreage	8,638
Number	83
Biologically Significant Stream Mileage	125.9
Natural Heritage Sites	255
State Land	
State Parks	2
State Conservation Areas	1
State Forests	0
State Fish & Wildlife Areas	0
Acreage	2,060

Percentage of RRA	0.4
Federal Land	
Acreage	136,817
Percentage of RRA	28.7

LANDCOVER	Acres	% of RRA
Upland forest	256,155.00	53.69
Bottomland forest	18,882.62	3.96
Wetland- nonforested	1,833.27	0.38
Grassland	114,612.20	24.02
Cropland	76,954.51	16.13
Urban/Built-up	2,415.12	0.51
Water	6,261.69	1.31
TOTAL	477,114.41	100.00

ILLINOIS NATURAL AREAS INVENTORY SITES	Acres
Abbot Geological Area	9
Barker Bluff	125
Battery Rock	*
Bell Smith Springs	546
Big Creek	395
Big Grand Pierre Creek Site	*
Big Sink Limestone Glade	27
Brown's Hole Cave	7
Brownfield Bluff	4
Camp Ondessonk	459
Cane Creek Area	4
Caney Branch Glade	47
Cave Hill	305
Cave Spring Cave System	1,161
Chimaphila Site	1
Collier Limestone Glade	12
Copperous Branch Hill Prairie	23
Crow Knob Sandstone Barrens	*
Double Branch Hole	5
Eagle Creek-robinette Creek	50
East Fork Oxalis Site	1
Flick Hill	17
Frailey's Landing Geological Area	7
Frieze Cave	26
Garden of the Gods	113
Gibbons Creek Barrens	21
Grantsburg Swamp	161
Griffith Cave	1
Gyp Williams Hollow	327
Haney Creek	134
Hayes Creek Sites	6
Herman Hill Site	303
Hicks Dome Plug Geological Area	11
Hicks Geological Area	10
Homberg Spring	1
Horseshoe Geological Area	3
Hosick Creek	42
Jackson Hole Barrens	*
Jackson Hollow	268

Sandstone canyons are one of the outstanding features of the Shawnee Hills. Luxuriant vegetation grows in the cool, humid ravines, which are shaded by dense forest canopy and high canyon walls. Sphagnum moss, ferns, and club mosses grow on the moist, sandstone cliff faces. Lusk Creek Canyon is a large gorge where a high-quality stream flows between vertical, sandstone cliffs that are 100 feet high in places. Several rare and unusual plants are found here, including 13 species of wild orchids.

French's shooting star is a wild-flower restricted to a 10-mile band across southern Illinois called the Shawneetown Ridge. The plant grows under the dripline of sandstone ledges, where the sandy soil stays moist during the growing season.

Kaskaskia Woods	24
Keeling Hill	60
Lamb Site	*
Layoff Cave	260
Leisure City Glade	9
Little Grand Pierre South Glade	4
Little Saline River	65
Lusk Creek	446
Lusk Creek Canyon	346
Lusk Creek North	1
Manson Ford	*
Martha's Woods Site	6
Melcher Hill Limestone Glade	8
Millstone Bluff	138
Old Stone Face -Dennison Hollow	411
Old Zion Cemetery Geological Area	6
Orr's Landing Geological Area	2
Panther Hollow	253
Peters Creek	61
Pine Hollow	417
Pleasant Valley Hill Prairie	7
Pounds Hollow	273
Quarrel Creek Area	*
Reddick Hollow	5
Reddick Hollow Amphipod Site	*
Reid's Chapel Sandstone Glades	*
Robnett Creek Barrens	*
Rock Creek	123
Rocky Branch Battle Ford Creek	*
Russell Cemetery Glade	17
Saline Landing	5
Saline River Geological Area	1
Sand Cave	39
Simmons Creek -Hurricane Hollow Area	142
Simpson Township Prairie	72
Soward Limestone Glade	6
Split Rock Hollow	3
Sulphur Springs Area	<1
Teal Pond	<1
Trig Tower Sandstone Glades	206
Wamble Mountain	23
Werner Tract	66
Whoopie Cat Mountain	272
Wise Ridge	229
* = point location, map not available	
BIOLOGICALLY SIGNIFICANT STREAMS	<u>Miles</u>
Big Creek drainage	31.6
Big Grand Pierre Creek, Rte 146 to Pinhook Cr.	8.0
Burden Creek	2.1
Clifty Creek	3.7
Copperous Branch	2.0
Eagle Creek	10.7
Honey Creek	10.0

Hosick Creek	3.5
Little Saline River, Allen Branch to South Fork	8.0
Lusk Creek, Flick Branch to Little Lusk Creek	13.3
Ohio River, Elizabethtown to Cave-in-Rock	7.5
Peters Creek	8.3
Robinette Creek, Pounds Lake to Eagle Creek	3.7
Rock Creek	10.2
Three Springs Hollow	0.8
unnamed trib, Cedar Creek	1.5
unnamed trib, Wallace Branch, Cave Spring Cave	1.0

NATURAL HERITAGE CATEGORIES

	<u>Occurrences</u>	<u>Types/Species</u>
Communities		
Cave	8	2
Forest	9	3
Savanna	4	2
Primary	25	3
Threatened and Endangered Animals		
Bird	16	9
Fish	2	1
Mammal	24	7
Reptile	9	1
Crustacean	23	6
Insect	2	1
Threatened and Endangered Plants		
Lichen	4	1
Plant-Dicot	71	28
Plant-Monocot	33	17
Plant-Fern/Fern Ally	9	3
Geological Feature		
Geological Feature	10	1
Other		
Forest Block >500 Acres	4	1
Rookery	2	1

STATE AND FEDERAL LAND

	<u>Acres</u>
State Parks	
Cave-In-Rock	204
Dixon Springs	799
State Conservation Areas	
Saline County	1,057
State Forests	
State Forests	0
State Fish and Wildlife Areas	
State Fish and Wildlife Areas	0
Federal Land	
Shawnee National Forest Proclamation Boundary	418,276
Shawnee National Forest Ownership	136,817

ILLINOIS NATURE PRESERVES

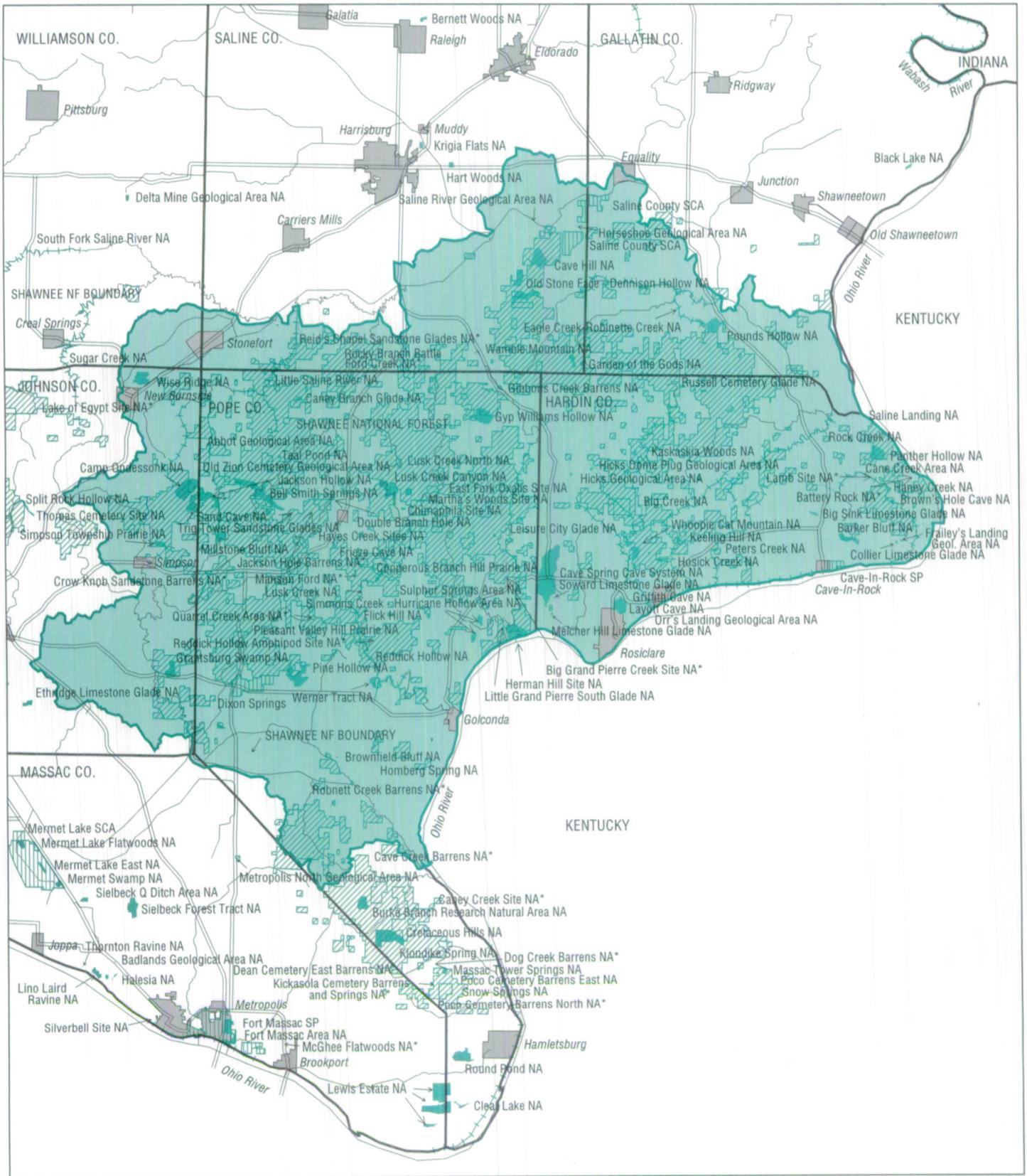
	<u>Acres</u>
Lusk Creek Canyon	129

NATURAL DIVISIONS

	<u>Acres</u> <u>in RRA</u>	<u>% of</u> <u>RRA</u>	<u>% of</u> <u>Division</u>
Shawnee Hills	390,000	82.0	43.1
Wabash Border	45,371	9.5	2.5
Coastal Plain	39,415	8.3	8.5
Major Water Bodies	862	0.2	0.0
Southern Till Plain	76	0.0	0.0



With more than one-quarter million acres, the Shawnee National Forest is the largest public land holding in Illinois. Located in the southern part of the state, it is bordered on the east and south by the Ohio River and on the west by the Mississippi River. The Forest Service of the U.S. Department of Agriculture manages Shawnee for multiple uses, including camping, hiking, fishing, hunting, timber harvest, mining, and grazing. Within the boundaries of the Shawnee are many high-quality natural areas and rich assemblages of species unique to Illinois.

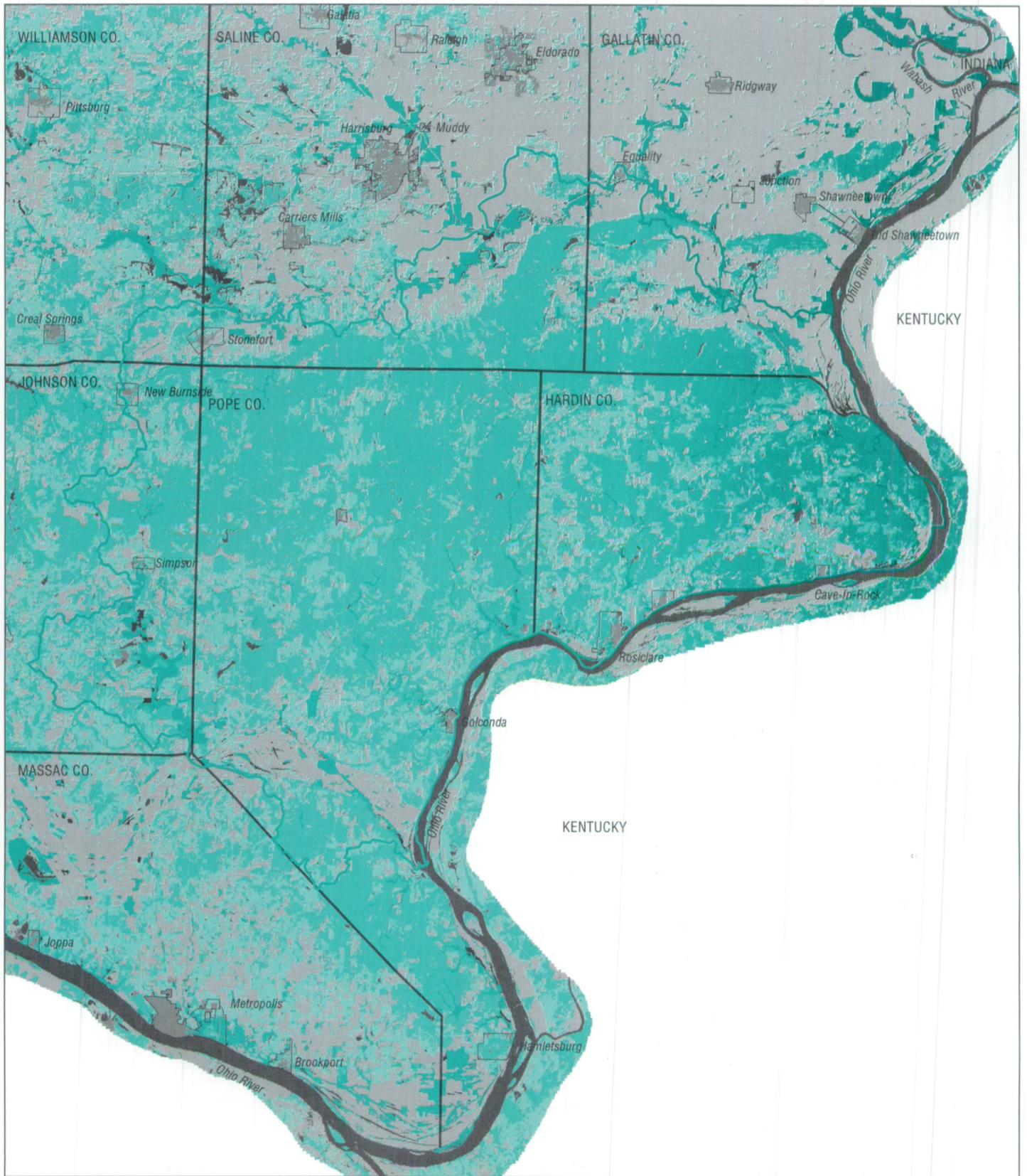


Shawnee Hills

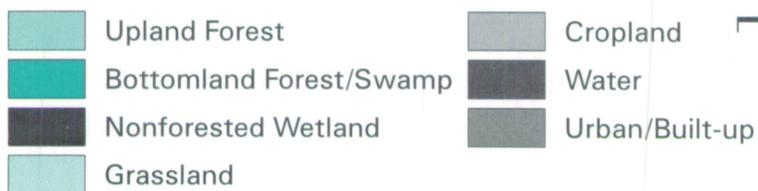
- | | | | |
|---|--------------|---|--------------------|
|  | Natural Area |  | Stream |
|  | Town |  | Significant Stream |
|  | State Land |  | Highway |
|  | Federal Land |  | County |

7 Miles



Shawnee Hills



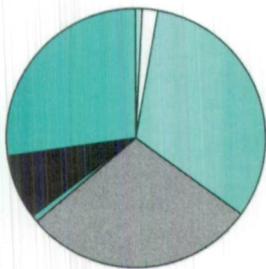
7 Miles



Size:
443,616 acres
693 square miles

Location:
Southern Illinois along the Cache River; Alexander, Johnson, Massac, Pulaski, and Union counties.

Landcover at a Glance



- upland forest 27%
- bottomland forest 8%
- wetland <1%
- grassland 29%
- cropland 32%
- urban built-up 2%
- water 1%

CACHE RIVER

The Cache River RRA is located at the southern tip of Illinois. The upper reach flows through the hills of the Ozark plateau; the lower Cache flows through flatter coastal plain where drainage is slow and wetlands become more abundant. Unique features include bald cypress-tupelo gum swamps and several species associated with the southern U.S. The Cache River RRA shares a common border with the Illinois Ozarks RRA; the large, contiguous forests that occur along the boundary are split into the two RRAs.



LANDCOVER ♦ The landcover is fairly evenly divided among three categories—cropland (32%), grassland (29%), and upland woods (27%). In terms of percentage of the site, the Cache River RRA ranks fourth for grassland, fifth for upland woods, and sixth for bottomland woods. This site has the eighth highest acreage of nonforested wetlands.

NATURAL AREAS ♦ Sixty-three Natural Areas totalling 18,444 acres are located in this RRA. This RRA ranks third in number of Natural Areas and fourth in acreage of Natural Areas. Significant features include caves, springs, barrens, ponds, lakes, swamps, woods, and geological features. The largest Natural Areas are Heron Pond-Little Black Slough (6,613 acres) and the Lower Cache River Swamp (6,561 acres).

BIOLOGICALLY SIGNIFICANT STREAMS ♦ Six stream segments totalling 53 miles have been designated as BSS. Horseshoe Lake and Lake Creek support a number of species that are extremely rare in Illinois.

HERITAGE SITES ♦ There are 298 Heritage occurrences, the second highest number among the RRAs. There are 17 community types, 41 plant species, and 43 animal species represented. Seven large forest tracts and two rookeries are located here.

STATE AND FEDERAL LAND ♦ The total acreage of public land in this RRA is 65,665 acres, or 15% of the land area. There are three state parks and two state conservation areas. The majority of public land is federally owned and consists of Cypress Creek National Wildlife Refuge and Shawnee National Forest.

NATURE PRESERVES ♦ Eight Nature Preserves are located in the Cache River RRA. Principal natural features include glades, upland forests, floodplain forests, bluffs, ravines, ponds, and cypress-tupelo swamps.

NATURAL DIVISIONS ♦ The Natural Divisions of the Cache River RRA are the Coastal Plain (58%), Shawnee Hills (35%), and Ozarks (7%).

SUMMARY OF SITE CHARACTERISTICS: SIZE, BIOLOGIC RESOURCES, AND PUBLIC LANDS

Total Acreage	443,616
Natural Areas	
Acreage	18,444
Number	63
Biologically Significant Stream Mileage	52.8
Natural Heritage Sites	298

State Land	
State Parks	3
State Conservation Areas	2
State Forests	0
State Fish & Wildlife Areas	0
Acreage	11,924
Percentage of RRA	2.7
Federal Land	
Acreage	53,741
Percentage of RRA	12.1

LANDCOVER	<u>Acres</u>	<u>% of RRA</u>
Upland forest	117,758.90	26.55
Bottomland forest	35,327.44	7.96
Wetland-nonforested	2,508.85	0.57
Grassland	130,500.20	29.42
Cropland	143,676.50	32.39
Urban/Built-up	7,187.96	1.62
Water	<u>6,646.45</u>	<u>1.50</u>
TOTAL	443,606.30	100.01

ILLINOIS NATURAL AREAS INVENTORY SITES	<u>Acres</u>
Archimedes Cave	28
Badlands Geological Area	4
Big Brushy Ridge	145
Black Powder Hollow Geological Area	<1
Britten Spring	5
Cache Valley Geological Area	5
Cave Creek Barrens	8
Cedar Bluff	330
Cedar Bluff Cave	5
Chestnut Hills	674
Cooper Creek Hollow Mine	*
Cypress Pond	499
Deer Pond	154
Diswood Site	*
Draper's Bluff	587
Dusky Salamander Sites	*
Ethridge Limestone Glade	56
Firestone Creek Cave	29
Fort Massac Area	21
Goreville Interchange Geological Area	13
Halesia	36
Horseshoe Forest	231
Horseshoe Lake	351
Horseshoe Lake Nuttall's Oak Site	<1
Horseshoe Lake South	3
Horseshoe Lake State Conservation Area	*
Indian Point	108
Jug Spring	*
Lake Creek	59
Lick Creek Geological Area	14
Lino Laird Ravine	72
Little Black Slough--Heron Pond Area	6,613

At the extreme southern tip of Illinois, the land flattens and is poorly drained. Southern flora is present in this area, the northernmost extent of the coastal plain that stretches to the Gulf of Mexico. Swamps, dominated by bald cypress (some of the largest and oldest trees in Illinois) and tupelo, are reminiscent of Louisiana bayous. The Heron Pond-Little Black Slough Nature Preserve is a significant natural area with high-quality swamp and flood-plain forest as well as upland forest and glade communities.

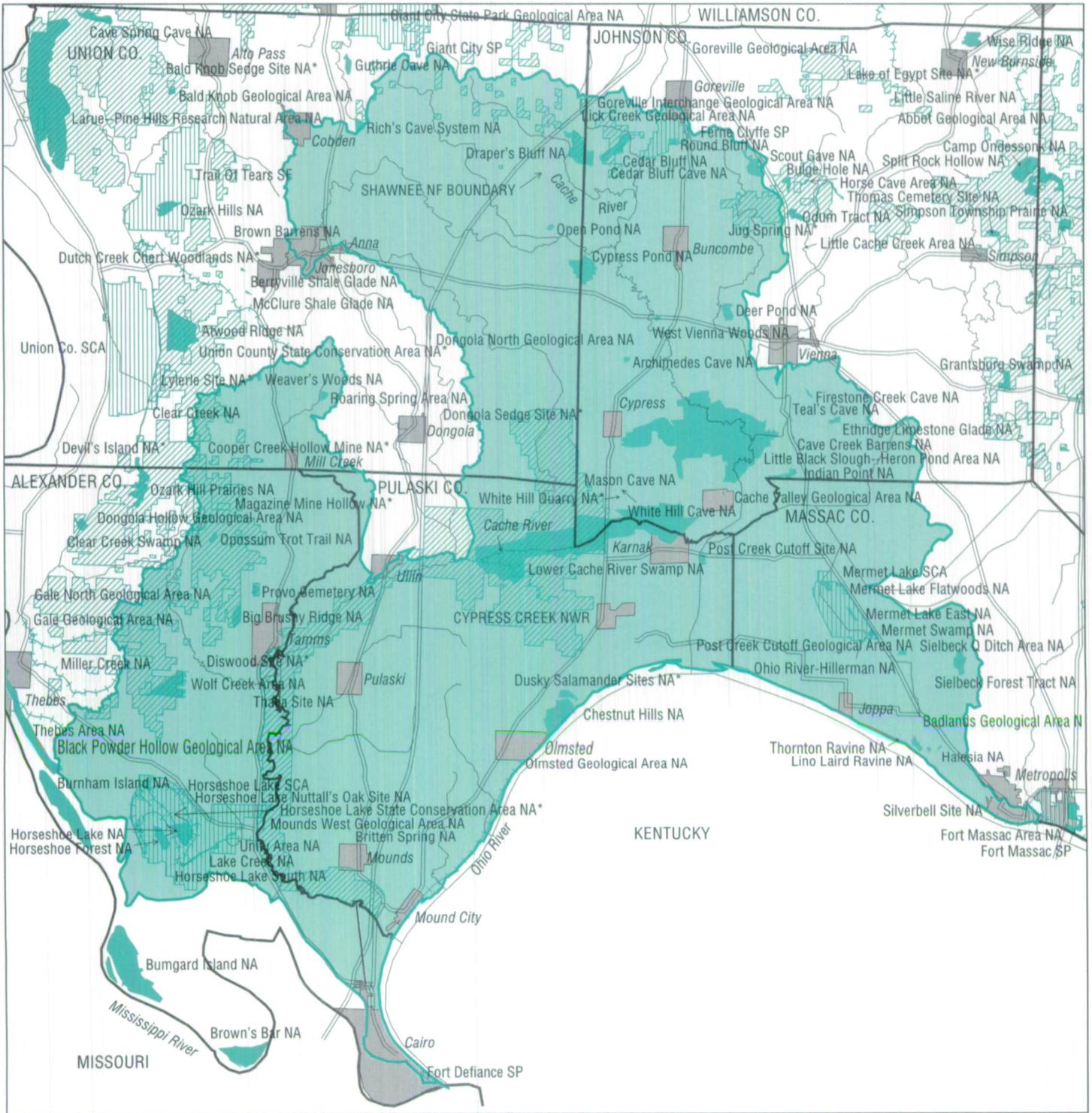
The green treefrog is one of the most colorful frogs in North America. Its bright green-to-olive coloration protects it from predators as it perches on vegetation in swamps, floodplain sloughs, and marshes. In Illinois, the green treefrog is limited to the extreme southern tip of the state.

ILLINOIS NATURAL AREAS INVENTORY SITES (<i>continued</i>)		<u>Acres</u>
Lower Cache River Swamp		6,561
Magazine Mine Hollow		*
Mason Cave		12
Mermet Lake East		50
Mermet Lake Flatwoods		64
Mermet Swamp		47
Mounds West Geological Area		9
Ohio River-Hillerman		108
Olmsted Geological Area		6
Open Pond		37
Opossum Trot Trail		49
Post Creek Cutoff Geological Area		4
Post Creek Cutoff Site		57
Provo Cemetery		59
Rich's Cave System		17
Roaring Spring Area		59
Round Bluff		59
Scout Cave		232
Sielbeck Forest Tract		206
Sielbeck Q Ditch Area		40
Silverbell Site		1
Teal's Cave		4
Thalia Site		1
Thebes Area		20
Thornton Ravine		1
Unity Area		29
Weaver's Woods		32
West Vienna Woods		25
White Hill Cave		4
White Hill Quarry		*
Wolf Creek Area		599
* = point location, map not available		
BIOLOGICALLY SIGNIFICANT STREAMS		<u>Miles</u>
Cache River, Big Creek to Karnak		8.1
Horseshoe Lake		22.0
Lake Creek		3.7
Limekiln Slough		5.5
Ohio River, L&D 52 to Metropolis		2.4
Ohio River, L&D 53 to Mound City		10.9
NATURAL HERITAGE CATEGORIES		
Communities		
	<u>Occurrences</u>	<u>Types/Species</u>
Floodplain Forest	10	3
Lake	3	1
Wetland	11	2
Cave	7	2
Forest	10	5
Prairie	1	1
Primary	7	3
Threatened and Endangered Animals		
Amphibian	19	2
Bird	37	15
Fish	7	5

Mammal	51	8	
Reptile	8	3	
Crustacean	9	4	
Mollusk	10	6	
Threatened and Endangered Plants			
Lichen	1	1	
Plant-Dicot	66	24	
Plant-Monocot	20	14	
Plant-Fern/Fern Ally	2	2	
Geological Feature			
Geological Feature	10	1	
Other			
Forest Block >500 Acres	7	1	
Rookery	2	1	
STATE AND FEDERAL LAND			
State Parks		<u>Acres</u>	
Ferne Clyffe		1,162	
Fort Defiance		62	
Fort Massac		137	
State Conservation Areas			
Horseshoe Lake		8,160	
Mermet Lake		2,404	
State Forests		0	
State Fish and Wildlife Areas		0	
Federal Land			
Cypress Creek National Wildlife Refuge		34,497	
Shawnee National Forest Proclamation Boundary		66,908	
Shawnee National Forest Ownership		19,244	
ILLINOIS NATURE PRESERVES			
		<u>Acres</u>	
Cave Creek Glade		40	
Chestnut Hills		272	
Halesia		19	
Heron Pond-Little Black Slough		2,131	
Horseshoe Lake		579	
Mermet Swamp		47	
Round Bluff		56	
Section 8 Woods		322	
NATURAL DIVISIONS			
	<u>Acres</u>	<u>% of</u>	<u>% of</u>
	<u>in RRA</u>	<u>RRA</u>	<u>Division</u>
Coastal Plain	256,009	57.8	55.4
Shawnee Hills	155,257	35.0	17.1
Ozarks	31,480	7.1	7.7
Major Water Bodies	525	0.1	0.0



Significant natural features that represent forest, wetland, and aquatic habitats are found at Horseshoe Lake, an old oxbow of the Mississippi River. Near-virgin woods of beech, sugar maple, swamp chestnut oak, and American elm grow on the island in the middle of the lake. Bald cypress, tupelo, swamp cottonwood, willow, and button-bush are found in the shallow water. Several interesting and rare species are known from here, including the spotted gar, pugnose minnow, green treefrog, mole salamander, broad-banded water snake, green water snake, prothonotary warbler, red-shouldered hawk, big-eared bat, and rice rat.



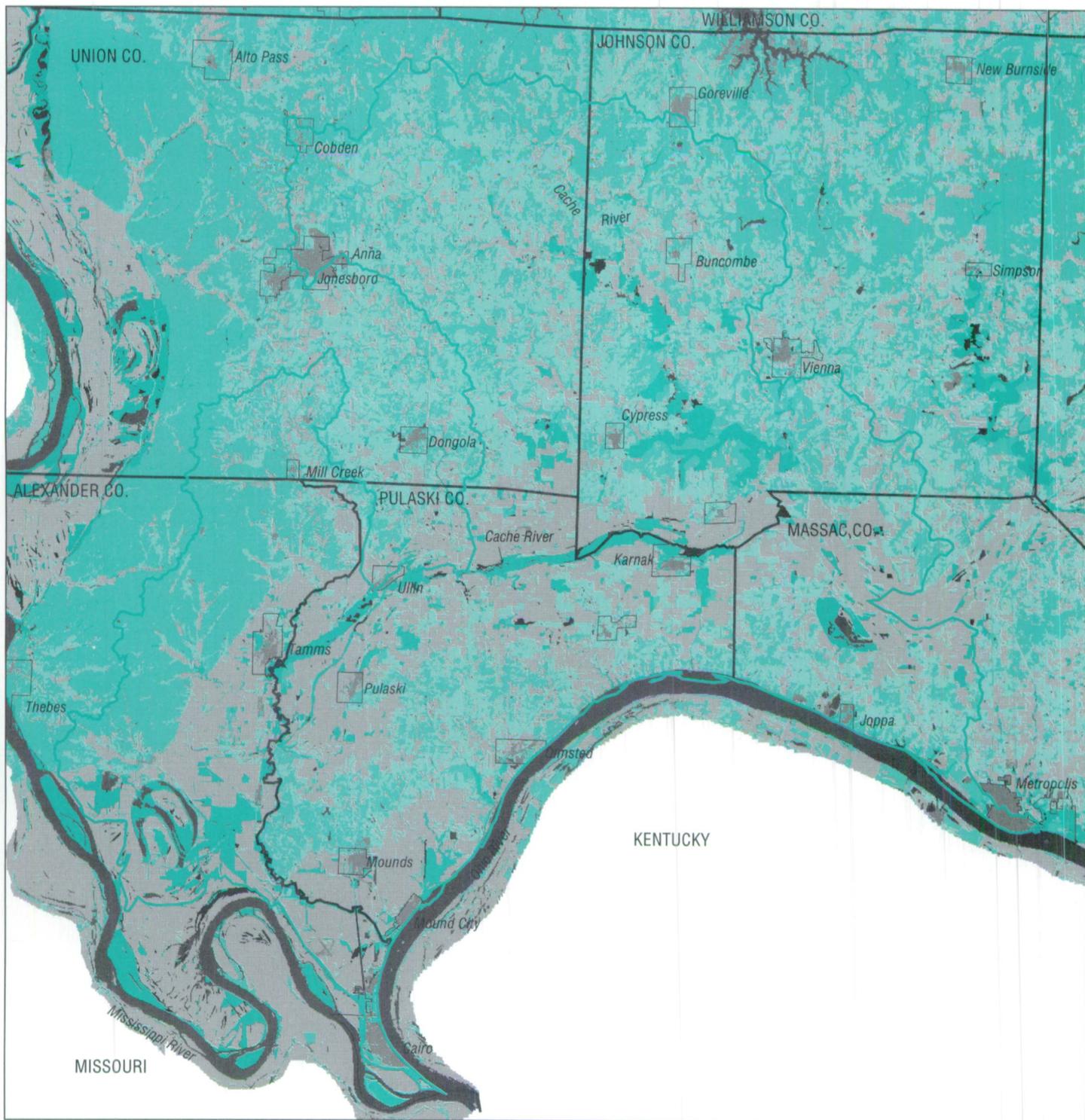
Cache River

- Natural Area
- Town
- State Land
- Federal Land

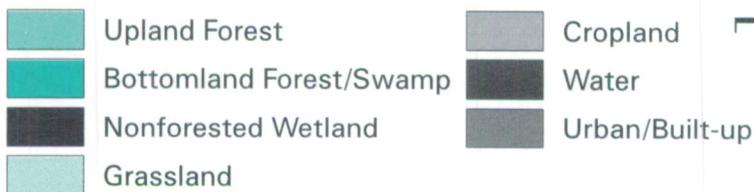
- Stream
- Significant Stream
- Highway
- County

6 Miles





Cache River



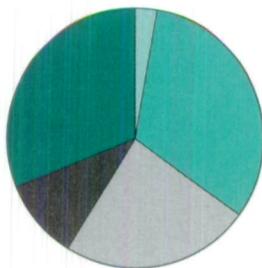
6 Miles




Size:
87,928 acres
137 square miles

Location:
Southeastern tip of Illinois along the Ohio River; Massac and Pope counties.

Landcover at a Glance



- upland forest 31%
- bottomland forest 9%
- wetland <1%
- grassland 24%
- cropland 32%
- urban built-up <1%
- water 3%

CRETACEOUS HILLS

The Cretaceous Hills RRA encompasses the southeastern tip of the state. The area is characterized by rolling hills of sand, gravel, and clay and bottomlands along the Ohio River.

LANDCOVER ♦ Predominant landcover types are cropland (32%), upland woods (31%), and grassland (24%). This site ranks fourth in percentage of upland woods, ninth for grassland, and fifth for bottomland woods. It has one of the lowest acreages for nonforested wetlands.

NATURAL AREAS ♦ There are 19 Natural Areas. Important natural features include barrens, springs, lakes, ponds, and flatwoods.

BIOLOGICALLY SIGNIFICANT STREAMS ♦ Two stretches of the Ohio River totalling 14 miles are designated as BSS streams.

HERITAGE SITES ♦ There are 74 Heritage occurrences. Seven community types, 25 plant species, ten animal species, and two rookeries are located in this RRA.

STATE AND FEDERAL LAND ♦ Fort Massac State Park is the only state land in this RRA. Federally owned land consists of 12,000 acres in the Shawnee National Forest.

NATURE PRESERVES ♦ Significant features in the two Nature Preserves are slope, ridge, and ravine forests, seep springs, cypress swamp, floodplain forest, and flatwoods.

NATURAL DIVISIONS ♦ This RRA is 89% in the Coastal Plain Division and 10% in the Shawnee Hills Division.

SUMMARY OF SITE CHARACTERISTICS: SIZE, BIOLOGIC RESOURCES, AND PUBLIC LANDS

Total Acreage		87,928
Natural Areas		
Acreage		1,940
Number		19
Biologically Significant Stream Mileage		14.1
Natural Heritage Sites		74
State Land		
State Parks		1
State Conservation Areas		0
State Forests		0
State Fish & Wildlife Areas		0
Acreage		619
Percentage of RRA		0.7
Federal Land		
Acreage		11,999
Percentage of RRA		13.6
LANDCOVER	<u>Acres</u>	<u>% of RRA</u>
Upland forest	27,471.32	31.24
Bottomland forest	8,315.74	9.46



Wetland-nonforested	412.86	0.47
Grassland	20,896.33	23.77
Cropland	28,118.41	31.98
Urban/Built-up	357.46	0.41
Water	<u>2,353.70</u>	<u>2.68</u>
TOTAL	87,925.82	100.01

ILLINOIS NATURAL AREAS INVENTORY SITES

		<u>Acres</u>
Burke Branch Research Natural Area		167
Caney Creek Site		*
Cave Creek Barrens		*
Clear Lake		40
Cretaceous Hills		449
Dean Cemetery East Barrens		*
Dog Creek Barrens		*
Fort Massac Area		183
Kickasola Cemetery Barrens and Springs		*
Klondike Spring		3
Lewis Estate		355
Lewis Estate North		404
Lewis Estate South		44
Massac Tower Springs		45
McGhee Flatwoods		*
Poco Cemetery Barrens East		1
Poco Cemetery Barrens North		*
Round Pond		247
Snow Springs		1

* = point location, map not available

BIOLOGICALLY SIGNIFICANT STREAMS

		<u>Miles</u>
Ohio River, L&D 52 to Metropolis		2.8
Ohio River, at mouth of Cumberland River		11.3

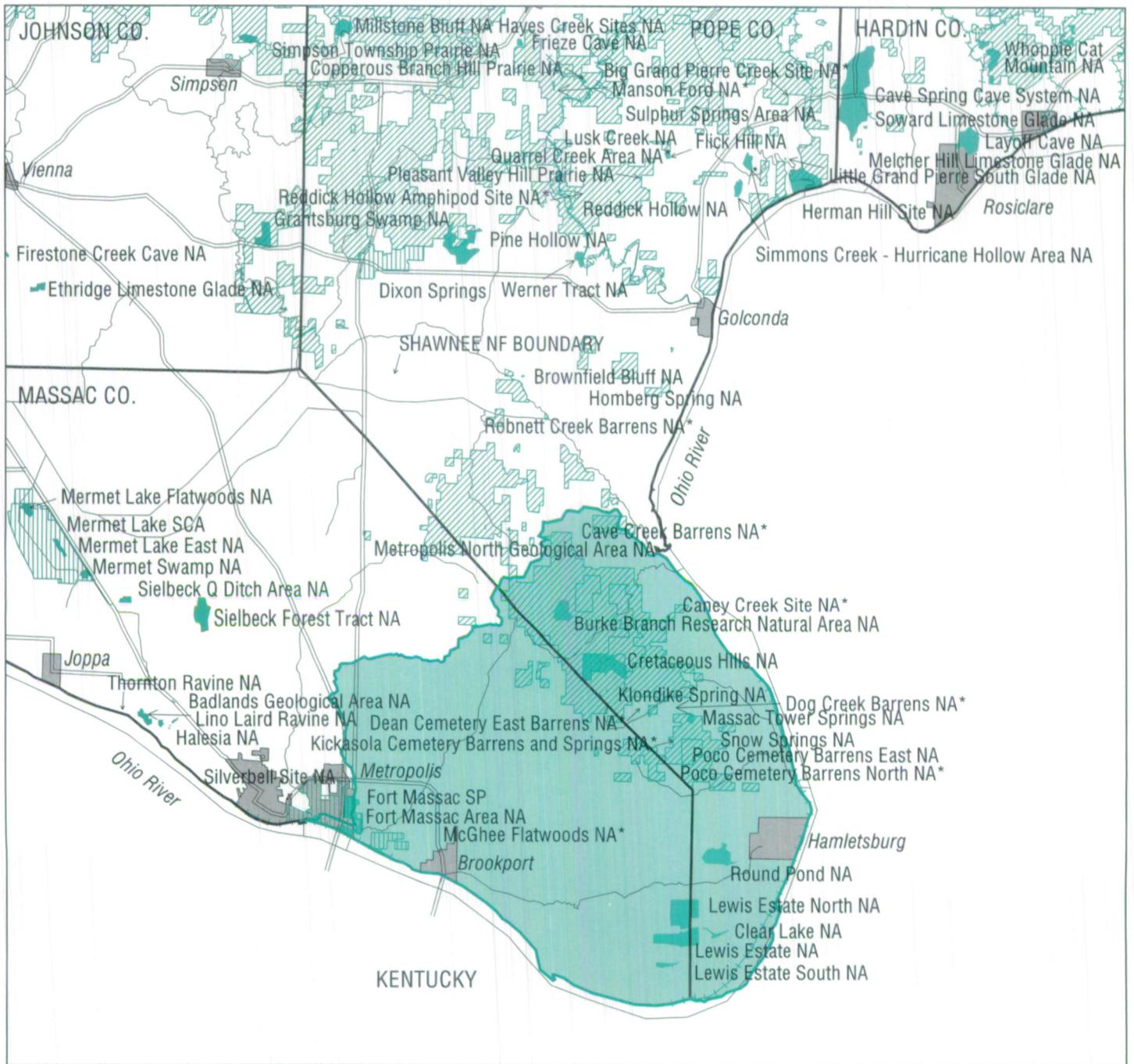
NATURAL HERITAGE CATEGORIES

Communities	<u>Occurrences</u>	<u>Types/Species</u>
Floodplain Forest	3	2
Lake	1	1
Wetland	5	2
Savanna	8	2
Threatened and Endangered Animals		
Bird	3	2
Fish	3	2
Mammal	2	1
Reptile	1	1
Mollusk	4	4
Threatened and Endangered Plants		
Plant-Dicot	23	13
Plant-Monocot	18	11
Plant-Fern/Fern Ally	1	1
Geological Feature		
Other		
Rookery	2	1

STATE AND FEDERAL LAND

State Parks		<u>Acres</u>
Fort Massac		619

Cretaceous Hills is an area of low, gravel hills. Acidic seeps, which support some of the most interesting natural communities in the state, are found in this area. Seeps are caused when groundwater, percolating through the gravel, flows to the surface where it meets underlying sandstone. An abundant and diverse flora grows in these moist areas, including many unusual and rare species of orchids, mosses, and ferns, some with four foot-long fronds.

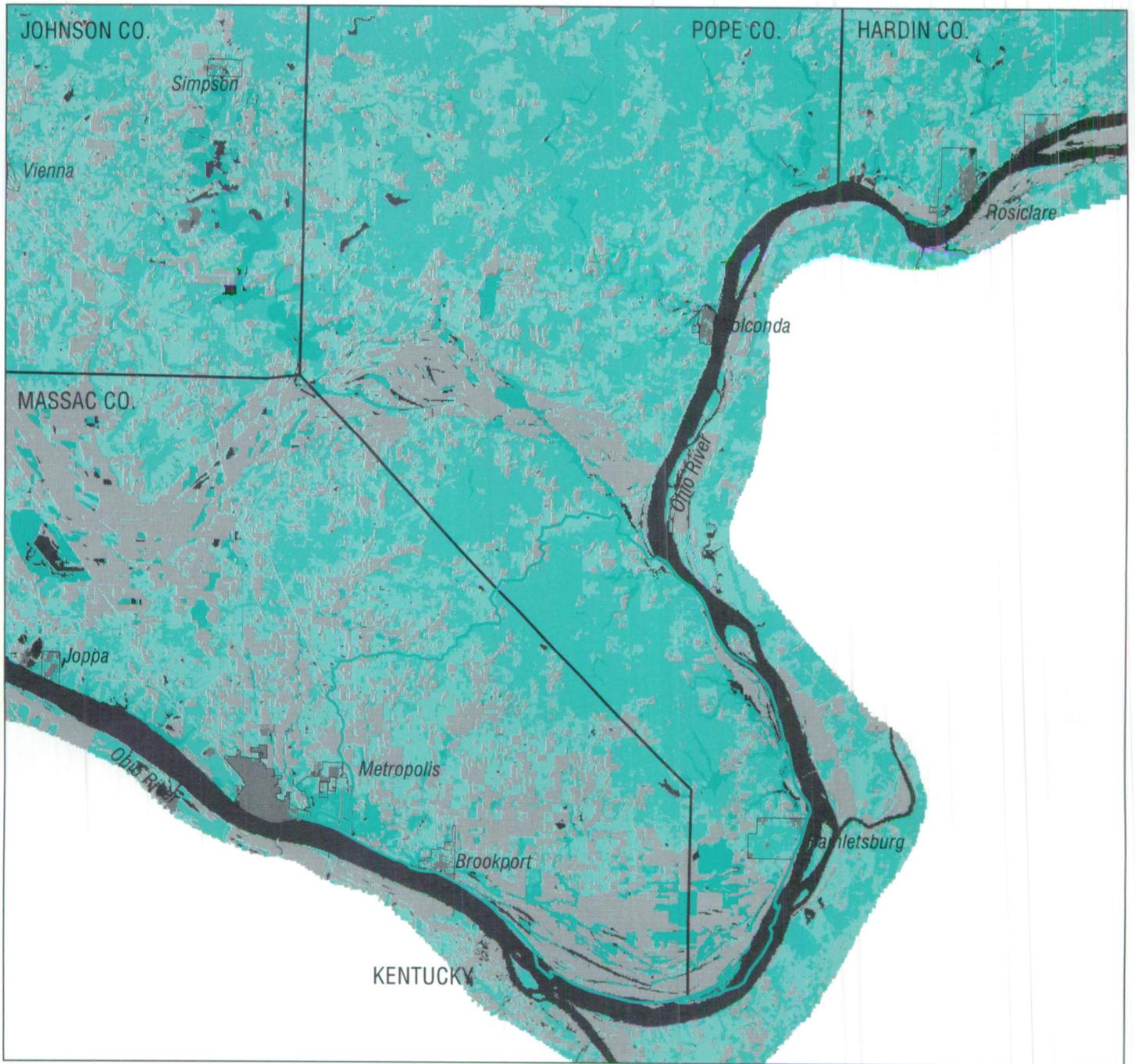


Cretaceous Hills

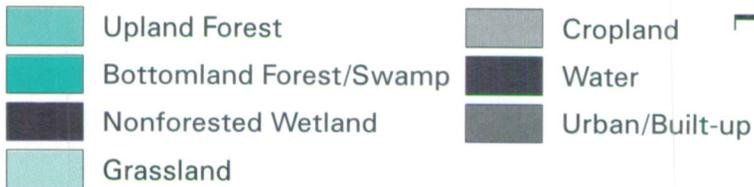
- | | | | |
|---|--------------|---|--------------------|
|  | Natural Area |  | Stream |
|  | Town |  | Significant Stream |
|  | State Land |  | Highway |
|  | Federal Land |  | County |

5 Miles





Cretaceous Hills



5 Miles



In the Ohio River floodplain are areas of cypress swamp, floodplain forest, and flatwoods. Flatwoods are forests growing on hardpan clay, a soil that is wet in spring and dry and hard in summer. The trees are relatively small, reflecting the harsh soil conditions, and they tend to blow over because of their shallow root systems. The nature preserve in Fort Massac State Park has a large flatwood forest comprised of pin oak, swamp white oak, and post oak.

STATE AND FEDERAL LAND <i>(continued)</i>			<u>Acres</u>
State Conservation Areas			0
State Forests			0
State Fish and Wildlife Areas			0
Federal Land			
Shawnee National Forest Proclamation Boundary			30,851
Shawnee National Forest Ownership			11,999
ILLINOIS NATURE PRESERVES			<u>Acres</u>
Cretaceous Hills			272
Massac Forest			156
NATURAL DIVISIONS	Acres	% of	% of
	<u>in RRA</u>	<u>RRA</u>	<u>Division</u>
Coastal Plain	78,285	89.3	16.9
Shawnee Hills	8,824	10.1	0.9



METHODOLOGY

The identification and characterization of areas rich in biological resources, or Resource Rich Areas (RRA), used an analysis of natural resource data utilizing GIS technology that was guided by scientists with extensive knowledge of ecosystem concepts and Illinois biota. The process of identification of RRAs was begun by meeting with scientists at the Illinois Natural History Survey to develop a list of ecological characteristics and functions of large ecological reserves, and to develop criteria to be applied in identification and evaluation of RRAs.

A landscape level approach envisions the existence of a system of areas that would protect, maintain, and enhance the living natural resources of Illinois. From an ecological perspective these areas need to be large enough to provide habitat for area-sensitive species and to allow management practices to reasonably simulate natural forces (e.g. fire).

Further, the areas need to be distributed in a way that the various ecotypes in Illinois are adequately represented. The specific ecological roles of sites were determined to be the following:

1. provide areas large enough to allow for the natural dynamic nature of ecosystems and to allow management to simulate natural forces to meet the needs of various communities and species.
2. protect, restore, and enhance areas to provide the ecological requirements for animals and plants that need large areas.
3. include representative examples of the natural communities of Illinois.
4. protect areas with significant habitat and species diversity.
5. protect habitat types that are diminishing at an alarming rate, such as wetlands, forests, prairies, and biologically significant streams.

Watersheds, as identified by the Illinois Environmental Protection Agency (IEPA), were used as the geographic unit for evaluation and analysis. These watersheds have the advantage of being an ecologically identifiable unit and are important administratively within the state. They have the disadvantage of being irregular in shape and variously sized. The average area covered by an IEPA watershed, of which there are 816, is 69 square miles (44,000 acres). RRA boundaries are derived directly from watershed boundaries.

Criteria for the evaluation and characterization of RRAs were selected because they (1) emphasized ecologically important characteristics; (2) were available as digital statewide databases; and (3) were suitable for analysis using IEPA watersheds. The criteria, analysis, maps, and summaries in this report are based upon ecological characteristics; economics, recreational interests, and other considerations were not explicitly accounted for in this effort. Watersheds were evaluated using the following variables:

1. Forest - percent of the watershed
2. Wetlands - percent of the watershed
3. Illinois Natural Areas Inventory - total area
4. Biologically Significant Streams - total length

The sources of data for the four variables are discussed later in this section.

Time limitations made it impossible to acquire new field data and required that decisions be based upon the best data available for the entire state. The Illinois Natural Areas Inventory and Biologically Significant Streams digital datasets were updated and enhanced for use in the analysis. Other datasets, including boundaries of state and federally owned land in Illinois, were created or improved to provide supplemental information.

The four variables were given equal weight in the analysis. Each watershed was ranked against all other watersheds for each variable.

Watersheds were placed into 10% quantiles for each variable and given a score of 10 points if they were in the top quantile, 9 points in the 81-90 % quantile, 8 points in the 71-80 % quantile, etc. Watersheds in which a variable did not occur were given a 0 score for that variable. The scores for each variable in each watershed were summed; the maximum possible cumulative score was 40. Watersheds were defined as

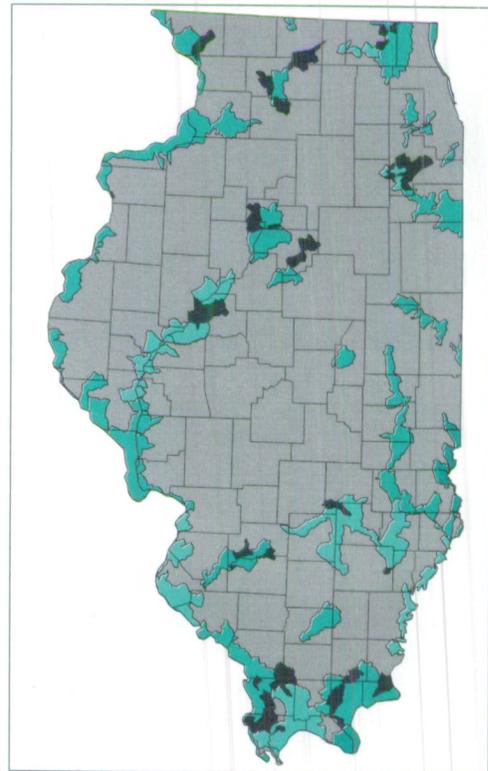


Figure 14. RRA Watershed Scores < 26

resource rich if their cumulative score ranked in the top 10%. This qualification resulted in inclusion of watersheds having a score of 26 or greater (actually the top 12% of all watersheds due to tie scores).

Spatially adjacent watersheds were grouped to form RRAs. All watersheds with scores of 26 or above were included in the RRAs and none were excluded. Review of the selections and additional information and advice regarding inclusion of additional adjacent watersheds and determination of boundaries was provided by an advisory group of four INHS scientists. Some RRAs were modified by the addition of adjacent watersheds with cumulative scores of less than 26 in order to accommodate (1) contiguous landcover; (2) watersheds of the three current IDNR project areas (i.e. Rock River, Cache River and Prairie Parklands; and (3) important natural features that were known by INHS scientists (Figure 14). Boundaries of RRAs with shared borders were determined based on consideration of such factors as natural divisions and drainage basins. RRAs were named for the predominant natural feature, usually the major stream. They are ordered by geographic location from north to south in the tables of this report.

RRAs were collectively and individually described by the occurrence and composition of several characteristics. These include information about landcover classes, Natural Areas, and Biologically Significant Streams, which were used in the screening process. Supplemental data about Natural Heritage communities, state and federally owned land, Illinois Nature Preserves, and natural divisions are also reported. These datasets are described below.

Landcover information was derived from the Critical Trends Assessment Project Landcover Database produced by the Illinois Natural History Survey from satellite imagery acquired from 1991 to 1995. Seven landcover classes were utilized in this project—upland forest, bottomland forest, nonforested wetland, grassland, cropland, urban or built-up, and water. For the screening process, forests were defined as the combination of upland forest and bottomland forest landcover classes, and wetlands as nonforested wetland and bottomland forest classes. Upland forests consists of any wooded, nonbottomland area; these may be relatively small and the term "forest" is applied loosely. The grassland class was not used in the screening because "natural" grassland habitats such as prairies and savannas are not distinguished from grassland impacted by farming and other human uses. The landcover data has a ground resolution of 93.5 feet (28.5 meters) on a side. Each pixel covers 0.2 acres although a filter with a threshold of up to 5 pixels (1 acre) was applied to the database for this analysis. Area calculations reflect the use of the Universal Transverse Mercator (UTM) projection, zone 16, North American datum of 1927.

The Illinois Natural Areas Inventory is a dynamic listing of approximately 1,200 sites known to possess important natural qualities within the state. The INAI database includes sites based on the presence of (a) high quality natural communities, (b) habitats for endangered species, (c) habitats for relict species, (d) outstanding geologic features, (e) natural community restoration and endangered species relocations, approved natural areas and restoration sites, (f) unique natural features, and (g) outstanding streams and rivers (McFall, pers. comm; White 1978). Outstanding streams and rivers were included in the analysis under this category if they were not included under Biologically Significant Streams. The INAI data are maintained by the Division of Natural Heritage of IDNR (DNH-IDNR). The digital database was created and is maintained at INHS and was updated through November 1995.

Biologically Significant Stream designation is based on a comprehensive evaluation of the state's aquatic resources. BSS designation indicates the presence of high quality aquatic systems (Page, et al. 1991). The criteria included fish populations, water quality, macroinvertebrates, endangered and threatened species, and mussel diversity. The database is maintained at INHS and was current as of November 1995.

The Natural Heritage database provided information about significant communities, endangered and threatened species locations, geological features, and nesting bird colonies. INHS maintains this DNH-IDNR database in its digital form and was updated in November 1995.

Because information about state and federally owned land may be important in planning management strategies, a comprehensive GIS database of these resources was developed for this project. IDNR owns the largest acreages of state-owned land in Illinois. The state owned lands database consists of State Parks, Forests, Conservation Areas, and Fish and Wildlife Areas.

Illinois Nature Preserves are areas that retain a high degree of their presettlement character or have significant ecological, geological, or archaeological features (McFall and Karnes 1995). They are dedicated by law to being maintained in their natural state. The digital database at INHS was current as of November 1995 with 236 Nature Preserves (from data provided by IDNR).

Natural Divisions is a classification of the natural environments in Illinois based on topography, soils, bedrock, glacial history, and distribution of plants and animals (Schwegman 1973). Fourteen natural divisions are defined in Illinois.

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PHOTOGRAPHY BY MICHAEL R. JEFFORDS

FRONT COVER:

Heron Pond in fall

Middle Fork of the Vermilion River

Aerial View of riparian corridor

Corn ready for harvesting

BACK COVER

Nachusa grassland

PUBLICATION DESIGN BY GRAY INK

