

## Appendix F: Regionally Significant Environmental Resources

**Table 1. Regionally Significant Environmental Resources**

Category	Description
<b>State Conserved Areas</b>	<p>State parks, state wildlife areas (Ohio) and wildlife management areas (Kentucky), and state preserves (preserves are established under state law)</p> <ul style="list-style-type: none"> <li>▪ Areas where state investments conserve environmental resources</li> </ul>
<b>Regionally Significant Streams</b>	<p>High quality streams or stream segments identified for conservation or protection by the states based on one or more of the following:</p> <ul style="list-style-type: none"> <li>▪ Designated as a National and State Scenic River based on outstanding qualities to be protected for the future (the national system includes 1/4 of 1%, or 166, of the nation's rivers)</li> <li>▪ Identified as a priority area for conserving aquatic species (by the state wildlife conservation plan)</li> <li>▪ Designated for use as habitat by species that require a high level of water quality (by use designations included in water quality standards in state code)</li> <li>▪ Reported as supporting its designated use for aquatic habitat (by the 2010 state Integrated Report)</li> <li>▪ Classified for high ecological value (in state Antidegradation Policy included in water quality standards in state code)</li> </ul>
<b>Wetlands</b>	<p>Areas where transportation projects are likely to involve additional costs if impacts to wetland functions are not avoided (more than a third of the nation's threatened and endangered species live only in wetlands)</p> <ul style="list-style-type: none"> <li>▪ Includes the Oxbow of the Great Miami River (habitat important for rare species and migration)</li> </ul>
<b>Endangered, Threatened, and Rare Species</b>	<p>Species native to the OKI Region that are listed at federal or state levels as endangered (in danger of extinction), threatened (likely to become endangered within the foreseeable future), or at risk</p> <ul style="list-style-type: none"> <li>▪ 165 species native to the OKI Region are state listed.</li> <li>▪ Nearly two thirds of the region's 104 state-listed animal species depend on aquatic habitat for survival, and nearly half of these are "critically imperiled" or "imperiled" at global levels.</li> <li>▪ The survival of listed species depends partly on Regionally Significant Streams, State Conserved Area, and Wetlands.</li> </ul>
<b>Prime and Important Farmland and Agricultural Districts</b>	<p>Areas where transportation projects may involve additional costs if they reduce the land's use or suitability as farmland</p> <ul style="list-style-type: none"> <li>▪ Prime Farmland has soil characteristics that make it the world's most productive agricultural land and a globally-scarce resource.</li> <li>▪ Impacts to Prime and Important Farmland from federally-funded projects are to be avoided or mitigated under federal policy.</li> <li>▪ Agricultural Districts in Ohio and Kentucky are enrolled in state programs for 5-year protection as agricultural use (per request of property owner) that may include mitigation from impacts of state-funded projects.</li> </ul>

OKI 2012 Environmental Consultations

**Table 2. State Conserved Areas in the OKI Region**

Map Code	Facility Name	County	Acres	Note
<b>Nature Preserves - dedicated under state law</b>				
NP1	Hueston Woods State Nature Preserve	Butler	29	Within a state park
NP2	Sharon Woods Gorge	Hamilton	21	Within a county park
NP3	Caesar Creek Gorge State Nature Preserve	Warren	483	
NP4	Halls Creek Woods State Nature Preserve	Warren	278	
NP5	Crooked Run ... Sanctuary	Clermont	78	
NP6	Boone County Cliffs State Nature Preserve <sup>a</sup>	Boone	75	
NP7	<u>Dinsmore Woods State Nature Preserve<sup>a</sup></u>	Boone	105	
	OKI Region		1,069	
<b>Wildlife Areas / Wildlife Management Areas - preserves with hunting and fishing</b>				
WA1	Pater Wildlife Area	Butler	192	
WA2	Spring Valley Wildlife Area <sup>b</sup>		288	
WA3	Caesar Creek Lake Wildlife Area <sup>b</sup>	Warren	1,109	Connected to a state park
WA4	East Fork Wildlife Area	Clermont	2,705	Connected to a state park
WA5	Mullins Wildlife Management Area	Kenton	259	
WA6	Adair Wildlife Management Area	Boone	635	
	OKI Region		5,188	
<b>State Parks</b>				
SP1	Hueston Woods State Park <sup>b</sup>	Butler	1,022	Includes State Nature Preserve
SP2	Caesar Creek State Park <sup>b</sup>	Warren	7,066	Connected to a Wildlife Area
SP3	Little Miami State Park	Cl,Hm,Wr	127	
SP4	Stonelick State Park	Clermont	1,258	
SP5	East Fork State Park	Clermont	7,301	Connected to a Wildlife Area
SP6	<u>Big Bone Lick State Park</u>	Boone	512	
	OKI Region		17,286	

<sup>a</sup>Owned by Boone County Fiscal Court; dedicated to Kentucky state nature Preserves systems

<sup>b</sup>Extends beyond the OKI Region (acreage is for in-region only)

Additional State Conserved Area (not listed or mapped)

- Ohio State Dedicated Natural Areas (434 acres in Hamilton County)

- Indiana Preserves without trails or parking (62 acres in Dearborn County)

Source of Acreage Data

Acreage of sites entirely within the OKI Region is from state agency websites. Acreage for in-region portion of sites that extend outside of the OKI Region is from OKI.

State Agency Websites

OH [http://www.dnr.state.oh.us/Home/Preserves/preserves\\_info/mapofpreserves/tabid/860/Default.aspx](http://www.dnr.state.oh.us/Home/Preserves/preserves_info/mapofpreserves/tabid/860/Default.aspx)  
[http://www.dnr.state.oh.us/Home/wild\\_resourcessubhomepage/WildlifeAreaMapsLandingPage/tabid/19694/Default.aspx](http://www.dnr.state.oh.us/Home/wild_resourcessubhomepage/WildlifeAreaMapsLandingPage/tabid/19694/Default.aspx)  
<http://www.dnr.state.oh.us/parks/default/tabid/726/Default.aspx>

KY <http://naturepreserves.ky.gov/naturepreserves/Pages/preserves.aspx>  
<http://www.kdfwr.state.ky.us/kfwis/wmaguide.asp?lid=600&NavPath=C100C154>  
<http://parks.ky.gov/>

OKI 2012 Environmental Consultations. Data and sources: 12/2010 updated 2/2012

**Table 3. Regionally Significant Streams in the OKI Region**

OKI 2012 Environmental Consultations (prepared September 2011)

River and Streams	County	Total Stream Length	Designated as Scenic River <sup>1</sup>	criteria used for Kentucky streams is in green		criteria used for Indiana streams is in purple	
				Identified as Priority Area for Conserving Aquatic Wildlife <sup>2</sup>	Designated for a High Level of Aquatic Life Use <sup>3</sup>	Reported as Attaining its Aquatic Life Use Designation <sup>4</sup>	Classified for High Ecological Value in Antidegradation Policy <sup>5</sup>
<b>Great Miami River</b>	Butler Dearborn Hamilton Warren	170.3		#5 rank among 11 Ohio Focus Watersheds		Indiana Category 2 for Dearborn Co. part	
Big Cave Run (trib. to Sevenmile Cr.)	Butler	2.9				Ohio Category 1	
Cotton Run (trib. to Sevenmile Cr.)	Butler					Ohio Category 1	
Doublelick Run	Dearborn Hamilton	1.2 in Ohio				Indiana Category 2 for Dearborn Co. part	
Elk Creek	Butler	12.6			Ohio Exceptional Warmwater Habitat		
Four Mile Creek	Butler	38.2			Ohio Exceptional Warmwater Habitat between RM 13/Darrtown Rd. & RM .4/Sevenmile Ave		Proposed as Ohio Superior High Quality Water between RM 13.83/Curlane Run & RM .61/unnamed trib.
Mutton Run (trib. to Sevenmile Cr.)	Butler					Ohio Category 1	
Ninemile Creek (trib. to Sevenmile Cr.)	Butler	3.6				Ohio Category 1	
Sevenmile Creek (tributary to Four Mile Cr.)	Butler	32.5			Ohio Exceptional Warmwater Habitat	Ohio Category 1	Ohio Superior High Quality Water
Twin Creek	Warren	46.2			Ohio Exceptional Warmwater Habitat	Ohio Category 1	Ohio Outstanding State Water
<b>Licking River</b>	Campbell Kenton			Mussels Conservation Area	Kentucky Outstanding State Resource Water S. of RM 19.3/SR 536 bridge	Kentucky Category 2 between RM 0 & RM 4.8 and RM 31.0 & RM 37.6	
Bowman Creek	Kenton	6.0			Kentucky Outstanding State Resource Water	Kentucky Category 2	Kentucky Exceptional Water
Cruises Creek	Kenton	8.6				Kentucky Category 2	
Sawyers Fork (tributary to Cruises Creek)	Kenton	3.3			Kentucky Outstanding State Resource Water	Kentucky Category 2	Kentucky Exceptional Water
<b>Little Miami River</b>	Clermont Hamilton Warren	105.5	<ul style="list-style-type: none"> <li>National Scenic River</li> <li>N of Foster</li> <li>National Recr. River S of Foster</li> <li>State Scenic River for entire length</li> </ul>	#1 rank among 11 Ohio Focus Watersheds	Ohio Exceptional Warmwater Habitat upstream of RM 3.0/Beechmont Ave.	Ohio Category 1 for mainstem between Caesar Creek & O'Bannon Creek	Ohio Outstanding State Water
Agins Run (tributary to Todd Fork)	Warren					Ohio Category 1	
Caesar Creek	Warren	33.9	Lower 2 miles are included in the Little Miami River's designation		Ohio Exceptional Warmwater Habitat		Ohio Superior High Quality Water

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	County	Total Stream Length	Designated as Scenic River <sup>1</sup>	Identified as Priority Area for Conserving Aquatic Wildlife <sup>2</sup>	Designated for a High Level of Aquatic Life Use <sup>3</sup>	Reported as Attaining its Aquatic Life Use Designation <sup>4</sup>	Classified for High Ecological Value in Antidegradation Policy <sup>5</sup>
Dry Run (tributary to Turtle Creek)	Warren	1.3			Ohio Coldwater Habitat between hdwtr.s & RM 1.2		
East Fork	Clermont	81.7			Ohio Exceptional Warmwater Habitat		Ohio Superior High Quality Water downstream of RM 45.18/Howard Run (excl. reservoir)
Halls Creek	Warren	4.1			Ohio Exceptional Warmwater Habitat		
Homans Branch (tributary to Sharp Run, tributary to Lick Run)	Warren					Ohio Category 1	
Kunkers Run (tributary to Sugar Run)	Warren					Ohio Category 1	
Lick Run (tributary to Todd Fork)	Warren	4.9				Ohio Category 1	
Newman Run	Warren	4.0			Ohio Exceptional Warmwater Habitat		
Sharps Run (tributary to Lick Run)	Warren					Ohio Category 1	
Sugar Run (tributary to Todd Fork)	Warren	1.6				Ohio Category 1	
Todd Fork	Warren	35.0				Ohio Category 1	
Whitakers Run (tributary to Todd Fork)	Warren					Ohio Category 1	
<b>Ohio River</b>	Boone Cambell Clermont Dearborn Hamilton Kenton			Mussels Conservation Area east of the Licking River		Indiana Category 2 Kentucky Category 2 ORSANCO did not assess aquatic life use because of differences in state approaches to handling data with conflicting results	
Big Bone Creek	Boone	10.7				Kentucky Category 2 between RM 1.2 & RM 10.7	
Brush Creek (tributary to Twelvemile Cr.)	Campbell					Kentucky Category 2 between RM 0 & RM 1.6	
Double Lick Creek (tributary to Woolper Creek)	Boone	3.5			Kentucky Outstanding State Resource Water	Kentucky Category 2	Kentucky Exceptional Water
Fourmile Creek	Campbell					Kentucky Category 2 between RM .2 & RM 9.4	
Garrison Creek	Boone	4.85			Kentucky Outstanding State Resource Water	Kentucky Category 2	Kentucky Exceptional Water
Laughery Creek	Dearborn					Indiana Category 2 west of Hayes Branch	

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Little South Fork (tributary to Big South Fork)	Boone	5.9			Kentucky Outstanding State Resource Water between RM 1.2 & RM 5.9	Kentucky Category 2 between RM 1.2 and 5.9	Kentucky Exceptional Water between RM 1.2 & RM 5.8
Mudlick Creek (tributary to Big Bone North Hogan Creek)	Boone	11.3				Kentucky Category 2 between RM .2 & RM 6.1	
	Dearborn					Indiana Category 2 between Goose Run & unnamed tributary near E. end of Short Ridge Rd.	
Pleasant Run Creek	Kenton	3.4				Kentucky Category 2 between RM .2 & RM 3.4	
Second Creek	Boone	2.9			Kentucky Outstanding State Resource Water between RM .2/ backwaters & RM 2.7/headwaters	Kentucky Category 2 between RM .5 & RM 2.9	Kentucky Exceptional Water between RM .4 & RM 2.9
Tanners Creek	Dearborn					Indiana Category 2 between unnamed tributaries south of the Conrail line and north of Greendale Cemetery	
Twelvemile Creek	Campbell	13.2				Kentucky Category 2 between RM 3.5 & 9.0 and RM 10.4 & 13.2	
Unnamed tributary to Laughery Creek in Caesar Creek Township	Dearborn					Indiana Category 2	
<b>Whitewater River</b> (trib. to Great Miami River)	Butler Dearborn Hamilton			Meets Indiana plan criteria for Priority Conservation Areas	Ohio Exceptional Warmwater Habitat	Ohio Category 1 for Hamilton Co. mainstem Indiana Category 2 S of Logan Creek	Ohio Superior High Quality Water
Blue Creek (headwaters)	Dearborn					Indiana Category 2	
Cooper Run	Dearborn Hamilton					Ohio Category 1 Indiana Category 2	
Crane Run	Dearborn					Indiana Category 2	
Dry Fork (trib. to Whitewater River)	Butler Hamilton	19.6 in Ohio			Ohio Exceptional Warmwater Habitat between state line & RM 10.2/Atherton Rd.	Ohio Category 1 south of Howard Creek	
Fox Run	Hamilton					Ohio Category 1	
Jamison Creek	Dearborn Hamilton	.6 in Ohio				Ohio Category 1 Indiana Category 2	
Lee Creek (tributary to Dry Fork)	Hamilton	6.5				Ohio Category 1	
Logan Creek	Dearborn					Indiana Category 2	

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	County	Total Stream Length	Designated as Scenic River <sup>1</sup>	Identified as Priority Area for Conserving Aquatic Wildlife <sup>2</sup>	Designated for a High Level of Aquatic Life Use <sup>3</sup>	Reported as Attaining its Aquatic Life Use Designation <sup>4</sup>	Classified for High Ecological Value in Antidegradation Policy <sup>5</sup>
Phillips Creek (tributary to Dry Fork)	Butler	4.1				Ohio Category 1	
Pinhook Creek	Dearborn					Indiana Category 2	
Pipe Creek (headwaters)	Dearborn					Indiana Category 2	
Sand Run Creek	Dearborn	3.1				Ohio Category 1	
	Hamilton	in Ohio				Indiana Category 2	
Unnamed tributary with confluence on the eastern side of the Whitewater River just north of I-74	Dearborn					Indiana Category 2	
Unnamed tributary with confluence on the eastern side of the Whitewater River and north of Braysville	Dearborn					Indiana Category 2	

**<sup>1</sup> Designated as Scenic River**

Designated rivers are free-flowing with outstanding qualities to be protected for future generations. Designation does not prohibit development nor involve federal control of private property. Protection relies on landowners, river users, and nonprofits; federal, state, and local regulations and programs; ODNR consideration of public project impacts (outside of municipalities); and community involvement. Major threats are increased impervious surface, clearing of streamside forest, floodplain encroachment, channelization/piping, and increased wastewater effluent.

State Data Source	Basis for OKI Selection	Website	State Agency
Ohio Scenic Rivers Program established by Scenic Rivers Act	The Little Miami River is one of fourteen state-designated rivers.	<a href="http://www.dnr.state.oh.us/tabid/985/Default.aspx">http://www.dnr.state.oh.us/tabid/985/Default.aspx</a>	Ohio Dept. of Natural Resources, Div. of Natural Areas and Preserves
National Wild and Scenic Rivers System established by the Wild & Scenic Rivers Act	The Little Miami River is one of 166 federally-designated rivers (¼ of 1% of the nation's rivers).	<a href="http://www.rivers.gov/">http://www.rivers.gov/</a> and <a href="http://www.rivers.gov/wsr-little-miami.html">http://www.rivers.gov/wsr-little-miami.html</a>	U.S. Fish and Wildlife Service

**<sup>2</sup> Identified as Priority Area for Conserving Aquatic Wildlife**

Conservation needs, strategies, and priorities are defined in state wildlife plans in an effort to conserve wildlife and habitat before they become more rare and more costly to protect. Plans focus on preserving species with the greatest conservation need.

State Data Source	Basis for OKI Selection	Website	State Agency
Ohio Comprehensive Wildlife Conservation Strategy (2005)	Ohio Focus Areas for conserving aquatic habitat NOTE: The plan also identifies priority conservation areas for terrestrial habitat, but none are in the OKI Region.	<a href="http://www.fws.gov/midwest/FederalAid/state_plans.html">http://www.fws.gov/midwest/FederalAid/state_plans.html</a>	Ohio Dept. of Natural Resources, Div. of Wildlife
Kentucky Comprehensive Wildlife Conservation Strategy (2005) and 2010 Wildlife Action Plan Revision	Kentucky rivers with watersheds identified as Conservation Areas for aquatic taxonomic groups (HUC-8) NOTE: Mussels are 1 of the 7 groups of species (taxonomic groups) with state-defined Conservation Areas. Freshwater mussels is the most threatened and rapidly declining species group in North America. NOTE: The OKI map does not show Conservation Areas for mussels by HUC-14 (Campbell Co. 05100101 230290 & 05090201 380110), Amphibians (area in Boone & Kenton Co.s), or Bird Forestland & Wetland (area in Campbell & Kenton Co.s)	<a href="http://fw.ky.gov/kfwis/stwgl/">http://fw.ky.gov/kfwis/stwgl/</a>	Kentucky Dept. of Fish and Wildlife Resources
Indiana Comprehensive Wildlife Conservation Strategy, 2006	Indiana criteria for conservation priorities (related to plan goal and critical needs): the Whitewater R. addresses the plan's goal -- to preserve the state's native biological diversity -- and critical needs -- to provide habitat for rare species and connectivity for wildlife movement and migration.	<a href="http://www.fws.gov/midwest/FederalAid/state_plans.html">http://www.fws.gov/midwest/FederalAid/state_plans.html</a>	Indiana Dept. of Natural Resources, Div. of Fish and Wildlife, Wildlife Diversity Section

### 3 Designated for a High Level of Aquatic Life Use

States assign Designated Uses to individual streams based on their existing and potential ability to support aquatic habitat, recreation, water supply, and other functions. Designated Uses are part of administrative code for State Water Quality Standards that define how the state will meet Clean Water Act goals: to restore and maintain surface waters to levels that support fish, shellfish, and wildlife and recreation. Designated uses can be revised when states review standards every 3 years.

State Data Source	Basis for OKI Selection	Website	State Agency
Ohio Administrative Code, Chapter 3745-1 Water Quality Standards	<ul style="list-style-type: none"> <li>Ohio Exceptional Warmwater Habitat (capable of supporting and maintaining an exceptional or unusual community of warmwater aquatic organisms)</li> <li>Ohio Coldwater Habitat (capable of supporting populations of native coldwater fish and associated vertebrate and invertebrate organisms and Kentucky Outstanding State Resource Water (support federally listed endangered or threatened species or may be designated for exceptional aesthetic or ecological value, location within a state or local government park, or within a watershed that can provide scientific data)</li> </ul>	<a href="http://www.epa.ohio.gov/dsw/rules/3745_1.aspx">http://www.epa.ohio.gov/dsw/rules/3745_1.aspx</a>	Ohio EPA, Div. of Surface Water (DSW)
Kentucky Administrative Regulations, Title 401, Chapter 10 Water Quality Standards	Kentucky Outstanding State Resource Water (support federally listed endangered or threatened species or may be designated for exceptional aesthetic or ecological value, location within a state or local government park, or within a watershed that can provide scientific data)	<a href="http://www.lrc.ky.gov/kar/TITLE401.HTM">http://www.lrc.ky.gov/kar/TITLE401.HTM</a>	Ky. Energy and Environment Cabinet, Dept. for Environmental Protection/DEP, Div. of Water
Indiana Administrative Code, Title 327, Article 2, Water Quality Standards	Indiana Outstanding State Resource Water (waters of high quality that are designated by the Water Pollution Control Board -- none are in Dearborn Co. Waters may be considered as OSRWs that have unique or special ecological, recreational, or aesthetic significance.)	<a href="http://www.in.gov/legislative/iac/T03270/A00020.PDF">http://www.in.gov/legislative/iac/T03270/A00020.PDF</a>	Ind. Dept. of Env. Mgmt. (IDEM), Office of Water Quality, Watershed Assessment & Plng. Branch

### 4 Reported as Attaining its Aquatic Life Use Designation

Streams that attain their designated uses (meet standards) are listed in a biannual Integrated Report. Attainment corresponds to Category 1 or 2; other categories indicate streams that have not yet been assessed or don't meet standards. The Integrated Report fulfills Clean Water Act requirements for Section 305(b) inventories of water quality conditions (indicate progress in meeting designated uses) and Section 303(d) lists of waters that do not meet standards (ranked by need for a Total Maximum Daily Load /TMDL).

State Data Source	Basis for OKI Selection	Website	State Agency
2010 Ohio Integrated Water Quality Monitoring and Assessment Report	Ohio Category 1: "Use attaining" for aquatic life. Reporting units are watersheds with 12-digit hydrologic unit codes/HUC-12 or Large River Assessment Units/LRAUs (avg. 38 square miles).	<a href="http://epa.ohio.gov/dsw/tmdl/2010IntReport/2010OhioIntegratedRe">http://epa.ohio.gov/dsw/tmdl/2010IntReport/2010OhioIntegratedRe</a>	Ohio EPA, Div. of Surface Water (DSW)
Integrated Report to Congress on the Condition of Water Resources in Kentucky, 2010	Kentucky Category 2: "Assessed designated uses(s) is/are fully supporting, but not all designated uses assessed." Reporting units are streams or stream segments.	<a href="http://water.ky.gov/waterquality/Pages/IntegratedReport.aspx">http://water.ky.gov/waterquality/Pages/IntegratedReport.aspx</a>	Ky. Energy and Environment Cabinet, Dept. for Environmental Protection/DEP, Div. of Water, W.Q. Branch
Indiana Integrated Water Monitoring and Assessment Report: 2010 (draft pending U.S.EPA approval)	Indiana Category 2: "The waterbody is fully supporting the designated use assessed and no other use is threatened; insufficient data and information are available to determine if the remaining uses are supported or threatened." Reporting units are Assessment Units that are reach-specific for streams.	<a href="http://www.in.gov/ide/m/nps/2639.htm">http://www.in.gov/ide/m/nps/2639.htm</a> or 317-308-3173 Office of W. Q.: Integrated Report Coordinator	Ind. Dept. of Env. Mgmt. (IDEM), Office of Water Quality, Watershed Assessment & Planning Branch



2010 Biennial Assessment of Ohio River Water Quality Conditions (305b)	"...Having highlighted what would be considered impaired, the commission's assessment is not assessing the aquatic life use because of differences in states' approaches to handling data with conflicting results..." pages 2 & 3	<a href="http://orsanco.org/biennial-assessment-of-ohio-river-water-quality-conditions-305b">http://orsanco.org/biennial-assessment-of-ohio-river-water-quality-conditions-305b</a>	Ohio River Valley Water Sanitation Commission (ORSANCO)
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**5 Classified for High Ecological Value in Antidegradation Policy**

Antidegradation policy is intended to preserve the existing quality of streams classified as having exceptional ecological value, as indicated by types and variety of species. Policy defines how water quality can be lowered but still maintain existing uses. It regulates wastewater dischargers and may be applied to construction and storm water sources. Antidegradation policy is part of administrative code for Water Quality Standards and is reviewed every 3 years; stream classifications can be revised.

State Data Source	Basis for OKI Selection	Website	State Agency
Ohio Administrative Code, Chapter 3745-1, Water Quality Standards	Ohio Superior High Quality Water/SHQW (exceptional ecological values based on presence of threatened or endangered species and high level of biological integrity): 35% of remaining pollutant assimilative capacity is reserved from use for wastewater treatment Ohio Outstanding State Water/OSW (qualifies as Superior High Quality Waters and further distinguished as among the best waters of the state from an ecological perspective): 70% of remaining pollutant assimilative capacity is reserved from use for wastewater treatment NOTE: set-asides can be reduced by credit projects that enhance water quality	<a href="http://www.epa.ohio.gov/dsw/rules/3745_1.a.spdx">http://www.epa.ohio.gov/dsw/rules/3745_1.a.spdx</a>	Ohio EPA, Div. of Surface Water (DSW)
Kentucky Administrative Regulations, Title 401, Chapter 10 Water Quality Standards, Sections 026-031	Kentucky Exceptional Water (includes streams with Designated Use as Outstanding State Resource Water/OSRW): the same protection approach applies to all streams that are not impaired (including High-Quality Waters that have not been assessed) NOTE: the Licking R. segment that is an OSRW is not Exceptional Water (its size precludes the technical process that supports the EW classification)	<a href="http://www.lrc.ky.gov/kar/TITLE401.HTM">http://www.lrc.ky.gov/kar/TITLE401.HTM</a>	Ky. Energy and Environment Cabinet, Dept. for Environmental Protection/DEP, Div. of Water
Indiana Administrative Code, Title 327, Article 2, Water Quality Standards	Indiana Outstanding State Resource Waters/OSRW: none are designated in Dearborn Co. (the Whitewater River is a good candidate because of recreational and aquatic habitat value) NOTE: Indiana Antidegradation Policy is under development.	<a href="http://www.in.gov/ide/m/5387.htm">http://www.in.gov/ide/m/5387.htm</a>	Ind. Dept. of Env. Mgmt. (IDEM), Office of Water Quality, Watershed Assessment & Plng. Branch

September, 2011

**Table 4. Endangered, Threatened, and Rare Species in the OKI Region**

*OKI 2012 Environmental Consultations*

Listed Species (see notes at end of table)	Species listed at federal or state level	Number of species in the OKI Region that have ...												
		Global Heritage Rank	Federal Status	Ohio Status	Kentucky Status	Indiana Status	Butler	Clermont	Hamilton	Warren	Boone	Campbell	Kenton	Dearborn
Number of Animal Species	104	32	19	88	61	54	14	33	46	24	37	36	36	10
Number of Plant Species	61	5	1	51	15	27	13	25	18	14	5	5	2	10
Number of Total Species	165	37	20	139	76	81	27	58	64	38	42	41	38	20
<b>Mammals (4)</b>														
American badger	Taxidea taxus	Concern		Concern		Concern								
Bobcat	Lynx rufus			Endangered		Concern								
Eastern Spotted Skunk	Spilogale putorius				Concern	Concern								
Indiana Bat	Myotis sodalis	Imperiled	Endangered	Endangered	Endangered	Endangered								
<b>Reptiles (5)</b>														
Eastern Box Turtle	Terrapene carolina			Concern		Concern								
Kirtland's Snake	Clonophis kirtlandii	Imperiled		Threatened	Threatened	Endangered								
Northern Rough Greensnake	Ophedryx aestivus			Concern		Concern								
Spotted Turtle	Clemmys guttata			Threatened		Endangered								
Timber Rattlesnake	Crotalus horridus			Endangered		Endangered								
<b>Birds (23)</b>														
American Bittern	Botaurus lentiginosus			Endangered	Historic	Endangered								
Bachman's Sparrow	Aimophila aestivalis			Extirpated	Endangered									
Bald eagle	Haliaeetus leucocephalus		Delisted	Threatened	Threatened	Concern								
Bank Swallow	Riparia riparia			Threatened	Concern	Endangered								
Barn Owl	Tyto alba			Threatened	Concern	Endangered								
Bewick's Wren	Thryomanes bewickii			Endangered	Concern	Endangered								
Black-crowned Night-heron	Nycticorax nycticorax			Threatened	Threatened	Endangered								
Henslow's Sparrow	Ammodramus henslowii			Concern	Concern	Endangered								
Interior Least Tern	Sterna antillarum athalassos		Endangered		Threatened	Endangered								
Lark Sparrow	Chondestes grammacus			Endangered	Threatened	Endangered								
Least Bittern	Ixobrychus exilis			Threatened	Threatened	Endangered								
Loggerhead Shrike	Lanius ludovicianus			Endangered	Threatened	Endangered								
Northern Harrier	Circus cyaneus			Endangered	Threatened	Endangered								
Osprey	Pandion haliaetus			Threatened	Concern	Endangered								
Peregrine Falcon	Falco peregrinus			Threatened	Endangered	Endangered								
Savannah Sparrow	Passerculus sandwichensis			Threatened	Concern	Endangered								
Sedge Wren	Cistothorus platensis			Concern	Concern	Endangered								

Listed Species (see notes at end of table)	Species listed at federal or state level	Number of species in the OKI Region that have ...					Dearborn
		Global Heritage Rank	Federal Status	Ohio Status	Kentucky Status	Indiana Status	
<b>Birds (continued)</b>							
Sharp-shinned Hawk	Accipiter striatus			Concern	Concern	Concern	
Sora Rail	Porzana carolina			Concern			
Upland Sandpiper	Bartramia longicauda			Threatened	Historic	Endangered	
Vesper Sparrow	Poocetes gramineus				Endangered	Endangered	•
Virginia Rail	Rallius limicola			Concern		Endangered	•
Yellow-crowned Night-heron	Nyctanassa violacea			Threatened	Threatened	Endangered	•
<b>Amphibians (4)</b>							
Cave Salamander	Eurycea lucifuga			Endangered			•
Eastern Hellbender	Cryptobranchus alleganiensis	Vulnerable		Endangered	Endangered	Endangered	•
Redback Salamander	Plethodon cinereus				Concern	Concern	•
Northern Leopard Frog	Rana pipiens				Concern	Concern	•
<b>Fish (20)</b>							
Alligator Gar	Atractosteus spatula	Vulnerable		Extirpated	Endangered		•
Bigeye Shiner	Notropis boops			Threatened	Concern		•
Black Buffalo	Ictiobus niger			Concern			•
Blue Catfish	Ictalurus furcatus			Endangered			
Blue Sucker	Cypleptus elongates	Critically imperiled		Concern	Concern		•
Burbot	Lota lota			Concern			•
Channel Darter	Percina copelandi			Threatened		Endangered	
Diamond Darter	Crystallaria cincoita	Vulnerable	Candidate		Extirpated		•
Eastern Sand Darter	Ammocrypta pellucida			Concern			•
Goldeye	Hiodon alosoides			Endangered			•
Lake Sturgeon	Acipenser fulvescens	Vulnerable		Endangered	Endangered	Endangered	•
Mountain Madtom	Noturus eleutherus			Endangered			•
Northern Madtom	Noturus stigmosus	Critically imperiled		Endangered	Concern	Concern	•
Paddlefish	Polyodon spathula			Threatened			•
River Darter	Percina shumardi			Threatened			•
River Redhorse	Moxostoma carinatum			Concern			•
Shortnose Gar	Lepisosteus platostomus			Endangered			•
Spottail Shiner	Notropis hudsonius			Endangered	Concern		•

Listed Species (see notes at end of table)	Species listed at federal or state level	Number of species in the OKI Region that have ...					Butler	Clermont	Hamilton	Warren	Boone	Campbell	Kenton	Dearborn
		Global Heritage Rank	Federal Status	Ohio Status	Kentucky Status	Indiana Status								
<b>Fish (continued)</b>														
Tonguetied Minnow	<i>Exoglossum laurae</i>			Threatened			•							•
Variagate Darter	<i>Etheostoma variatum</i>													
<b>Crustaceans (1)</b>														
Sloan's Crayfish	<i>Orconectes sloanii</i>	Imperiled		Threatened			•	•	•	•				
<b>Aquatic Snails (3)</b>														
Furrowed Lioplax	<i>Lioplax sulculosa</i>										•	•	•	•
Onyx Rocksnail	<i>Leptoxis praerosa</i>										•	•	•	•
Varicose Rocksnail	<i>Lithasia verrucosa</i>										•	•	•	•
<b>Freshwater Mussels (39)</b>														
Black Sandshell	<i>Ligumia recta</i>			Threatened			•							
Butterfly	<i>Eliipsaria lineolata</i>			Endangered			•							
Catspaw	<i>Epioblasma obliquata obliquata</i>	Critically imperiled	Endangered	Endangered	Endangered	Endangered					•	•	•	•
Clubshell	<i>Pleurobema clava</i>	Imperiled	Endangered	Endangered	Endangered	Endangered					•	•	•	•
Cracking Pearlymussel	<i>Hemistena lata</i>	Critically imperiled	Endangered	Extirpated	Extirpated	Extirpated					•	•	•	•
Creek Heelsplitter	<i>Lasnigona compressa</i>			Concern	Endangered	Endangered					•	•	•	•
Deertoe	<i>Truncilla truncata</i>			Concern			•							
Ebonyshell	<i>Fusconaia ebenus</i>			Endangered			•	•	•	•				
Elephant-ear	<i>Eliptio crassidens</i>			Endangered			•	•	•	•				
Elktoe	<i>Alasmidonta marginata</i>			Concern			•	•	•	•				
Fanshell	<i>Cyprogenia stegaria</i>	Critically Imperiled	Endangered	Endangered	Endangered	Endangered					•	•	•	•
Fawnsfoot	<i>Truncilla donaciformis</i>			Threatened						•				
Flat Floater	<i>Anodonta suborbiculata</i>			Concern			•	•	•	•				
Hickorynut	<i>Obovaria olivaria</i>			Extirpated										
Little Spectaclecase	<i>Villosa lienosa</i>			Endangered			•	•	•	•				•
Monkeyface	<i>Quadrula metanevra</i>			Endangered			•	•	•	•				
Northern Riffleshell	<i>Epioblasma torulosa rangiana</i>	Imperiled	Endangered	Endangered	Endangered	Endangered					•	•	•	•
Ohio Pigtoe	<i>Pleurobema cordatum</i>	Critically imperiled		Endangered						•				
Orangefoot Pimpleback	<i>Plethobasus cooperianus</i>	Critically imperiled	Endangered		Endangered	Endangered					•	•	•	•
Pink Mucket	<i>Lampsilis abrupta</i>	Imperiled	Endangered	Endangered	Endangered	Endangered					•	•	•	•
Pocketbook	<i>Lampsilis ovata</i>	Imperiled	Endangered	Endangered	Endangered	Endangered					•	•	•	•

Listed Species (see notes at end of table)	Species listed at federal or state level	Number of species in the OKI Region that have ...					Butler	Clermont	Hamilton	Warren	Boone	Campbell	Kenton	Dearborn
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<b>Freshwater Mussels (continued)</b>														
Purple Liliiput	Toxolasma lividus	Imperiled		Endangered Concern	Endangered	Concern								
Purple Wartyback	Cyclonaias tuberculata	Imperiled		Endangered	Endangered	Endangered		•		•		•		
Pyramid Pigtoe	Pleurobema rubrum	Vulnerable	Candidate	Endangered	Threatened	Endangered				•		•		
Rabbitsfoot	Quadrula cylindrica cylindrica	Imperiled	Proposed Endangered	Endangered	Extirpated	Concern			•			•		
Rayed Bean	Villosa fabalis	Critically imperiled	Endangered	Extirpated	Endangered	Extirpated						•		
Ring Pink	Obovaria retusa	Critically imperiled	Endangered	Extirpated	Endangered	Endangered						•		
Rough Pigtoe	Pleurobema plenum	Critically imperiled	Endangered	Extirpated	Endangered	Endangered						•		
Round Pig-toe	Pleurobema sintoxia	Vulnerable		Concern	Threatened	Concern						•		
Salamander Mussel	Simpsonaias ambigua	Critically imperiled	Endangered	Extirpated	Extirpated	Extirpated						•		
Scaleshell	Leptodea leptodon	Vulnerable	Proposed Endangered	Endangered	Endangered	Endangered						•		
Sheepnose	Plethobasus cyphus	Vulnerable	Proposed Endangered	Endangered	Endangered	Endangered						•		
Snuffbox	Epioblasma triquetra	Vulnerable	Proposed Endangered	Endangered	Endangered	Endangered						•		
Spectaclecase	Cumberlandia monodonta	Vulnerable	Proposed Endangered	Extirpated	Endangered	Extirpated						•		
Threehorn Wartyback	Oblivaria reflexa			Threatened										
Wartyback	Quadrula nodulata			Endangered										
Washboard	Megaloniaias nervosa			Endangered										
Wavy-rayed Lampmussel	Lampsilis fasciola			Concern										
Winged Mapleleaf	Quadrula fragosa	Critically imperiled	Endangered	Extirpated	Extirpated	Concern								
<b>Insects (5)</b>														
Blue Corporal (dragonfly)	Ladona deplanata	Imperiled		Endangered	Endangered	Endangered								
Cobblestone Tiger Beetle	Cicindela marginipennis	Vulnerable		Threatened	Threatened	Endangered								
Northern Metalmark	Calephelis borealis			Endangered	Threatened	Rare								
Plains Clubtail (dragonfly)	Gomphurus externus			Concern	Threatened	Threatened								
Six-banded Longhorn Beetle	Dryobius sexnotatus													
<b>Vascular Plants (61)</b>														
Blue False Indigo	Baptista australis			Endangered	Concern	Rare								
Buckbean	Menyanthes trifoliata			Threatened	Concern									

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		Global Heritage Rank	Federal Status	Ohio Status	Kentucky Status								
<b>Vascular Plants (continued)</b>													
Buffalo Clover	<i>Trifolium reflexum</i>	Vulnerable		Endangered	Endangered								
Burhead	<i>Echinodorus berteroi</i>	Vulnerable		Threatened	Threatened			•					
Butternut / White Walnut	<i>Juglans cinerea</i>				Threatened			•					
Buttonweed	<i>Diodia virginiana</i>											•	
Canada Lily	<i>Lilium canadense</i>			Concern								•	
Canada Milk-vetch	<i>Astragalus canadensis</i>			Concern								•	
Carolina Willow	<i>Salix caroliniana</i>			Concern								•	
Common Prickley Pear	<i>Opuntia humifusa</i>			Concern								•	
Deam's Three-seeded Mercury	<i>Acalypha virginica</i> var. <i>deamii</i>			Concern								•	
Dwarf Bulrush	<i>Lipocarpa micrantha</i>			Threatened									
Elliptic-leaved Arrowhead / Delta Arrowhead	<i>Sagittaria platyphylla</i>			Endangered	Endangered								
Fern-leaved Scorpion-weed	<i>Phacelia bipinnatifida</i>			Concern									
Five-angled Dodder	<i>Cuscuta pentagona</i>			Threatened									
Floating Pondweed	<i>Potamogeton natans</i>			Concern									
Gray Beardtongue	<i>Penstemon canescens</i>			Threatened									•
Hairy/Shaggy False Gromwell	<i>Onosmodium hispidissimum</i>				Endangered								
Inland rush	<i>Juncus interior</i>			Endangered									
Lake Cress	<i>Armoracia aquatica</i>												•
Louisanna Broomrape	<i>Orobanche ludoviciana</i>			Extirpated	Historic								•
Low Spearwort / Pursh Buttercup	<i>Ranunculus pusillus</i>			Endangered									
Matted Broomspurge	<i>Euphorbia serpens</i>			Endangered									•
Maypop / Purple Passion-flower	<i>Passiflora incarnata</i>			Threatened									
Midland Sedge	<i>Carex mesochorea</i>			Endangered									
Missouri Gooseberry	<i>Ribes missouriense</i>			Threatened									
Missouri Violet	<i>Viola missouriensis</i>			Endangered									
Netted Chain Fern	<i>Woodwardia areolata</i>			Concern									
Nodding Rattlesnake-root	<i>Prenanthes crepidinea</i>			Threatened									
Pale Umbrella-sedge / Short- point Flatsedge	<i>Cyperus acuminatus</i>												
Potato-dandelion	<i>Krigia dandelion</i>			Threatened									
Prairie Brome	<i>Bromus kalmii</i>			Concern									
Prairie Wake-robins	<i>Trillium recurvatum</i>			Threatened									

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<b>Vascular Plants (continued)</b>													
Prairie Wedge Grass	<i>Sphenopholis obtusata</i> var. <i>obtusata</i>			Threatened				•					
Primrose Willow	<i>Ludwigia decurrens</i>			Endangered								•	
Red Chokeberry	<i>Aronia arbutifolia</i>			Threatened									
Riverbank Paspalum	<i>Paspalum repens</i>			Endangered			•		•				
Running Buffalo Clover	<i>Trifolium stoloniferum</i>	Vulnerable	Endangered	Endangered	Threatened		•		•				
Screw-stem / Twining Bartonia	<i>Bartonia paniculata</i>			Endangered	Concern				•				
Side-oats Grama	<i>Bouteloua curtipendula</i>			Concern									
Small Fringed Gentian	<i>Gentianopsis procera</i>			Concern			•						
Smooth Buttonweed	<i>Spermacoce glabra</i>			Endangered			•						
Snowy Campion	<i>Silene nivea</i>			Threatened			•						
Softleaf Arrow-wood	<i>Viburnum molle</i>			Threatened	Concern							•	
Southern Black-haw	<i>Viburnum rufidulum</i>			Concern			•						
Southern Dewberry	<i>Rubus trivialis</i>			Endangered			•						
Southern Hairy Rock Cress	<i>Arabis hirsuta</i> var. <i>adpressipilis</i>			Concern									
Southern Wapato	<i>Sagittaria montevidensis</i>			Concern			•						
Southern Woodrush	<i>Luzula bulbosa</i>			Threatened									
Sparse-lobed Grape Fern	<i>Botrychium biternatum</i>			Endangered			•						
Spring Coral-root	<i>Corallorhiza wisteriana</i>			Concern			•						
Stemless Evening-primrose	<i>Oenothera triloba</i>			Concern	Threatened						•		
Tansy Mustard	<i>Descurainia pinnata</i>			Concern									
Three-birds Orchid	<i>Triphora trianthophora</i>			Concern			•						
Timid Sedge	<i>Carex timida</i>	Imperiled		Threatened									
Virginia Mallow	<i>Sida hermaphrodita</i>	Vulnerable		Concern	Threatened						•		
Virginia Saxifrage	<i>Saxifraga virginensis</i>			Concern									
Waterplantain Spearwort	<i>Ranunculus ambigens</i>			Extirpated	Concern							•	
White Wand-lily / White Camas	<i>Zigadenus elegans</i>			Concern									
Wild Kidney Bean	<i>Phaseolus polystachios</i>			Concern									
Western Hairy Rock Cress	<i>Arabis hirsuta</i> var. <i>pycnocarpa</i>			Endangered	Historic								

**Global Heritage Rank** (rankings from 1 to 5)  
 • Critically imperiled globally (#1 rank) • Imperiled globally (#2 rank) • Vulnerable/Rare and uncommon globally (#3 rank)  
 • Additional global rankings and also state rankings of abundance are included in each state's Natural Heritage Database

### **Federal Status** (U.S. Fish and Wildlife Service)

- Endangered - Species in danger of extinction throughout all or a significant portion of its range
- Threatened - Species likely to become endangered within the foreseeable future throughout all or a significant portion of its range
- Concern = Species of Concern are listed only for Kentucky (Species of Management Concern) - Species with no legal protection but important to monitor in need of concentrated conservation action
- Candidate Species - Species under consideration for official listing as threatened or endangered (U.S. EPA)
- Proposed Endangered - Species proposed for official listing as endangered (U.S. EPA).

### **State Status**

- Endangered - In danger of disappearing from the state
- Threatened - Continued or increased threat will result in species becoming endangered
- Concern - Species of Concern (Ohio wildlife status), Potentially Threatened (Ohio plant status), Special Concern (Kentucky status), Species of Special Concern (Indiana status)
- Extirpated - Known or presumed to have disappeared from the state (Kentucky)
- Historic - "reported... but not seen for at least 20 years" (Kentucky)
- Rare (Indiana)
- Watch List (Indiana)

### **Sources for County Data**

- *Ohio Biodiversity Database Rare Species List by County* . Ohio Dept. of Natural Resources. July 2011. Includes state and federal status. [http://www.ohiodnr.com/Home/Rare\\_Plants/RarePlantSpeciesbyCount/tabid/20404/Default.aspx](http://www.ohiodnr.com/Home/Rare_Plants/RarePlantSpeciesbyCount/tabid/20404/Default.aspx)
- *County Report of Endangered, Threatened, and Special Concern Plants, Animals, and Natural Communities of Kentucky* . Kentucky State Nature Preserves Commission. May 2011. Includes state and federal status; includes global and state rankings. [http://naturepreserves.ky.gov/pubs/publications/KSNPC\\_countylist.pdf](http://naturepreserves.ky.gov/pubs/publications/KSNPC_countylist.pdf)
- *Indiana County Endangered, Threatened and Rare Species List*. Indiana Dept. of Nature Preserves, Indiana Natural Heritage Data Center. June 10, 2010. Includes state and federal status; includes global and state rankings. [http://www.in.gov/dnr/naturepreserve/files/np\\_dearborn.pdf](http://www.in.gov/dnr/naturepreserve/files/np_dearborn.pdf)

### **Sources for State Status of Species Listed for the OKI Region** (in addition to information in county data)

- *Ohio's Endangered Species* . Ohio Dept. of Natural Resources, Div. of Wildlife. October 2010. <http://www.dnr.state.oh.us/Portals/9/pdf/pub356.pdf>
- *Rare Native Ohio Plants 2010-2011 Status List*. Ohio Dept. of Natural Resources, Div. of Natural Areas and Preserves. [http://www.ohiodnr.com/Home/Rare\\_Plants/20102011RareNativeOhioPlants/tabid/22557/Default.aspx](http://www.ohiodnr.com/Home/Rare_Plants/20102011RareNativeOhioPlants/tabid/22557/Default.aspx)
- *Rare and Extirpated Species/Biota and Natural Communities of Kentucky* . Kentucky State Nature Preserves Commission. May 2011. [http://naturepreserves.ky.gov/pubs/publications/ksnpc\\_ets201105.pdf](http://naturepreserves.ky.gov/pubs/publications/ksnpc_ets201105.pdf)
- *Indiana's Species of Greatest Conservation Need* . Indiana Dept. of Natural Resources, Div. of Fish and Wildlife, Wildlife Diversity Section. July 2009. (insect status provided by staff) [http://www.in.gov/dnr/fishwild/files/fw-Indiana\\_Species\\_of\\_Greatest\\_Conservation\\_Need.pdf](http://www.in.gov/dnr/fishwild/files/fw-Indiana_Species_of_Greatest_Conservation_Need.pdf)
- *Endangered, Threatened, Rare and Extirpated Plants of Indiana* . Indiana Dept. of Natural Resources, Div. of Nature Preserves. May 2010. <http://www.in.gov/dnr/naturepreserve/files/np-etplants051910.pdf>